



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

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This paper is drawn from a longer, more detailed working paper by Alfredo Stein, published by IIED as one of ten case studies of innovative programmes to reduce urban poverty. This is available from the Human Settlements Programme, IIED, 3 Endsleigh Street, London WC1H 0DD, UK. See www.iied.org for more details.

The author would like to thank Ruth Sobalvarro, coordinator of the infrastructure and housing component of PRODEL, for her help in preparing a previous version of this document. The paper was presented at the international seminar "Social Programmes, Poverty and Citizen Participation" organized by the Inter-American Development Bank (IDB) at its annual governor meeting held in Cartagena, Colombia, 12-15 March, 1998.

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SUMMARY: This paper describes the work of the Local Development Programme (PRODEL) in eight cities in Nicaragua where it provided small grants for infrastructure and community works projects, and loans for housing improvement and micro-enterprises, targeted at low-income groups. The external funds provided by the Swedish International Development Cooperation Agency (Sida) were matched by municipal, community and household contributions. Between 1994 and 1998, more than 38,000 households benefited, and both loan programmes achieved good levels of cost recovery. The paper describes the micro-planning workshops and other methodologies through which households and communities were given more scope for participation. It explains how local governments and the bank responsible for managing the loans learned to work in a more participatory way, and it outlines the measures taken to ensure that the needs and priorities of women and children were addressed. The paper ends by considering some of the lessons learned in terms of sustaining the initiatives after projects are completed, and institutionalizing citizen participation in social programmes. It also describes how PRODEL's methods have come to be used by central and local governments in other programmes.

I. INTRODUCTION

THIS PAPER ANALYZES the experience of community participation of PRODEL (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 the sustainability of social programmes. It shows how, 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, increasing efficiency in the management of public resources and generating 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 of external financing provided by Sida through a central government agency for infrastructure projects, US\$ 0.66 of local resources were mobilized, including contributions by the communities. In the housing improvement component, for each US\$ 1 provided as a loan, families mobilized at least an additional US\$ 0.30 of their own resources. Financial analysis shows that the break-even point in the operation of small loans has been reached, and this allows a profit of 15 per cent per annum after

paying the commission to the commercial bank that manages the revolving fund. These figures show how a large quantity of resources and local internal savings can be mobilized for the construction, operation and maintenance of basic urban services, as well as for housing and income generation in spite of the prevailing poverty conditions in these cities.

Experience also shows that technical solutions defined with the direct participation of the end-users can save money. Projects costing up to US\$ 50,000 and carried out by the programme with community participation may cost up to 20 per cent less than projects carried out by the local governments, either directly or through contracts to private companies without community participation. The participatory model also brings many other benefits, as the paper describes.

Finally, the paper suggests that an effective process of participation requires an environment that does not impede the decentralization and devolution of functions, resources and decision-making authority from higher 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 institutionalized 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 the administration of projects allows local governments to focus public investments in infrastructure, equipment and housing more effectively, based on real, coordinated and negotiated demands, to where the poorest groups live.

II. BACKGROUND⁽¹⁾

NICARAGUAN SOCIETY EXPERIENCED major changes during the 1990s. From a situation of war and political polarization, progress was made in the process of national reconciliation and democratization. From a collapsed, centrally managed economy with record levels of hyper-inflation and the highest foreign debt in the region (700 per cent of its GDP), it was transformed into a market economy with incipient growth, relative financial stability and a significant reduction in the fiscal deficit.⁽²⁾ 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.⁽³⁾

In this context, the governments of Sweden and Nicaragua signed a cooperation agreement in July 1993 for the implementation of the Local Development Programme (PRODEL). The two governments were interested in creating a decentralized, participatory and sustainable programme which would contribute to mitigating the negative impacts of structural adjustment policies, especially in urban areas, and facilitate the process of national reconciliation and democratization.

III. THE AREAS IN WHICH PRODEL OPERATES

DURING THE FIRST phase (1994-1997), the programme operated in three

1. This section is based on PRODEL (1997), *Documento de proyecto para la segunda fase de PRODEL* (PRODEL Phase II project document), INIFOM, Managua.

2. Inflation was reduced from 30,000 per cent per annum in 1989 to 12 per cent in 1995. The GDP per capita was US\$ 418 in 1995 compared 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 a reduction of 84,000 in the armed forces (Villalta, Luis (1997), *Proceso de modernización*, UCRECEP, Managua).

3. 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 per cent. In 1996, the rate of total unemployment had decreased to 16 per cent but the rate of under-employment fluctuated between 35 and 55 per cent.

4. The "recent poor" are primarily those who have experienced a recent deterioration in income; they have incomes equivalent to one to two times the cost of a basic food basket but are not lacking basic necessities such as drinking water, sanitation and electricity. The "borderline poor" are households with incomes equivalent to more than twice the cost of a basic food basket but with one or more unfulfilled basic necessities. See Appendix 2 of the longer report on which this paper is based for more details.

mid-sized cities (León, Chinandega and Estelí) and two small 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-sized cities (Matagalpa and Jinotega) and one small city (Chichigalpa) were incorporated. The total population of these municipalities represented 15 per cent of the total population of Nicaragua and 19 per cent of its urban population.

As far as unsatisfied basic necessities are concerned, the cities within the first phase, with the exception of León, are below the national average in terms of the availability of drinking water, sewers, roads, electric power and waste collection services (see Table 1). More than half the population in the Phase 1 cities have incomes below the cost of a basic food basket and have more than one basic necessity unfulfilled (chronic poor). Another 30 per cent are classified as "recent poor" and "borderline poor".⁽⁴⁾ The proportion of "chronic poor" and "recent poor" within the populations of these cities is higher than the national average and well above the figures for the national capital, Managua.

Table 1:		The 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 comm-unities	Comm-unities served by PRODEL	% comm-unities served	% average coverage of basic services per city				
				Potable water	Sewers	Streets	Electri-city	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.

The poverty indicators highlight the type of urban population that PRODEL is working with:

- large segments of population lacking basic services and with incomes below the cost of the basic food basket;
- many households with income levels above the cost of the basic food basket but living in neighbourhoods which lack one or more basic services;
- households in inner-city areas where all the services may be available but with income levels below the cost of the basic food basket.

Some of these neighbourhoods have 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 housing has been constructed by the population on its own initiative. Most of the housing does not meet minimum standards with regard to health, safety and environmental quality. These municipalities were also particularly affected during Hurricane Mitch at the end of October 1998. About 10 per cent of the housing stock in the eight cities was partially damaged or destroyed. Most of the damage was in poor neighbourhoods that lacked basic services. About 3 per cent of the micro-enterprises 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.

IV. THE LOCAL DEVELOPMENT PROGRAMME (PRODEL)

a. Objectives and Strategy

SINCE IT BEGAN operations in April 1994, PRODEL's development objective has been to improve the physical environment and the socio-economic conditions of the poor population in the cities where it operates, with a special interest in ensuring improvements for women and vulnerable groups and in ensuring that the improvements can be sustained. To achieve these goals, the following components were developed:

- **Infrastructure and community works** which included the introduction, expansion, repair and improvement of infrastructure and community works through small scale projects costing up to US\$ 50,000. These include potable water, sewers and storm drains; 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 and sporting facilities; and sites for the collection, disposal and treatment of waste.
- **Housing improvement** through small loans (between US\$ 200 and US\$ 1,400) targeted at poor families who can afford to repay their loans. Loans are used to enlarge and improve houses including: the construction of additional rooms; repair and replacement of roofs; repair and reinforcement of outdoor walls; the construction and/or improvement of floors and interior walls; the installation of indoor plumbing and sewage facilities; electrification; and upgrading kitchens.
- **Financial assistance to micro-enterprises** in the neighbourhoods in the form of small short-term loans (between US\$ 300 and US\$ 1,500) for fixed 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 institutionalized financial entities to become involved in non-

conventional lending programmes for housing improvements and micro-enterprise loans to poor families.

b. Main Actors

PRODEL bases its implementation on the formation of broad but clearly defined cooperative alliances between the various institutions involved. The system of incentives and co-financing supports the participation of all actors at the local level in management, contribution of resources and decision-making. 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 decentralization 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 Cooperation Agency (Sida) and is responsible for the execution and supervision of the programme. INIFOM has formed a central executive unit to promote and coordinate actions at a central and local level.⁽⁵⁾ INIFOM's primary interest in the programme has been the possibility of establishing innovative methods to promote and enhance local government capacities through decentralized processes. The PRODEL participation model has been used by INIFOM to promote additional decentralization 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 households with housing improvement loans. The municipal governments are responsible for administering the funds that PRODEL transfers to them and for supervising activities at the local level. These are coordinated 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 made up 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 cooperation 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 in the process of providing services.
- **Banco de Crédito Popular.** This state commercial bank is responsible

5. The central executive unit consists of a national coordinator, an infrastructure coordinator, a housing and micro-enterprise coordinator and four people responsible for coordinating activities in the municipalities where the programme operates.

for screening, approving and disbursing the loans and supervising their correct utilization. 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 derives various benefits from its participation in this programme. The commissions it earns for placing and servicing the loans represent a significant additional revenue which helps 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 of creating more competition in 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 are recognized as having among the best performance for 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 figures for the number of loans given by NGOs were available for this report since their incorporation to the programme is relatively new.
- **The families in the selected neighbourhoods** participate in the definition, execution, financing and maintenance of the infrastructure projects; they 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 and the acquisition of 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 organization 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 coordination and supervision of the components of PRODEL.

c. Achievements

The achievements and limitations of PRODEL's participatory model must be understood in the context of a society which for years was politically polarized and which only took its first steps towards national reconciliation and reconstruction in the early 1990s. In addition to the economic and social crisis, PRODEL also had to face changes in local and central governments. In January 1997, there was a 90 per cent turnover in personnel in

the institutions directly involved in the administration and execution of the components, including the PRODEL management. The following section analyzes the achievement of each of the programme's components.

Infrastructure and community projects component. Between April 1994 and December 1998, 260 infrastructure and community projects were carried out in 155 different neighbourhoods, benefiting 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 per cent, with the other 56.9 per cent coming from the programme.

Thirty-five per cent of the projects consisted of improvements to roads, gutters and sidewalks; 10 per cent related to the improvement and expansion of potable water and sewage systems; 14 per cent to rainwater and storm water drainage projects. Another 18 per cent corresponded to electrification (public lighting and/or household connections) and 23 per cent 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. PRODEL concentrated the infrastructure component in the poorest neighbourhoods in the five cities.

The scale of the infrastructure programme was nearly twice that originally planned. The reasons for this are closely linked to 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, 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 mobilized more people and resources in each community and required fewer 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 reduced the need for new funds. This allowed a re-allocation of funds to finance more infrastructure projects.

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 families.⁶ In this component, the families, in addition to repaying their loans, contributed with their own resources, construction materials, labour, transportation and project administration to a minimum amount equivalent to at least 15 per cent of the value of the labour, transport and building materials. According to the Bank's figures, 70 per cent of the families have monthly incomes of US\$ 200 or less, including many with monthly incomes below US\$ 100. This indicates a sector of the population which, despite a low income, can afford to make monthly payments.

More than 12,451 loans for micro-entrepreneurs were provided in the communities in which the programme operated, with almost US\$ 5.5 million disbursed, benefiting approximately 2,400 existing families.

6. Housing loans were first given in October 1994. Since the loan repayment period is four years, only about 5 per cent 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.

Seventy new micro-enterprises were also created which gave jobs to some 210 people. In this component too, the final results exceeded the initial targets.

More than 60 per cent of the housing improvement loan recipients and 70 per cent of the micro-entrepreneurs are women. Approximately 30 per cent are women-headed households. One reason for this high participation of women is the approach that PRODEL developed with the Bank. Information meetings, credit analysis and the collection of loans are carried out 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, hence the size and form of loans sought to address the needs 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. Current levels of cost recovery show that there is a real possibility that the funds will become financially sustainable. In spite of two critical factors that affected the programme during 1998,⁽⁷⁾ the default risk or portfolio at risk rate was about 18 per cent in the housing improvement loan component and 10 per cent in the micro-enterprise component.⁽⁸⁾ An external evaluation of PRODEL's housing and micro enterprise loans at the end of 1998 showed that only 1.5 per cent of total loans had more than three payments in arrears or the portfolio at risk which may be lost and never recovered. About 2.5 per cent have to be recovered through judicial procedures and 96 per cent through simple administrative and follow-up procedures that the Bank needs to implement.

After five years of operation, the funds recovered through interest payments in the revolving fund are able to cover the Bank's direct costs and a good part of the costs of PRODEL personnel who are directly involved in monitoring the loan components. In 1998, accumulated interest recovered from the loan portfolio totalled US\$ 382,507 and annual payments to the Bank for the administration of the portfolio totalled 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 per cent in 1998. Over four years, the overall profit is 12 per cent.

This success is particularly noteworthy in light of the economic crisis currently experienced by Nicaragua, which includes high levels of unemployment and a lack of experience with credit, as a result of the historical circumstances that have prevailed. It also shows the importance and priority that poor sectors give to the repayment of their debts. The results also show that this is not simply an isolated project but a pilot experience with lessons to be learned, so that the programme can be replicated in other cities in Nicaragua (and elsewhere). 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. Some of the lessons from the PRODEL model have also started to be applied in Honduras and South Africa. *The ultimate goals are to institutionalize and define a participatory model for the provision of services, infrastructure, housing and income generation which will be sustainable on a national level.*

7. The first factor relates to the process of privatization for the Banco de Crédito Popular which forced the Bank to make some internal administrative readjustments. This affected Bank personnel directly linked with PRODEL's operation. The second factor is the social and economic consequences of Hurricane Mitch which seriously affected the eight cities where PRODEL works, including some of the clients who work with the programme's loans.

8. The method that the Bank and PRODEL agreed for measuring the default rate is as follows: 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 is due but not complied with.

V. THE PRODEL COMMUNITY PARTICIPATION MODEL

THE PRODEL COMMUNITY participation model is based on the premise that families who participate in decision-making processes and the administration and execution of infrastructure and housing improvement increase their commitment to co-finance and maintain the projects. This ensures the sustainability of the social investments over the long term. This section describes and analyzes the process of participation in the infrastructure, housing improvement and micro-finance components.

a. Infrastructure Component

INIFOM signs a framework agreement with the municipal governments defining the incentives, responsibilities and contributions of each party to 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 from the municipal council to allocate resources to the infrastructure projects. Third, municipalities must provide technical assistance to those families who 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 service 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 city.⁹ 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 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 being women). Usually, the existing community organization coordinates and makes 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 prioritize the main problems of the community. Priorities are assigned, the proposed solutions are discussed and negotiated, and the potential project to be financed by PRODEL is identified. Clean-up actions are also

9. Those communities with the highest levels of poverty, the lowest levels of basic services and social infrastructure and with good community organization are usually selected.

planned, in particular, trash collection. At the end of the workshop, the representatives of the municipal government and the community organization sign an agreement with the principal results of the micro-planning exercise.⁽¹⁰⁾

In Estelí, Ocotal and Somoto, the micro-planning methodology to identify social investment projects has been extended to projects being carried out by the municipal government with other sources of financing, including its own resources. Most 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 municipal law. This practice is becoming more common in the other municipalities where PRODEL operates and is also being adopted by other funding institutions. 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 of identifying the type of reconstruction projects that local governments and communities had to develop.

A general assembly of the community is then organized to which 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 for implementing the projects and define the contributions to this by both the municipal government and the community. Decisions are made regarding the community contributions 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, micro-planning workshops in Somoto identified and prioritized annual floods as the problem which had the greatest impact on the city's peripheral and central communities. 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 where work was necessary to solve the problem. People living in the affected communities 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, since this was needed to prevent the sewers from overflowing. The experience demonstrated to the municipal government the potential of community investments if communities are given the opportunity to participate and negotiate solutions with the local government. During Hurricane Mitch in November 1998, several of these infrastructure works were critical assets which prevented major landslides and flooding in the city.

In this general assembly, a formal structure consisting of seven people 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 municipal technicians, in particular the general characteristics regarding the location and dimensions of the project. CPAC also coordinates the management of the project and administers the stocks of materials, equipment and labour supplied both by the municipal government and the community. The committee reports back to the community on progress and on 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. This committee is also required to participate in the annual evaluations of the component performed by the municipal commission.

10. PRODEL has adapted the micro-planning method developed by Goethert, R, N 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 DC to the Nicaraguan context.

CPAC organizes the rest of the community in the physical execution of the project. Depending on the type and complexity of the project, the municipal government makes an initial proposal for the organization which can be done by block or by house. The municipal government's social services office trains the committee in the management and administration of the building materials warehouse and the methods used to manage the human resources employed in the project. The committee and the municipal technicians select the area where the materials will be stored. When the contribution is monetary, they initiate the collection 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 allow project execution. This contract clearly stipulates the contributions by the parties for each of the construction activities. PRODEL pays up to 60 per cent of the total project costs. The rest 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 per cent of the total project costs. PRODEL will not finance the project unless the community is prepared to make its own contribution. When the project starts, the CPAC manages the warehouse, the materials, tools and equipment, and the community's labour contributions. The community contributes to project execution 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 project execution depends on whether the infrastructure being built is for public or private use. For the installation of on-site infrastructure, each family participates individually. In the 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 carry out projects which involve the construction of a sewage system, the excavations and installing manholes.

The CPAC and other community members work 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 utilization 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 also take part in project evaluations carried out by the municipal commission. These evaluations analyze the experience, the level of organization 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 organizational experience that was acquired facilitated the subsequent management and administration of other projects by the communities. As noted earlier, the municipal governments are learning to apply the participatory methodology to other projects which are not financed by PRODEL.

The need to allocate funds as a counterpart to PRODEL's resources had a positive impact on the system of tax collections in Ocotol. In 1996, the municipal government was able to increase its tax collections by 30 per cent. This was the result of interest by the municipal authorities in managing directly the programme resources. However, it also reflects the fact that the population was prepared to pay taxes when they saw results. According to one of the leaders of the barrio Hermanos Zamora, where the programme upgraded streets, "...we realized that our taxes were being invested in works in which we ourselves had participated in the identification, definition, execution and auditing of the projects." This continued after Hurricane Mitch, even though family income levels diminished as a result of the economic crisis.

b. Evaluation of the Participatory Process in the Infrastructure Component

The programme shows that limited amounts of outside financial resources can generate benefits for a large number of people in marginal neighbourhoods by means of the infrastructure component. In total, 38,000 families benefited and contributed more than 155,000 days of labour. The per capita investment over five years was US\$ 22, of which 57 per cent came from outside resources and 43 per cent from local resources. PRODEL also succeeded in meeting its original objectives in terms of working with the poorest groups, mobilizing local resources and establishing a participatory methodology which has already been replicated in eight cities.

PRODEL's ability to mobilize matching municipal and community contributions is the key to this process. The purpose of introducing participatory financial and administrative procedures was to improve 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 rest of this 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 legitimized the actions of the municipal government vis-à-vis the communities. It has also given the community representatives the opportunity to learn about (and contribute to) the process by which the municipality establishes annual operating budgets and general development work plans. The community leaders also had an opportunity to become acquainted with the most important variables involved in the decision-making process at the level of central and local institutions for the provision of infrastructure and urban services.

Micro-planning workshops. Participation by community leaders and other community members 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 for assessing projects such as the 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. 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 (see Box 1). 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.

Box 1: The changes in priorities arising from micro-planning in Estelí

As part of its urban development plan, Estelí's local government wanted to build a children's 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. Street repairs in the neighbourhood and the construction of a kilometre-long pedestrian sidewalk that connects the centre of the city with the community were carried out. With community participation not only of *barrio* "La Union" but also 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 report to the general assembly meeting provide an opportunity for the community to earmark their contributions for the design phase, the execution and subsequent preventive maintenance. On some occasions, these contributions exceed the minimum required by the programme. For instance, in the latrine project in the Carlos Fonseca neighbourhood, community participation accounted for more than 18 per cent of the value of the work; and community contributions amounted to 24 per cent in the construction of the gutters and sewers in the Pedro Joaquín Chamorro neighbourhood.

Nevertheless, the negotiation of 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. This problem has been exacerbated in recent years as a number of social infrastructure projects have been entirely subsidized 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 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 why the community did not want to take part 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 the low levels of income are not an impediment to obtaining substantial financial contributions from very poor communities. When confronted with the blunt alternatives that are the result of the scarcity of tax revenues and of budget cuts, the communities have demonstrated an ability to overcome habits and traditions of paternalism without necessarily threatening their low family incomes. The low income levels of the residents in the *barrio* Mauricio Cajina in Somoto, one of the

poorest areas of the city (60 per cent of its economically active population is unemployed), did not prevent them from providing labour and making financial contributions to the development of their project. In four months, US\$ 5,000 was collected through the organization of raffles, community dinners, parties, dances and other activities all over the city. The money was used as their contribution to the construction of 285 metres of sewer line, one of the key projects to prevent floods.

Project design and preparation for project execution. 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 a better 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, sewers 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 at 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 optimizing resources, participation is an important vehicle of social communication to improve neighbourhood relations. That was the case in an electrification project financed by PRODEL in three communities in Ocotol. In the early 1990s, these communities were formed by ex-Sandinista soldiers, former soldiers of the Nicaraguan Resistance (*contras*) and refugee families who returned from neighbouring countries. The level of mistrust between 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 municipality believe that the empowerment process is an activity which is exclusively for social workers, 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, which affects the ability to prioritize the problems, define possible solutions and form the project committee. On average, 3 per cent of the families in each neighbourhood do not want to contribute and can generate obstacles to project execution.

If project approval is not rapid, and if the municipal government is not prepared for the physical execution, the enthusiasm of the CPAC can decline. In this sense, the quantity of information on delays available at the level of the community 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 organization 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 families. Such projects require effective channels of promotion, communication and understanding of the complexity of administering the organization and community participation in established squatter areas.

Participation in project execution and administration. This allows improved control of 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 the project's 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 minimize the conflicts between the traditional ways in which the municipal government takes 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 (see Box 2).

Box 2: Municipal learning with regard to participation

"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 coordinating 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 prioritization 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 to 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 the

costs for projects carried out with community participation are not necessarily lower, they are more realistic and some of the resources saved can be used for physical extensions of the project. The costs for project supervision, if shared, are minimal. Administrative and supervisory costs for projects carried out using PRODEL's methodology fluctuate between 3 and 5 per cent of the total project cost. Depending on the type of project, at least a quarter of these costs are 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 municipal engineers can supervise five projects at a time, which can result in greater efficiency in each project. A comparative analysis of 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 per cent higher than the cost of the project carried out using the PRODEL methodology.¹¹ The reduction in the cost per square metre in the paving project which involved community participation compared with the project which did not occurs in those activities where the contribution in labour and administration by the community can be more intensive. Such activities include moving earth (hauling of selected material, cutting, filling, landscaping and compacting, and removal of the excess dirt from the excavation), laying cobble stones, compacting pavements, cleaning, and the administration and supervision of the project.

Participation in the execution of projects also requires clear signals which help to establish the links between the community infrastructure or services introduced and the value of the individual home. This helps the families to appreciate the benefits that they receive from their contribution to community projects. For instance, support for community projects for laying sewers is increased as households know that this will also increase the value of their homes.

The type, extent, urgency and complexity of the project are obviously factors that municipal governments must take into consideration to determine the participation procedures. Project managers are often reluctant to promote participation because they think it delays the correct and timely completion of projects. The need for compliance with the municipal technical unit requirements, and continuous supervision and control of the implementation of the programme have made municipal government department employees realize the variables involved in participatory projects.

The project approval and contracting methods 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 negotiations with 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 do 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 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.

11. The longer document on which this paper draws contains a more detailed account of this analysis.

Operation and maintenance of the project. When the actual project construction has been completed, it is expected to leave behind a community structure with the ability to manage, and to negotiate with the municipal government. PRODEL, the municipal government and the communities evaluate the community contribution, the organization 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 that were used in the establishment of a national preventive maintenance fund by the Nicaraguan Social Investment Fund for the maintenance of the primary health and educational systems. As in the case of PRODEL, the goal is to create a fund with resources which promote local and community contributions.

The communities pay for the water, sewage and electric power services provided, and make additional contributions in the form of labour for the preventive maintenance of 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 project maintenance. 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. Box 3 illustrates how the extent of a project's connection with the community influences the quality of maintenance.

Box 3: Community participation and maintenance of child care centres

A comparative analysis of two child care centres being operated by members of two communities in the city of Ocotol showed how the level of community participation influenced the quality of the maintenance. The physical condition of the installations 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 Nora Astorga. In Nora Astorga, there had been no community involvement in either the identification phase or in the execution of the project, and no requirement for contributions from the community for its maintenance. In Santa Ana, there is a sense of ownership of the project, the community has made a census of the children in the neighbourhood and it has been able to negotiate agreements with the municipal government and other government institutions to provide food for the children. In Nora Astorga there is very little assistance provided to children, there is no information about their numbers and there are no agreements with private and government institutions which financed and supported the construction of the care centre at the time.

Women's participation. This has been successful because measures were taken to promote their involvement in all phases of the infrastructure project cycle and to encourage their participation in the other two loan components. PRODEL has dealt with gender issues in a pragmatic manner, giving preference to projects which addressed women's needs and also involving women in the process of evaluating their needs and

making decisions as well as in the planning and administration of projects. It also sought to provide incentives for men to participate more in the construction of the projects whilst 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 per cent of unskilled labour are women, although no progress was 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, since more than half of those attending are women. In management and supervision, 50 per cent are women; women also make up three-quarters of all team leaders.

“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, women’s role was to prepare coffee, cold drinks and food. PRODEL represented a major change because women were present at 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 materials 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.)

c. Housing Improvement and Micro-enterprise Loans

In the neighbourhoods in which the programme is active, the municipal government, PRODEL’s local coordinator and the loan officers from the Banco de Crédito Popular (BCP) prepare a joint strategy for the promotion of housing improvement and micro-enterprise loans. For micro-enterprise loans, the Bank’s loan officers visit the houses where the (generally family-owned) businesses and workshops 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.⁽¹²⁾

Information on housing loans is disseminated through a series of informal meetings at community centres or schools. Representatives of the Bank, the municipal government and PRODEL explain the terms of the loans,⁽¹³⁾ the technical assistance provided by the municipal government and the commitments which families must assume in terms of the use of the loan and repayment. Interested families complete a preliminary application, giving basic information on the location and condition of the home, the employment status of the potential borrower, and the socio-economic characteristics of other family members.

The Bank’s loan officer visits each family’s home and conducts a preliminary credit analysis to determine the need for improvement, the family’s borrowing capacity and affordability, whether a loan can be made and the maximum amount affordable by the family. The loan officer takes into consideration the monthly family income and expenses and also analyzes the land tenure situation, the type of collateral that may be offered by the borrower (mortgage, goods and even title to the construction materials) and the sources of income. The sex of the borrower, the type of improvement to be made, the credit history and personal references for the borrower, which may be provided by neighbours, are also taken into consideration.

12. Loans fluctuate between US\$ 300-1,500 and are recovered over a maximum of six months. Interest rates are high (up to 36 per cent per annum) plus maintenance of value, i.e. the indexing of the local currency compared to the US\$ (about 12 per cent per annum). The average loan is about US\$ 400.

13. Loans fluctuate between US\$ 200-1,400, repayable in four years at interest rates of 12 per cent per annum plus an adjustment for inflation (i.e. the indexing of the local currency compared to the US\$), which gives an effective annual interest rate of 24 per cent 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 family in question.

14. The technical consultant from this office is generally a young professional in the field of architecture or construction who is a direct employee of the municipal government. One per cent of the amount of the loan is added to the wages and allowances this employee receives from the municipal government.

The loan officer from the Bank informs the municipality's Technical Housing Assistance Office (ATV)⁽¹⁴⁾ of the potential maximum amount approved for each borrower. In some cases, the Bank's loan officer and the municipal technical consultant visit the house together. The technical consultant inspects the house, identifying the location of the various spaces and utilities of the property, the type of materials used, any potential structural problems and the need for expansion, repair and/or improvement. The consultant also identifies problems and establishes priorities for solutions with the family members. 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 technical assistance helps to guide and provide criteria for the family so that they can give priority to solving problems of overcrowding and environmental hazards. Emphasis is given to kitchen stoves close to the children's bedrooms, unventilated rooms, absence of drinking water and sewage systems, improper disposal of grey waters and garbage collection. Ultimately, it is the family who decides its priorities and requirements, but in an organized 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 effect the improvements. The final outcome is the identification of the type of improvement that has the highest priority, and the development 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 money available to pay for skilled labour and the transport of the materials).

Once the priorities have been established and the family's available resources have been analyzed, 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, and the plan defines the possible improvements to be made on the basis of the current loan. The borrower, who agrees to carry out the improvements defined with the technical consultant, 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.⁽¹⁵⁾

On the basis of the prepared budget, the beneficiary requests the loan from the Bank, providing the collateral and submitting the forms required. The Bank generally issues a single cheque which the borrower uses to buy 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 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

15. 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.

required quantities and buying the construction materials, hauling the materials to the site, mixing and laying bricks, and supervising the bricklayers if they do not take part in the process.

One month after receiving the cheque, 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.

d. Evaluation of Participation in Housing Improvement Loans⁽¹⁶⁾

The system of housing improvement loans is based on the premise that most 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 difficult savings and mobilization 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 institutionalized financial system. It also seeks to give technical assistance in a rapid 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 own a plot of land or are in the process of legalizing land tenure. Assistance therefore contributes to the process of self-help construction, with a defined and guaranteed participation by the users in the administration and construction. The impact of the participation of the user families in the housing component can be appreciated on the basis of the parameters discussed below.

The programme has created healthier environments, a reduction in overcrowding and improvements in the standards and systems of construction in at least 4,000 houses, which represent approximately 4.5 per cent of the total housing stock in the cities and 14.5 per cent of the households classified as poor. A sample of 69 houses studied in the five cities in the first phase of PRODEL shows that the creation and improvement of healthy environments and attending to the problems of overcrowding was the users' first priority. In second place was attention to 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.

The assisted self-help construction and access to credit provided a major impetus to the local economies, mobilizing 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. The housing improvement loans also generated indirect employment for some 270 persons in the construction sector. Family contributions, which add 15 per cent of the value of labour and transport, may represent up to 36 per cent of the actual cost of each housing improvement.⁽¹⁷⁾

The technical assistance is a new service which gives local governments the opportunity to learn how to support housing improvement. The

16. This section is based on Morales, Ninette and Edgard Herrera (1997), "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.

17. Calculation is based on the 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.

programme has generated a base knowledge of ideas, standards and methodologies for technical assistance to user families. This required a major effort by PRODEL to train municipal technicians and the Bank's loan officers and other employees. 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 programme's main weaknesses relate to the manner in which the financial and technical/construction aspects must be defined simultaneously with thousands of user families. The informal introductory meetings are often not enough to explain the relationship between the technician and the end-user or for the family to understand the complexities of the loan's financial terms. Sometimes, the incorrect preparation of project plans, budgets and schedules can affect the progressive development of the home. In all the cities, supervisory site visits have been insufficient, late, or have even have caused errors in construction itself. Nor was sufficient effort made to train the staff. And, at times, the beneficiary families do not see the link between the technical assistance and the opportunity to obtain a better quality house design and construction at a reasonable cost, and to repay the loan in accordance with their capacity to pay.

These problems relate not only to the existing capacities of municipal technicians and the Bank's loan promoters but also to the difficulties of administering a portfolio of thousands of small loans and coming up with technical solutions for a large number of small and varied on-site improvements scattered over a wide geographical area and carried out individually by the families or by construction workers. The possibilities of control are therefore more complex. Nevertheless, like the infrastructure component, the housing improvement component shows that the housing problems that the urban poor face are not necessarily only a lack of financial resources. Making institutionalized financing systems and technical assistance accessible to poor families stimulates their internal savings, mobilizes significant family resources and improves the overall housing situation. The repayment levels are acceptable, in spite of the non-conventional collateral provided, and the rotating funds system is close to achieving financial sustainability. Good financial performance depends less on the families' collateral and more on the pre-loan analysis and approval, the type of information given, the follow-up by the Bank and the administrative procedures for cost recovery.

VI. LESSONS LEARNED

THIS PAPER HAS considered the link between poverty reduction, participation and sustainability. It has shown that there are methods and processes that serve poor people and that may help to lift them out of poverty. It has also illustrated how poor groups can receive support from external cooperation and obtain the benefits from these programmes. The paper has also illustrated some key pre-conditions that are necessary for successful poverty reduction programmes, which include recognizing the different needs and resources available within low-income groups.

The experience gained by PRODEL in eight Nicaraguan municipalities has yielded important lessons regarding the potentials and limitations of community participation, and the institutional and financial sustainabil-

ity 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 per cent of the total population of the eight cities, improved the conditions in which they live. They improved their access to basic infrastructure and services by participating in the definition, execution and maintenance of 260 infrastructure and community works projects. Some 4,168 houses were improved or expanded and some 2,400 micro-enterprises supported.
- **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 identify more accurately 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 conducted in 150 different communities made it easier to identify the type, amount and scope of projects required by each *barrio*. These two mechanisms of participation in the decision-making processes have helped to increase the efficiency and accuracy of the diagnostic measures and the proposals prepared by the municipal governments for the annual social investment plans, and of the longer-term municipal development plans.
- **Making more efficient use of public resources.** As local governments developed projects in conjunction with communities through micro-planning workshops, public investments (including those provided by central government via the municipal government and the municipal government's own tax revenues) reflected the priorities and preferences of the users and the actual capacities of the municipal government in providing and financing services. Experience shows that these preferences are not always for new services but also for the improvement, expansion, repair and maintenance of existing services and systems. These have a positive impact on the costs of the solutions and optimize the utilization of the municipal government's scarce resources for this type of work.
- **Improving accountability and transparency.** The participation of beneficiary families in different phases of the operation and management of the infrastructure projects helps to establish new habits of control within municipal governments and better reporting to, and joint responsibility with, the communities. It also improves the understanding of the role of the municipal government, including the real limitations in the technical and financial resources available to address the problems of the poor.
- **Mobilizing internal savings.** Contributions from the communities in kind, in labour and in materials exceeded 10 per cent of the direct costs of the infrastructure and community assets projects and exceeded 15 per cent of those for the housing improvements. This mobilization of local and community resources also encouraged the municipal governments to improve the tax collection processes, in response to the programme requirement to come up with local matching funds. The resources mobilized over four years totalled US\$ 10.5 million: 53 per cent from the central government, with the foreign aid financing provided by Sida; and 47 per cent from local governments, the communities and the user families (including loan repayments).

- **Reducing the costs of the projects.** Community participation was shown to reduce project costs by up to 20 per cent, 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 projects toward the poor and vulnerable sectors of society. In the case of housing improvement and micro-enterprise loans, the primary benefits have been to poor sectors with a certain capacity to repay their loans. The participatory methodology employed also facilitated the access of women to the benefits of the projects and the loans.
- **Revitalizing local economies.** In addition to making some 12,000 loans to finance 2,400 micro-enterprises, the other components also contributed to local employment. In the area of housing improvements, the self-help construction processes have revitalized and consolidated micro-enterprises which produce local construction materials. There has also been an increase in the use of skilled and unskilled workers who were unemployed in the areas where the programme operates.
- **Improving national reconciliation.** The changes in attitude and contributions 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, not merely on simple social demands and false promises and expectations. The participation methodology also helped to facilitate communication between antagonistic groups and to coordinate positive actions for the improvement of living conditions in 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, and the involvement of beneficiary families in the management and administration of the project cycle have created a solid basis for an increased commitment and division of responsibilities between participants. This facilitates the maintenance and sustainability of projects. 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 organizations 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 a good cost recovery record for loans.

There were also some external factors which facilitated the design, organization and implementation of the PRODEL participatory model:

- **Non-partisan programmes.** In spite of the political changes in Nicaragua in the last five years, authorities from the central government institution responsible for the promotion of the programme and the local governments (regardless of their political tendencies) have made it possible to create alliances and to utilize methodologies which provide incentives for the participation of poor families, without any discrimination on the basis of political, ideological or religious factors. There is always the temptation to make use of scarce resources for partisan purposes. But if the rules of the game between the funding agency and the recipient government regarding the misuse of funds are clear, the possibility for avoiding this 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 financial resources. It also relates to the methods which promote the involvement of communities in the processes of decision-making and administration of projects. It is therefore important to ensure the availability of (limited) resources which stimulate and provide incentives for community contributions. As in PRODEL, these incentives can be for the introduction of urban infrastructure and services, and the possibility of individual household improvements 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 cooperating with and involving communities. They enhance their legitimacy and mobilize 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 utilize 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 infrastructure, housing improvement 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 recognize that communities are heterogeneous groups of people in which there are potential beneficiaries for different forms of technical assistance and financial services. Participation in the introduction and upgrading of 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 of external agencies that usually prevails in poor communities is not broken.
- **Division of functions and responsibilities.** An important factor for the development of the programme is the complementary nature of activities of the administrators and other parties involved. PRODEL has been able to recognize 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 in co-financing the projects and in contributing to the maintenance of the infrastructure and community assets. The commercial bank aims 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 the coordination 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 organization of the community.** It is common for projects of this type to have unrealistic expectations with regard to what can be accomplished through community participation. Actions are based on models of community organization 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 organization of the beneficiaries by territorial divisions appropriate to the neighbourhoods. It is also important to promote the democratic election of representatives for each block in order to be able to do better technical work as a result of the administrative and physical design of the project. The different commissions and committees formed must be in line with the complexity and nature of each project. These have been effective instruments in the programme's ability to accomplish its physical and social goals.
- **Empowerment of and technical assistance to the beneficiary families.** Community participation requires effort to provide the families with new options, capacities and skills in different areas. This mainly relates to the identification and analysis of problems (micro-planning workshops), project planning (design, scheduling, budgeting), mobilization of internal and external resources, 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 project maintenance (cleaning campaigns, security and protection of the project constructed, and management of resources for preventive maintenance tasks).

Finally, in spite of its successes, PRODEL must be further consolidated 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 at the local level in the context of Nicaragua. The results obtained for the three components in eight cities indicate that it is not simply a pilot project and that community participation is a determining factor in the introduction, improvement and maintenance of urban services and facilities.

The goal of PRODEL for the next few years is to replicate the system in other municipalities. It will also demand an improvement in the capabilities of the local participants so that they can define and structure the permanent fora and places for negotiation 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 institutionalization and face difficult questions regarding the future of the Bank and the type of legal structure it needs for a longer-term perspective.⁽¹⁸⁾ Should it continue to be a governmental programme or should it try to incorporate the private and public perspectives that will enable the programme to avoid the difficulties posed each year that there are elections? How will it retain the staff that it has trained to promote community participation? These are some of the challenges the programme has to face in the near future.

18. Unfortunately, the Nicaraguan government, under pressure from international financial organizations, closed the Banco de Crédito Popular in the year 2000. PRODEL decided to bid and tender its housing and micro-enterprise loan portfolio. Private banks were invited to participate. Although two of them showed interest in managing PRODEL's portfolio, their internal financial situation was not sufficiently solid. Thus, it was decided to transfer the portfolio to the two NGOs that started working with PRODEL funds after hurricane Mitch.

