

**Document of  
The World Bank**

Report No: 17924 VE

PROJECT APPRAISAL DOCUMENT  
ON A  
PROPOSED LOAN  
IN THE AMOUNT OF US\$60.7 MILLION  
TO  
VENEZUELA  
FOR A  
CARACAS SLUM-UPGRADING PROJECT

September 28, 1998

Infrastructure, Finance and Private Sector Department  
Colombia, Ecuador and Venezuela Country Management Unit  
Latin America and the Caribbean Regional Office

## **CURRENCY EQUIVALENTS**

(Exchange Rate Effective May 29,1998)

Currency Unit = Bolivares (Bs\$)

Bs\$1.0 = US\$537.5

US\$1.0 = Bs\$0.0018

## **FISCAL YEAR**

Jan 1-Dec. 31

## **ABBREVIATIONS AND ACRONYMS**

ASOVIV:	Housing Association
Barrio:	Informal Neighborhood Settlement
CBO:	Community Based Organization
CONAVI:	National Housing Council
FUNDACOMUN:	Foundation for Community Development and Municipal Promotion
FVP:	Foundation for Popular Housing
INAVI:	National Housing Institute
LCG:	Local Co-Management Group
MAC:	Metropolitan Area of Caracas
MACBIA:	Metropolitan Area of Caracas Barrio Improvement Agency
MINDUR:	Urban Development Ministry
NGO:	Non-Governmental Organization
NIP:	Neighborhood Improvement Plans
PMU:	Project Management Unit
RAP:	Resettlement Action Plan
UDU:	Urban Development Unit
UPF:	Physical Planning Unit

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**Venezuela**  
**Caracas Slum-Upgrading Project**

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**Venezuela**  
**Caracas Slum-Upgrading Project**

**Project Appraisal Document**

Latin America and the Caribbean Regional Office  
Colombia, Ecuador and Venezuela

Date: September 28, 1998	Task Team Leader/Task Manager: M. Vitor Serra
Country Manager/Director: Andrés Solimano, Director	Sector Manager/Director: Danny Leipziger
Project ID: VE-PA-40174	Sector: Urban Management
	Program Objective Category: Poverty Reduction
Lending Instrument: Specific Investment Loan	Program of Targeted Intervention: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

<b>Project Financing Data</b>	<input checked="" type="checkbox"/> <b>Loan</b>	<input type="checkbox"/> <b>Credit</b>	<input type="checkbox"/> <b>Other [Specify]</b>		
<b>For Loans/Credits/Others:</b>					
Amount (US\$m/SDRm): US\$60.7 Million					
Proposed terms:					
Grace period (years): 5	<input type="checkbox"/>	Multicurrency	<input checked="" type="checkbox"/>	Single currency, specify US\$	
Years to maturity: 17	<input type="checkbox"/>	Standard Variable	<input checked="" type="checkbox"/>	LIBOR Based	
Commitment fee: .75%					
Front End Fee 1.0%					
Service charge: NA%					
Financing plan (US\$m):					
	Source	Local	Foreign	Total	
	Government (FUNDACOMUN)	28.1	21.9	50.0	
	Hidrocapital (Caracas Water Company)	10.6	9.4	20.0	
	INAVI (National Housing Agency)	6.2	0.0	6.2	
	IVI (Sucre State Housing Agency)	6.0		6.0	
	Municipalities	10.0	0	10.0	
	IBRD (including front-end fee)	29.8	30.9	60.7	
	<b>Total</b>	<b>90.7</b>	<b>62.2</b>	<b>152.9</b>	
Borrower: Republic of Venezuela					
Guarantor: NA					
Responsible agency: <i>Fundación para el Desarrollo de la Comunidad y Fomento Municipal (FUNDACOMUN)</i>					
Estimated disbursements (Bank FY/US\$m):					
	1999	2000	2001	2002	2003
Annual	4.9	13.8	20.4	12.0	9.6
Cumulative	4.9	18.7	39.1	51.1	60.7
Project implementation period: 5 Years    Expected effectiveness date: 1/1/99    Expected closing date: 6/30/04					

## **A: Project Development Objective**

### **1. Project development objective**

The objective of the Project is to improve the quality of life of the inhabitants of a selected number of barrios<sup>1</sup> (representing 15 percent of total barrio population) in the Metropolitan Area of Caracas (MAC), through the development and implementation of a community driven, sustainable and replicable infrastructure improvement program.

The Project follows the general directives defined by the *Plan Sectorial de Incorporación a la Estructura Urbana de las Zonas de Barrios del Area Metropolitana de Caracas y la Región Capital (Plan Sectorial)*. This plan, approved by the *Ministerio de Desarrollo Urbano (MINDUR)*, in 1994, outlines a comprehensive approach for improving the living conditions of the totality of the barrios of the MAC.<sup>2</sup> Thus, the Project also proposes to establish a model for the implementation of the *Plan Sectorial*.

### **2. Key performance indicators (see Annex 1):**

The performance indicators will be used to assess the progress of Project execution, and to flag any potential problems which may require a re-tooling of the Project. These indicators are presented below:

#### **Year 1**

- During the first year of Project implementation, design and install the impact evaluation system which will include, inter alia, a system to monitor housing and land markets in the barrios; a tool for assessing changes in quality of life; and an automated financial and physical output indicators system;
- During the first year of Project implementation, constitute at least 12 Community Participation Committees in the Project's targeted area;
- By the end of the first year of Project Implementation, submit to the Bank up to 12 Neighborhood Improvement Plans for approval;
- Conclude by the end of the first year of Project implementation, technical assistance plans oriented towards the municipalities and the creation of the micro-credit program; and
- By the end of the first year of Project implementation, the special UPF ordinances will be presented to the Municipal Councils of Libertador and Sucre, for approval of the UPF Master Plans of Petare Norte and La Vega.

#### **Year 2**

- By the second year, execution of the Neighborhood Improvement Plans will commence.

#### **General**

- Elaborate, and present to the Bank, an Annual Civil Works Execution Plan, with accompanying Community Outreach Plan, by the end of September of the preceding year of the execution of that Plan which will be used to measure the progress of Project execution from that point on;

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<sup>1</sup> Although barrio in Spanish means generically "neighborhood"; in Venezuela it is used solely to denote informal settlement.

<sup>2</sup> Full implementation of this plan would take 20 years and would require, according to preliminary MINDUR estimates, total investments on the order of US\$1.5 billion.

- Execute the Project in accordance with the following projected Disbursement Plan:

	Year 1	Year 2	Year 3	Year 4	Year 5
<b>% Disbursed</b>	<b>7</b>	<b>23</b>	<b>34</b>	<b>20</b>	<b>16</b>
<b>% Accumulated</b>	<b>7</b>	<b>30</b>	<b>64</b>	<b>84</b>	<b>100</b>

The implementing agency, *Fundación para el Desarrollo de la Comunidad y Fomento Municipal (FUNDACOMUN)*, in order to determine the impact of the project, *vis-à-vis* its development objectives, will also establish several quantifiable variables simple to measure and interpret. These variables will be used: (i) to assess impact of the Project outcomes; and (ii) as a basis for the development of methodologies for future projects. The variables to be measured include:

- Change in property values and land market activities in the targeted barrios and in a control group.
- Comparison in perceived quality of life against baseline Social Assessment Survey.
- Changes in economic differentiation, solidarity and centrality in the target barrios at year 0, 3 and 5.
- Quality impacts of the direct physical investments.
- Change in the capacity to target and coordinate investment in the MAC.

## **B: Strategic Context**

### **1. Sector-related Country Assistance Strategy (CAS) goal supported by the project (see Annex 1):**

CAS document number: 16471-VE. Date of latest CAS discussion: May 6, 1997

The Project supports the overarching CAS objective to: "...reduce poverty through sustainable economic growth with stability and increased efficiency in the provision of basic services." In addition, the Project supports the specific CAS objectives of: (i) improving basic infrastructure services; (ii) improving income and social conditions of the most vulnerable poor, and (iii) improving the efficiency and effectiveness of the public sector.

### **2. Main sector issues and Government strategy:**

#### **2.1 Main Sector Issues:**

**Barrios as a solution<sup>1</sup>.** The formation of the MAC barrios, as with slums elsewhere in Latin America, is a function of large segments of the population having incomes too low to permit access to the formal housing markets. In addition, access to housing in the MAC has been exacerbated further by urban policies that have increased the cost of supplying housing and by a perverse housing subsidy system which has primarily benefited higher-income groups of the population at the expense of the poor. Further, as a result of low-incomes and high transportation costs, the poor have in large measure been barred from a second best shelter alternative, which is access to formal land markets in the urban *periphery*. Consequently, the poor of the MAC have resorted to *invading* publicly owned land (in the presence of weak enforcement of property rights), and, on a much smaller scale, private land both in the City proper, and the urban periphery. Over time, these squatters have gradually built their houses and communities in a rhythm dictated by the needs of their family cycles and by the possibilities provided (and limited) by their fluctuating incomes. Gradually, also came the introduction of a few urban services, albeit with standards well below those of formal urban areas, constructed both by the poor themselves and by reluctant local or national governments. Of the total population of the MAC, according to the 1990 census, 44 percent of the area's population live in 144 barrios located in several municipal jurisdictions, representing over 1.2 million people. Approximately 75 percent of these barrios are located in the Municipalities of Libertador and Sucre.

<sup>1</sup> Barrios are one of various shelter solutions, such as doubling up, rental housing, pirate subdivisions, that the poor resort to in order to resolve their shelter needs.

**Barrios as a problem.** MAC barrios would truly have been a viable option to the shelter needs of the poor were it not for three main factors which significantly reduced the validity of squatting and progressive housing construction as a solution: (i) lack of adequately defined property rights; (ii) absence of collective action mechanisms to resolve the problem of providing public goods; and (iii) lack of credit to facilitate housing construction. The combination of these factors have led to very poor living conditions in the barrios of the MAC (as is recognized also in other parts of LAC) with public goods and urban services poorly provided and of inferior quality, and existing housing units, though representing an impressive accomplishment, also being of inferior quality to what they could have been had sufficient human and capital resources been mobilized within the framework cited above.

**Definition of Property Rights.** The lack of clear definition of individual or condominium land property rights and of utilities rights-of-way has a number of deleterious effects which extends from housing to urban services: (i) it restrains action on part of municipalities, which, not being capable of taxing property, see provision of public goods as an ad-hoc paternalistic concession, which is not subject to rules of efficiency and sustainability; (ii) Barrio-dwellers are denied an address by municipalities, limiting their identification, and severely restricting mailing and the possibility of billing; (iii) it creates an environment of overall illegitimacy over large areas of the MAC, which extends to property rights over other urban services, such as water. This is well demonstrated by the situation in the MAC, where although nearly 100 percent of the barrio population has access to potable water through household connections, 82 percent is illegally connected to the system; (iv) it restrains network-based public utilities from providing services; (iv) it contributes to the private sector restraining from extending credit to housing construction, for lack of collateral; (v) it impairs barrio housing market transactions, reducing demand for housing only to those few potential buyers accepting the insecurity of weak or no titles, and lowering the market values of housing units put on sale. By also reducing the number of market transactions it diminishes geographical mobility of barrio-dwellers; (vi) it gives origin to complicated interpersonal disputes related to the transfer of property, particularly at the level of family units, on the occasion of eventual separation or death of the head of household.

All of the above, except for (vi) correspond to perceptions of ownership held by entities (municipalities, public utilities, etc.) other than the barrio-dweller themselves, who seem to be reasonably confident of their rights to property, as evidenced by the investments made on the sites they occupy. But there is some evidence also that it may well be that their perceptions are influenced to a certain extent by that of the rest of society and, in that case, they are in fact investing less in housing than they would be willing to do if property rights were formally recognized.

**Failure of Collective Action.** The absence of collective action mechanisms, represented by the action of municipalities, lies at the heart of the problem of the delivery of public goods to the MAC barrios. This lack is felt pungently in the case of accessibility, definition of rights-of-way, and of environmental externalities. Poor accessibility and inexistence of rights-of-way is a consequence of the barrio's pattern of growth, lacking a plan either proposed by a private developer or dictated by a municipality. MAC barrios have very limited and ineffective accesses characterized by an excessive number of footpaths and by very minimal, almost no, vehicular access. Absence of collective action mechanisms is also felt in the lack of resolution of problems which arise from the occupation of areas which are either risk-prone (steep hillsides, unstable terrain, *quebradas*) or cause negative environmental external effects on the rest of the city (the environmental impact of 1.2 million people living without a formal drainage and sanitation systems in a region as dense as the MAC is enormous).

**Lack of Credit.** Credit to facilitate housing construction would abbreviate time needed to build a house. Access to credit would very probably reduce construction costs and also, if coupled with engineering and architectural technical assistance, would substantially improve the quality of barrio housing. Finally, to no small measure, it would increase the housing stock, by stimulating that rental units be added to existing housing (15 percent of the population of barrios are renters).

**Poor Provision of Urban Services.** As the result of the above, MAC barrios suffer from a chronic lack of services. The lack of rights-of-way and vehicular access mentioned above has impeded proper implementation and maintenance of water and sanitation infrastructure (or increased its costs), proper operation of vehicle-based public services such as police and solid waste collection, or vehicle-based emergency services such as firefighting, rescue, and civil defense (in the case of an earthquake, lack of accessibility will dramatically reduce the response of civil defense plans). Lack of vehicular accessibility also increases the costs of delivery of all private goods and imposes on barrio-dwellers long walks uphill (in OSD PAD Form: July 30, 1997



some cases it takes 24 floors to reach a vehicular street), reducing the number of trips they are willing to undertake. Public transportation of sufficient scale is of course non-existent. Access to water is universal but informal and precarious. Only 28.5 percent of barrio residents have continuous piped water on a daily basis, and an additional 13.1 percent of the residents receive intermittently piped water on a daily basis. The remaining 58.2 percent of the population do not receive water daily, with 30.5 percent receiving water an average of every three to four days, forcing residents to store water on a large scale. Wastewater coverage though high is improvised and geotechnical studies have identified leakage in the system as a major contributor to the undermining of the geotechnical integrity of the barrios, putting residents at great risk of hill slides if no mitigation is done, including the construction of properly engineered drainage and sanitation systems. Filtration of wastewater into streets and dwellings is common and maintenance is non-existent. Increasingly, families occupy unstable terrain or steeply sloping hillsides, posing a threat to human safety and advancing the process of hillside erosion.

**Future of MAC barrios.** The most intensive period of formation of barrios in the MAC corresponds to that of the wave of rural to urban migration of Venezuela, from the 50s to the 80s. This is now largely over. Venezuela is one of the most urbanized countries in the world (93 percent in 1990), and given its fairly well distributed system of cities, migration will not have an aggressive impact on any one city (with the exception of oil enclaves) and definitely not in the MAC. The MAC can be expected to now grow mostly as dictated by: (i) the vegetative rate of population growth, which though still high (2.2 percent), is declining, and (ii) the rate of new household formation. Many of the new households will be accommodated by squatting but they will do so following a different location pattern than that observed in the past fifty years. Decentralization of activities in the MAC will very probably promote increased squatting in the municipalities in the periphery. In the central municipalities, formation of new barrios should be modest. In the latter, growth will be concentrated in the existing barrios, through increased densification, as these offer substantial location advantages over new areas.

**Sector policies.** Establishing a long-term program for the upgrading of slums is just one element of a broader housing and shelter program, which would be required to properly accommodate the still fast growing Venezuelan population. An upgrading program, such as the one proposed by the Project, has the following basic merits: (i) it substantially improves the quality of life of current barrio-dwellers at a cost which is one half to one fourth that of the closest comparable alternative (the lowest cost formal housing alternative); (ii) in some cases it provides the opportunity to be housed at low cost, as barrios may grow more efficiently and may accommodate more people, if improved layouts and services are provided; and (iii) it promotes important efficiency gains in the overall operation of the city (possibility of charging for water and sanitation, more active housing markets, elimination of negative environmental externalities, increased general levels of safety, etc.). However, slum improvement is but one solution (especially very dense ones such as those in the MAC) and additional policies must be in place to avoid future growth of slums as they will incur future costs (which are expressed by the large resettlement costs of this Project) which could be avoided. There are other long-run, lower-cost solutions for some of the new households to be formed. Implementation of these would require profound modifications in the Venezuelan housing policies and housing subsidy systems, including the following: (i) expanding access to formal sector housing; (ii) revamping the housing subsidy system; (iii) facilitating access to land; (iii) providing physical infrastructure to poor non-squatted areas; (iv) providing micro credit for housing improvement and land acquisition; (v) introducing incentives to rental housing; and (vi) promoting generalized regularization of land tenure. The GOV has recognized the need to address the other aspects of housing and shelter policy indicated above. It wishes to do so in a separate loan or as part of the Second National Low-Income Barrios Improvement Project, which is to begin preparation in FY99. Some of these issues are also being addressed by the IDB through a housing project that currently tests a demand-oriented housing subsidy mechanism.

## **2.2 Government Response to Barrio Issues:**

Between the 1950s and 1980s, the period that saw the most significant rise in barrio formation, the GOV attempted to address the problem through various policy initiatives, including barrio clearance programs and provision of high-rise public housing. Nothing worked. Land continued to be re-occupied, apartment buildings, which had never been built to take into account family size and changing housing needs over the family life-cycle, deteriorated from deferred maintenance. Barrios proliferated during the 1970-80's and state-provided housing units quickly became high-rise slums, with socio-economic and safety conditions often worse than in the barrios. The impact of barrio clearance and public housing solutions on the social fabric of whole communities has been disastrous, as families have been relocated to new

areas, away from others in the community and from their economic means of support, and into housing that is overcrowded and very poorly maintained.

The 1990s were a turning point in policy towards barrios with a series of initiatives, which included:

- The Plan to Confront Poverty, of 1989, which for the first time officially recognized the existence of barrios, also presented a framework for the delivery of services to barrios that included devolving responsibility over them to state and local governments;
- The World Bank financed Low-Income Barrios Improvement Project (PROMUEBA), of 1993, which provides financing to municipalities for barrio infrastructure, linked with municipal technical assistance;
- The Interamerican Development Bank financed PROINSOL Project, of 1993, which provides financing to secondary Venezuelan cities in much the same terms as the above;
- The *Plan Sectorial*, of 1994, which outlines a comprehensive plan for improving the barrios of the MAC; and
- The creation of the *Comisión Nacional de Equipamiento de Barrios* (CNEB), of 1995, whose purpose is to coordinate policies and investments in barrios.

In parallel to the above GOV initiatives, and partly stimulated by them, there has been a resurgence of NGO initiatives in barrio upgrading activities throughout the country. In the MAC several pilot projects were undertaken to improve barrios, the most notable in the communities of Aguachina, Quebrada Catuche and El Limón. There was much methodological experimentation in these areas. Using a blend of financial resources from central, state, and local government agencies, these communities have, through the formation of legally recognized Community Based Organizations known locally as *consortiums*, prepared and implemented neighborhood improvement plans - including, *inter alia*, the improvement of water and sanitation systems, road paving and construction of new roads, new housing for those in vulnerable areas, public lighting and community centers.

These pilot projects, together with the *Plan Sectorial*, provide the conceptual framework for the proposed Project, which will scale-up these pilot initiatives to reach a population of approximately 180,000 in two separate groups of barrios: La Vega and Petare Norte.

### **3. Sector issues to be addressed by the project and strategic choices:**

The proposed Project addresses the three main factors which were previously identified as significantly reducing the functionality of barrios: (i) the lack of adequate definition of property rights; (ii) the absence of collective action mechanisms to resolve the problem of providing public goods; and (iii) the lack of credit to facilitate housing construction.

#### **3.1 Proper Definition of Property Rights: Strategic choices were:**

- Full property rights should be granted to barrio-dwellers to the sites that they currently occupy in both La Vega and Petare (surveys and focus groups conducted as part of the project social assessment confirmed that title to property was a priority for barrio-dwellers); in case of extreme difficulty to define individual properties, titles will be condominium; land titling should be done through proper, conventional, titling procedures, according to Venezuelan existing legislation;

No attempt will be made, as proposed in many projects, either to improve the current system of registry of titles or to establish a parallel system. This could be valid if extension of titling and the improvement of titling procedures were the sole objective of the project.

- Sites should be defined within the process of preparation of the Neighborhood Improvement Plans (NIP) where the re-

ordering of the existing layout will be carried out together with the definition of streets, rights-of-way, individual and condominium property limits and the identification of the site occupants; and

Attempts to title properties without the support of both the NIP and community participation would prove to be of no consequence. Disputes concerning rights will have to be resolved within the community and the resolution will be incorporated in the NIP. Also, without the final covenants between parties required by the NIP, there is no guarantee that similar disputes would not arise in the future.

- Expectation of title will be used as an incentive to recover part of the costs of project investments. Beneficiaries will be charged a one-time combined land transfer/improvement levy to partially recover the costs of the package of goods and land transfer. The transfer of title would be dependent upon the household's willingness to enter into an agreement to pay the levy, and would be provisional until the debt had been paid, carrying a first lien on the proceeds of any sale prior to cancellation of the debt. The levy to be charged will depend on the relative location of the dwelling and the ability to pay of the beneficiary and will be defined by the end of the first year of project implementation.

### **3.2 Putting in Place Collective Action Mechanisms.** Strategic choices were:

- To assign to a special agency, the responsibility to plan, coordinate and execute the project. As a result, the Project will be run through a PMU that will originate in FUNDACOMUN. By the end of the fourth year of the Project, a study will be completed to determine the feasibility of creating an autonomous agency, the Metropolitan Area of Caracas Barrio Improvement Agency (MACBIA), charged with the coordination and management of infrastructure investments in barrios, which would undertake any follow-up project.

There were two alternatives to the above choice: (i) to implement the project through either one of two central government agencies, FUNDACOMUN or CNEB; and (ii) directly through the Municipalities of Libertador and Sucre. Barrio improvement is a clear municipal responsibility which should not be delegated to central government agencies, which in the long-run is responsive to other constituencies than the beneficiaries of the Project. On the other hand, the Municipalities of Libertador and Sucre, initially unresponsive to the idea of barrio upgrading, proved also not to have the capacity to execute a large scale operation such as that proposed by the project. They acknowledged that and, also in view of metropolitan nature of the problem, agreed to delegate this responsibility to the PMU and the future a Metropolitan Area of Caracas Barrio Improvement Agency (MACBIA). In addition, both municipalities will be part of the PMU's technical committee, will execute some works and will preserve their legal competence to approve the NIPs.

- To strengthen through technical assistance, the municipalities of Libertador and Sucre, so that they can (a) support the PMU during project implementation, and (b) carry out their legal mandate with respect to barrios after the project is implemented;
- To make full use for project implementation of the numerous barrio urban infrastructure related NGOs and CBOs which have originated in the MAC as a consequence of the lack of state action in this field. Intense community participation at all phases of the project is seen as keys to its success. Two instruments will serve to consolidate the community participation efforts: (i) the Local Co-Management Groups (LCG); and (ii) the above mentioned NIPs.

### **3.3 Housing Credit.** Strategic choices were:

- To develop a privately-funded and market-based program to deliver housing improvement loans to low-income populations;
- To apply non-traditional lending methodologies to reach low-income populations (e.g. application of joint liability mechanisms),
- To establish a guarantee fund, in favor of the participating banks, designed to demonstrate borrower capacity and

willingness to pay, as well as provide a hedge against macroeconomic shock risk,

- To provide technical assistance to the borrowers to ensure that they build with the right structural integrity, target priority investments (e.g. build a bathroom before a porch), and receive the expected benefit of the housing improvement efforts; and
- To leverage government resources through access to private funding and to allocate risks to those parties best able to manage or assess them.

**3.4 Integrated Packaging of Basic Urban Services:** Strategic choices were:

- To approach the problem of the MAC barrios in a comprehensive way. This means that an attempt will be made to deal simultaneously with a package of services and problems that include: (i) titling; (ii) providing access; (iii) replacing housing in risk-prone areas; (iv) water provision; (v) sanitation and drainage; (vi) electricity; and (vii) public lighting
- That at design level, the coordination of the above package, would be ensured through the preparation of NIPs. These plans would be prepared, during the first year of Project implementation, by the communities within each of the barrios. They will include designs for improved pedestrian and vehicular access, improved water, drainage and sanitation systems, improved electricity distribution, public lighting, green spaces and community centers. They will also include the replacement or improvement of housing located in risk-prone areas or that which is structurally unsound, as well as resettlement of structures impacted by projects to improve roadways. For the preparation of these plans, communities will be supported with the assistance of qualified professionals such as urban planners, architects, engineers, lawyers and sociologists.
- That at the phase of execution of works, coordination would be ensured by the communities with the possibility to manage directly the responsibility the procurement and management works, with the assistance of the PMU, or defer this responsibility in full to the PMU, with the community group acting in an advisory capacity.
- To strengthen the capacity of the community through technical assistance and empowerment.

This choice follows very closely the structure and procedures experimented with in the pilot projects of Aguachina, El Limón, and Quebrada Catuche in the MAC. It was further improved by the assessment of methodologies and procedures used in São Paulo's Water Quality Project (Guarapiranga) and in Guatemala's Municipal Development (El Mezquital).

**C: Project Description Summary****1. Project components (see Annex 2 for a detailed description and Annex 3 for a detailed cost breakdown and timetable):**

Component	Category	Cost Incl. Contingencies (US\$M) <sup>1</sup>	% of Total	Bank-financing (US\$M)	% of Bank-financing
<b>Urban Upgrading:</b> This component will finance the design and execution of the communities Neighborhood Improvement Plans (NIP) for the areas of La Vega and Petare Norte. Direct costs will include the design and execution of pedestrian and vehicular access; water distribution; sewerage and sanitation; drainage, electricity distribution; public lighting; community centers; and construction of new housing for resettlement. It will also cover the costs of community outreach, Social Assistance Outreach and environmental education programs associated with the development of the NIPs, and the legal and administrative costs associated with land titling.	Physical and Other	136.1	89	52.7	88
<b>Institutional Development:</b> This component will finance the start-up and operational costs of the Project Management Unit (PMU), including public dissemination, monitoring and evaluation, and technical assistance and capacity building in several areas including cost recovery, municipal cadastre updating, development of technical norms and standards for urban projects in the informal sector, the design of the Metropolitan Area of Caracas Barrio Improvement Agency (MACBIA) and additional relevant studies.	Project Management and Institutional Building	14.9	10	7.1	12
<b>Micro-Credit Pilot Project for Housing Upgrade:</b> This component will finance the development and operation of a market-based housing improvement loan fund which will provide consumer credit to low-income individuals residing in the barrios to finance improvements to their housing unit, working through a partnership between private banks and a non-governmental organization (NGO).	Credit and Institutional Building	1.2	1	0.2	0.3
	<b>Total</b>	<b>152.2</b>	<b>100</b>	<b>60.0</b>	<b>100</b>

<sup>1</sup> Numbers may not add due to rounding.  
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## **2. Key policy and institutional reforms supported by the project:**

The project supports three key policy and institutional reforms: (a) the development of a consistent, rational and economically and socially viable program of barrio consolidation; (b) the decentralization and coordination of investment in the barrios at the level of the MAC; and (c) the private sector involvement in the improvement of informal housing.

**2.1 Barrio upgrading and consolidation.** With formal recognition of barrios in 1989, with the creation of the *Comisión Nacional de Equipamiento de Barrios* in 1995, and with the approval, in 1994, of the *Plan Sectorial*, the GOV drastically changed official policy and opened the door to begin the process of not only improving the living conditions of those in the barrios, but also setting the stage for the official recognition of the right of settlers to occupy the land by providing them with formal title. The proposed Project strengthens that policy by supporting the 1994 *Plan Sectorial* recommendation to consolidate and improve the barrios of the MAC in an integrated manner, through direct investment in infrastructure and human capital, and *the de facto* economic and social stabilization of the informal sector, rejecting traditional slum-clearance and public housing solutions. The Project also builds on recent pilot experiences of slum upgrading in the MAC that have relied strongly on community-based planning and implementation processes. By scaling up this approach, it proposes to generate a model that can be replicated in other barrios of the MAC, supporting implementation of the longer-term slum-upgrading policy postulated by the *Plan Sectorial*.

**2.2 Decentralization to municipalities of responsibilities concerning barrios.** The above GOV initiatives also set the stage for the decentralization of policy concerning barrios to municipalities, in consonance with the general decentralization trend which affects Venezuelan policy making, which the Bank strongly supports. In fact, Bank support to Venezuela in this field has been very consistent. The Bank financed PROMUEBA Project, of 1993, provides financing to municipalities for barrio infrastructure, linked with municipal technical assistance. The proposed Project will support decentralization of barrio policy to the PMU, charged with coordinating and implementing investment in the barrios, supported by a technical committee including representatives from the states and municipalities. The GOV clearly recognized early in the Project preparation that a metropolitan agency was needed to coordinate investment in the barrios of Caracas in order to support the process of devolution to the local level, but also understood the technical constraints of the individual municipalities and the need to plan investment on a metropolitan scale. The Project will continue to give support to decentralization of barrio policies to municipalities, and will support the future creation of the MACBIA.

**2.3 Private sector involvement in the improvement of informal housing.** The formal banking system will participate in the development of a program to provide micro credit loans to informal barrio dwellers, in order to make physical improvements to their dwellings. In the past, the GOV has provided funds to NGOs for this purpose, but interest rates were capped below market making the programs unsustainable. The project will support a new scheme which will leverage private sector bank funds, allowing these funds to flow to the barrio household level through a partnership with a locally strong and proven NGO. Loans will be made at rates above market, allowing for sustainability. It is estimated that through this system, a US\$1.0 million partial risk guarantee fund set up for this purpose will leverage up to US\$5.0 million in consumer loans for housing upgrades. Although a small step, this pilot credit scheme could be scaled up to make housing credit available to a substantial portion of the population currently unable to access credit through formal banking channels.

## **3. Benefits and target population:**

**3.1 Target Population:** The project will target two separate agglomerations of barrios in Caracas - Petare Norte, located in the municipality of Sucre, and La Vega, located in the municipality of Libertador. Together these two agglomerations contain twelve distinct barrios and a population of 184 thousand.

Petare Norte is an agglomeration of four contiguous barrios - Antonio Jose de Sucre, Agricultura, Jose Felix Ribas and Julian Blanco, with a total population of 102 thousand (20,014 families) located in the Municipality of Sucre over an area of 227.16 hectares. The Project will target all of the barrios in Petare Norte. The average family size in Petare Norte is 5.3 persons, with the typical family living in a single-family dwelling, self-built, of brick or concrete. The population of Petare Norte is relatively young, with 32 percent under the age of 15, and fairly stable, with 57 percent having lived there for 10 years or longer. Approximately 34 percent of the households are female-headed. The average household income,

though still below citywide averages, is higher than expected at US\$421/month equivalent. Female-headed households typically earn 94 percent of male-headed households and 82 percent of households headed by couples. Despite higher than expected household incomes, a relatively high percentage of the population is poor. The lowest 20 percent of the population earn only the average equivalent of US\$301/capita/year, or roughly the equivalent of \$125/household per month. In addition, 40 percent of the population works in the informal employment sector, a less secure employment status, and one that does not reap formal employment benefits.

La Vega is an agglomeration of eight contiguous barrios - El Carmen, Vista Hermosa, Los Naranjos, Los Paraparos, Los Cangilones, Los Mangos, Los Torres and San Miguel, with a total population of 82 thousand (14,620 families) located in the Municipality of Libertador over an area of 293.68 hectares, making it considerably less dense than Petare Norte. The Project will not target the entire area of La Vega, but will instead focus on the barrios El Carmen, Vista Hermosa, Los Naranjos, Los Paraparos, Los Cangilones and San Miguel. (Due to the relatively low population densities of Los Mangos and Los Torres, investment in these areas could not be justified on cost-benefit and economic grounds). Socio-economically La Vega is similar to Petare Norte. The average family size is 5.4 persons, with 55 percent having resided in La Vega for at least ten years. Like Petare Norte, the population is relatively young, with 32 percent of the population under 15 year of age. Average household incomes are lower than in Petare Norte (US\$409/month equivalent), consistent with the fact that a higher percentage of households are female-headed. In addition, a slightly higher percentage of workers are employed in the informal sector (45 percent). As with Petare Norte, there are pockets of extreme poverty in La Vega, with the bottom 20 percent of the population earning only the equivalent of US\$125/month/household.

**3.2 Benefits:** In a social assessment conducted during project preparation which included a 2,300 household survey, focus groups and interviews with community leaders in the Project's targeted barrios, respondents were asked to identify their most pressing community problems and priorities. In both Petare Norte and La Vega the top five priorities (in order) were: (i) safer neighborhoods (26.2 percent); (ii) improved water distribution systems (23.4 percent); (iii) better sewerage systems (11.4 percent); (iv) improved access to the barrios from the formal neighboring areas (8.8 percent) and (v) better pedestrian and vehicular access within the barrios. The project will provide a direct benefit to those living in Petare Norte and La Vega by responding to these community priorities. *Inter alia*, the project will:

- Improve water systems to a minimum service standard of eight hours of water, seven days a week, consequently reducing risks associated with poor water service, eliminating the need to store water, and lowering water losses;
- Provide adequate and properly engineered sewerage to all households and eliminate the current practice of combining surface rain water drainage with household wastewater drainage, thus providing direct health and environmental benefits to the community;
- Provide much improved access both to-and-from and within the barrios, resulting in better circulation for public transportation, emergency vehicles and police, solid waste collection vehicles and other transport vehicles, as well as lowering transport costs (time and money) for the barrio dwellers;
- Improve public lighting in streets and alleyways resulting in enhanced safety;
- Reduce the number of families living in high geotechnical risk areas or in structurally unsound buildings;
- Empower communities by fostering community participation and decision making at the local level, together with the provision of local institutional support resulting in stronger and better organized communities; and
- Improve access to housing credit through formal market channels so that families may improve the physical condition of their housing or expand their housing unit for a productive use.

#### **4. Institutional and implementation arrangements:**

**4.1 Implementation Period:** The Project will be implemented over a period of five years, beginning January 1999.

**4.2 Executing Agency:** FUNDACOMUN will be the Central Government counterpart and executing agency for the Project. FUNDACOMUN will be responsible for the coordination of GOV funding and flow of these funds to the Project. By way of the annual budget process, FUNDACOMUN will assign a determined amount of resources to the PMU sufficient for it to carry out its objectives of project management and coordination. FUNDACOMUN will also work in concert with the PMU to ensure that sufficient Government counterpart, Government co-financing and Bank funds are available for the execution of works and activities under the project. Operating through its Board of Directors, FUNDACOMUN will be responsible for establishing the overall policies, execution strategies, coordination and evaluation of the Project from its inception to termination, providing direction to the Project Management Unit.

FUNDACOMUN is a decentralized national public administration organization and the oldest municipal development agency in Latin America. This semi-autonomous agency, under the auspices of the Ministry of Family Affairs, receives annual budget authority from Congress and has the power to generate additional income from outside at the direction of its President and Board of Directors. FUNDACOMUN's mandate is the promotion of decentralization and the strengthening of local governments and local communities. It currently manages several important programs, such as: (i) the *Programa Nacional de Equipamiento de Barrios* which aims to stimulate community participation in local community development; (ii) the *Programa de Ocupación Inmediata en Barrios* (POIBA) which creates short-term employment opportunities for the poor; (iii) the *Programa de Gestión de Ciudades Intermedias* which strengthens municipal finance, administrative and local planning agencies; and (iv) the *Proyecto de Mejoramiento Urbano en Barrios*, a World Bank financed project which provides technical assistance to municipalities and co-financing of basic urban infrastructure projects in low-income barrios in secondary cities. The Bank has been working with FUNDACOMUN since 1993.

FUNDACOMUN will be assisted in its role as strategic planner by a Consultative Council, which will help in setting program policy. The Council will consist of high level representatives from the two municipalities, the governments of the State of Miranda and the Federal District, Hidrocapital, INAVI and representatives from the beneficiary communities.

**4.3 PMU:** The PMU will be a semi-autonomous, specialized unit responsible for the coordination, administration and execution of the Project. This unit will be assigned directly to the Presidency of FUNDACOMUN, charged with coordination of investment in MAC barrios. The PMU will consist of an Executive Management Unit assisted by a Technical Commission. These two units will be responsible for the overall coordination and management of the Project, including the coordination of all sources of funding. The Executive Management Unit will provide overall coordination, including maintaining relations with the Central Government, Public Utility Companies, State and Regional Governments, Municipalities, and other public and private entities. To facilitate this, a Technical Commission will be established to provide permanent interface with the Executive Management Unit. This Commission will include technical representatives from the above mentioned entities, and will provide continual technical advice to the Executive Management Unit. Under the Executive Management Unit there will be four separate management units:

- **Procurement and Contracting Administration:** This unit will undertake all actions related to procurement and will control and manage the fulfillment of all executed contracts and agreements;
- **Project Administration and Finance:** This unit will coordinate and manage, together with FUNDACOMUN, the financial and auditing aspects of the project;
- **UPF - PMU for Petare Norte:** This unit will coordinate the execution and follow-up of all work being done in Petare Norte under the project in order to guarantee the quality of all technical, social and administrative aspects of the project.
- **UPF - PMU for La Vega:** This unit will serve the same function for La Vega.

The UPF –PMUs for Petare Norte and La Vega will coordinate and manage the technical aspects of Project execution at the ground level, and will provide the critical interface between the project execution in the field, and the Executive Management Unit. In addition to managing the construction of both UPF and UDU level works, the UPF – PMUs will be responsible for managing all special programs including, inter alia, Resettlement, Land Titling and Environmental Management. They will be responsible for directing and managing the design and execution phases of the sub-projects, coordinating inspection of plans and works, and will provide direct coordination with: construction companies executing works, local authorities, public utility companies, Local Co-Management Groups and the communities themselves.



**4.4 Local Design Offices (LDOs) and Local Co-Management Groups (LCGs) :** In each of the barrio neighborhoods (UDUs) targeted by the Project, a Local Design Office will be set up at the onset of the Project. The LDO will be made up of professional staff and community leaders who will be the primary interlocutors in the development and implementation of each of the neighborhood improvement plans. At the end of the neighborhood design phase (1<sup>st</sup> year of the Project), the capacity of the community to manage the design and implementation process of neighborhood (UDU level) improvement plans will be evaluated, and the decision will be taken as to whether (i) the UDU sub-projects will be executed by the UPF-Project Management Unit with assistance from the LDO, or (ii) the sub-projects will be executed directly by the Local Co-Management Group, with assistance from the UPF-Project Management Unit.

The Local Co-Management Group would be constituted to have legal personality, so as to take on the function of contracting and managing the execution of the works called for under the NIPs. However, in most cases it is foreseen that this will be done directly by the UPT –PMUs, with continual consultation with the community.

The Local Design Office or Co-Management Group will consist basically of five separate units:

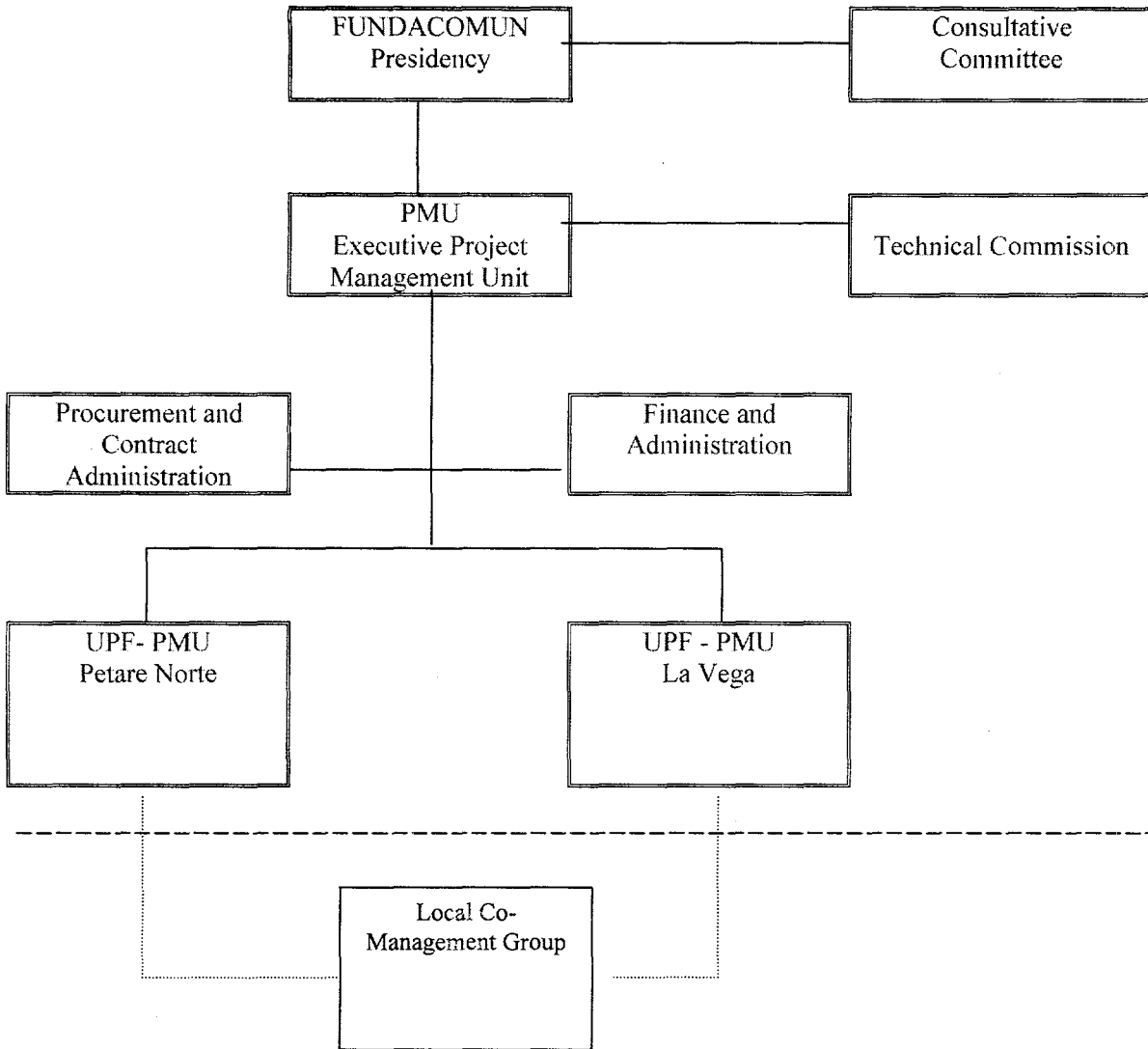
**General Assembly:** The General Assembly will consist of members of the community, as well as representatives from the professional teams assisting in the design and execution of the NIPs. It is the primary responsibility of General Assembly to approve the NIPs and to ensure that the opinions of all members of the community are heard in that respect.

**General Director:** This group will consist of technical representatives from the professional teams working in the design of the Project, and representatives from the community assisting in the technical activities. It is the responsibility of this unit to guarantee the effective, efficient and equitable execution of the NIPs.

**Community Participation Unit:** The role of this unit is to stimulate and ensure the active participation of the community in the design and execution phases of the NIPs. It will be constituted from members of the community with a leadership role in the community.

**Technical Assistance and Social Outreach Unit:** This unit will assist in the technical aspects of the NIPs design and execution, specifically in the areas of engineering, architecture and urbanization, as well as assist in developing program designed to improve the technical capacity of the community at large. It will be constituted by members of the community and the professional technical teams.

**Administration Unit :** This unit will be responsible for monitoring the sub-project budgets, administration and financial control of funds. In the case that the Co-Management Unit has the capacity to act as the executor of the Project, the role of this unit will become one of financial control and management.

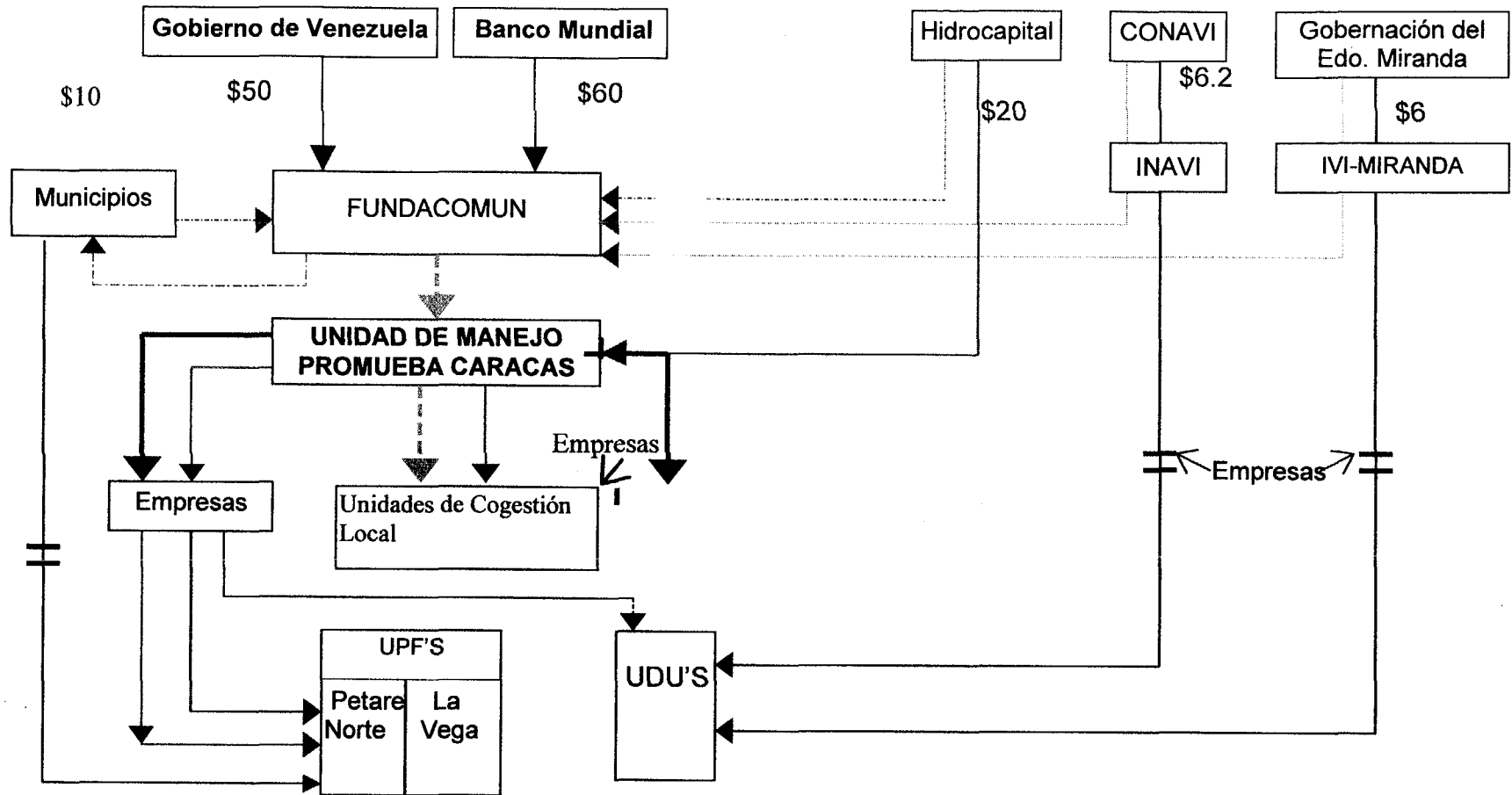


**4.5 Inter-institutional Matrix:**

<u>Entity</u>	<u>Arrangement</u>
Municipalities: (Approval by Mayor and Council)	A participation agreement will exist between FUNDACOMUN and the two municipalities. The municipalities will participate in the co-financing of sub-projects and will finance 100 percent of electricity and public lighting works, and a percentage of road works. The municipalities will also provide technical support in the provision of land titles. (Product - Contracts)
State of Miranda: (Approval by Governor and State Assembly)	A participation agreement will exist between FUNDACOMUN and the State of Miranda for the financing and/or direct provision of housing for resettlement purposes in the barrio of Petare Norte. (Product -Legal Agreement)
Hidrocapital (Approval by President and Board of Directors)	A participation agreement will exist between FUNDACOMUN and Hidrocapital for the assignation of financial resources, and the delegation of these resources to the PMU for the financing of water and sanitation sub-projects. (Product - Contract)
INAVI (Approval by Board of Directors)	A participation agreement will exist between FUNDACOMUN INAVI for the financing of resettlement housing sub-projects in Petare Norte and La Vega. (Product - Legal Agreement)
CONAVI:	CONAVI will enter into a participation agreement to authorize the use of INAVI funds the Project related resettlement housing.
Local Co-Management Groups (LCG): (Approval by LCG Board of Directors)	A contract will exist between FUNDACOMUN and the LCG to design and execute works in the barrios or contract with general contractors to execute the works. Delegating responsibility to the LCG will be done only in exceptional cases where there is demonstrated capacity at the local level. In most cases, it is expected that the LCG will choose to delegate the authority to design and execute the works to the PMU.

**FLUJOGRAMA DE RELACIONES INSTITUCIONALES Y RECURSOS**

Institutos del Gobierno Central y Empresas de Servicios



**Nota:** Los recursos indicados están en millones de dólares.

- ← Ejecución de obras
- ← Convenio de participación
- ← Contrato
- ← Convenio de préstamo
- ← Convenio de participación y delegación
- ← Normas de procura

**4.6 Procurement:** As indicated above, the PMU will establish a specialized unit specifically to manage, control and expedite all procurement under the Project, and to provide follow-up contract administration and, where necessary, technical assistance to LCGs. Most procurement will be done through a local competitive bidding process, with about 30 percent of contracts likely to reach amounts that will require an international competitive bidding process. The Project Implementation Manual will include detailed procurement procedures, which will have been pre-approved by the Bank. See annex 12.

**4.7 Financial Management:** FUNDACOMUN will be responsible for maintaining project management arrangements acceptable to the Bank. A LAC Financial Management Specialist (FMS) has visited and is assisting the Project Management Unit to establish a project financial management system as required by the Bank, per OD. 10.02. A consultant acceptable to the Bank shall be engaged prior to Board presentation and having an operable system acceptable to the Bank shall be a condition of effectiveness. External audits of Project and Executing Agency's (FUNDACOMUN) financial statements will be required on an annual basis, with contracts covering the duration of the project, providing auditors with sufficient lead time for audit preparation, thus ensuring timely submission of audit reports.

**4.8 Monitoring and Evaluation Arrangements:** Monitoring will be done through a special unit within the Executive Management Unit's office of the PMU and will include the daily monitoring of costs and activities to ensure that the Project is advancing according to projected costs and scheduling. Monthly reports will be generated detailing Project advancement and expenditures and providing the requisite information for managers to make informed decisions. Monitoring will require close Bank supervision in the first two years of Project execution, given that the first year is devoted to community organization and sub-project design, and year two is devoted to the commencement of sub-project construction. It is expected that four supervision missions will be required in each of the first and second years of Project execution, decreasing to two annual supervision mission in subsequent years. Evaluation of impacts will be done in several ways, and will involve special studies such as (i) social assessment; (ii) land markets survey; (iii) scalogram and (iv) quality impact monitoring. These are detailed in Annex 1.

## **D: Project Rationale**

### **1. Project alternatives considered and reasons for rejection:**

The government considered three possible alternative approaches to improving the living conditions of barrio residents. After consultation between the Bank and the GOV and study visits to Brazil and Guatemala, the final approach of the comprehensive, integrated barrio improvement program was decided to be the most appropriate, cost-effective, and socially, financially and technically feasible option. Other alternatives considered and reasons for rejection are briefly indicated below:

<b>Approach</b>	<b>Defining Characteristics</b>	<b>Reasons for Rejection</b>
<b>Status Quo: "no intervention"</b>	Caracas barrios would continue their unregulated and uncontrolled growth with increased overcrowding, uncontrolled development in high-risk and environmentally sensitive areas, poor service quality, extremely difficult accessibility and circulation, insecure land tenure, and myriad social and economic inequities resulting from living in the informal sector.	Small-scale, adhoc infrastructure investments made in the barrios are unsustainable: cost-recovery and maintenance are extremely difficult. Public services that require vehicular access will not be provided. "No intervention" will lead to continued decline in the quality of barrios and neighboring areas.
<b>PROMUEBA I:</b>	Sector investments to improve physical infrastructure in low-income barrios, with decisions made at the municipal level.	More appropriate for areas with lower population densities and clear sector infrastructure and service deficits. The size (1.2 million people) and densities of the Caracas

barrios warrant a more comprehensive and integrated approach in order to make a significant impact on the quality of life of specific agglomerations.

**Slum Clearance and On-Site New Housing:**

This approach is similar to São Paulo's Cingapura project which has razed existing slums and built new higher-density housing in the same area, moving the original residents back in. This comprises high- and low-rise housing combined with on-site social programs.

The cost of this approach is about four times that of barrio consolidation, and requires temporarily resettling substantial amounts of people for up to one year or more while new housing is being constructed. In addition, Venezuela's experience with high-rise solutions in the past has been typically associated with some of the worse social conditions in the country.

**Land Titling Only:**

Provision of secure titles to the occupiers of the barrios.

A titling only approach might be acceptable in barrios with existing rational physical layouts. Titling should be done in conjunction with reordering of layouts.

**2. Major related projects financed by the Bank and/or other development agencies (completed, ongoing and planned):**

Sector Issue	Country	Stage	Project	Latest Supervision (Form 590) Ratings (Bank-financed projects only)	
				Implementation Progress (IP)	Development Objective (DO)
Bank-financed					
Urban	Venezuela	Ongoing	Low-Income Barrios	S	S
Water and Sanitation	Venezuela	Ongoing	Monagas Water	S	HS
Transportation	Venezuela	Ongoing	Urban Transport	S	S
Human Resource Development	Venezuela	Ongoing	Social Development		
Water and Sanitation	Brazil	Ongoing	Sao Paulo Water Quality (Guarapiranga)	S	S
Water and Sanitation	Brazil	Completed	PROSANEAR		
Water and Sanitation	Brazil	Planned	PROSANEAR II		
Urban	Guatemala	Completed	Municipal Development (El Mezquital)		
Urban	Colombia	Planned	Land Regularization and Slum Upgrading		
Urban	Brazil	Planned	Recife Slum Upgrading		
Urban	Mexico	Planned	Northern Border Community Development		
Other development agencies					
Urban (IDB)	Venezuela	Ongoing	PROINSOL	NA	NA
Urban (IDB)	Brazil	Ongoing	Favela-Bairro	NA	NA
Transport (IDB)	Venezuela	Ongoing	National Urban Transport	NA	NA
Housing (IDB)	Venezuela	Ongoing	Social Housing Program	NA	NA

IP/DO Ratings: HS (Highly Satisfactory), S (Satisfactory); U (Unsatisfactory), HU (Highly Unsatisfactory)

**3. Lessons learned and reflected in the project design:**

The Project design reflects lessons learned in several areas that are discussed briefly below:

**3.1 Integrated Geographic Approach:** The geographic approach to integrated urban development is typified by many of the Bank shelter projects of the early to mid- 1970s. These projects, which generally aimed to improve basic infrastructure in already settled low-income neighborhoods, were by and large successful in meeting their objectives. However, these projects tended to remain at a small scale and highly centralized. Moreover, they were rarely expanded to a national level. Lessons from these early efforts suggest that, to make these projects sustainable, governments must pursue supportive policies, such as the regularization of land tenure, improvement of housing finance systems, decentralization of service provision and the institutionalization of urban and land development regulations which facilitate, rather than restrict, investment.<sup>1</sup> The Project takes this lesson into account, taking it one step further by suggesting that such an approach must also be scaled-up to a level that will have a significant impact on the quality of life of the residents in the targeted barrios and a demonstrable positive impact on the urban cityscape.

**3.2 Decentralization:** Bank experience has shown that the decentralization of basic infrastructure and service provision to municipalities, or to local associations of governments, significantly increases accountability to all segments of the population and consequently improves service quality. Decentralization of basic urban services and infrastructure

<sup>1</sup> Kessides, Christine. *World Bank Experience with the Provision of Infrastructure Services for the Urban Poor*, January 1997  
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provision poses several important challenges, the most urgent being the need to increase the capacity of local governments and agencies to manage these activities. In some cases, human shortfalls necessitate the building of capacity at the local and community level, or may require management through associations of municipalities, or private sector participation. This is reflected in the Project design through the interinstitutional structure of the project relying on coordinating investment in the barrios, as well as through the package of technical assistance which will be provided to the participating municipalities.

**3.3 Community Participation and Cost Recovery:** Community participation is another essential component for sustainability and cost recovery in upgrading programs. Bank experience suggests that the financial viability of upgraded works and improved services is enhanced when beneficiaries are allowed to indicate their effective demand for these improvements and participate in the decision making process. The involvement of the community in the decision making process provides them with a voice and a sense of ownership over the project, which leads to a higher likelihood of cost recovery. Previous projects point out that NGOs and CBOs can be effective intermediaries for the community, assisting in articulating needs and preferences and sorting through the tradeoffs when choosing among various alternatives. Likewise, NGOs and CBOs can be effective vehicles for promoting cost recovery, given their unique relationship with the community. The Project puts great emphasis on community participation. It will set up local Co-management Groups (LCG) which will have strong input in all aspects of decision making, including sub-project design and the execution of the works.

**3.4 Resettlement:** Past experience with civil works projects, emergency works and urbanization projects involving slum clearance in the MAC suggests that the process of population displacement has not always been handled with sensitivity in Venezuela. Meetings on several occasions with leaders from the targeted communities indicated that, in particular, families are concerned with losing their housing entirely and lack confidence in the effectiveness of resettlement options that were offered by the GOV in the past. In contrast, pilot projects such as Quebrada Catuche, Aguachina, San Miguel and El Limón, ongoing or implemented in the very recent past, which have adopted the slum upgrading approach, are seen as having produced better results. Interviews and site visits during project preparation indicated that in these projects there was great willingness on the part of households to work in concert with each other for the benefit of the entire community, while recognizing the need to avoid the hardship of displacement incurred by individual households. This is due, in no small measure, to the fact that the process of neighborhood upgrading and resettlement of families, although government-funded, was conducted in these cases in an open, transparent and participatory way, with strong technical and managerial involvement of local CBOs, NGOs and consultants. The *Plan Sectorial's* policy of upgrading and integrating slums into the urban structure and the pilot projects mentioned above together represent a marked change in the handling of resettlement by the GOV.

**3.5 Appropriate Technologies and Standards:** Experience has shown that appropriate technologies and design standards in low-income areas can greatly reduce upgrading costs and promote greater access by the poor to basic infrastructure and services. A recent Bank review of urban service provision to the poor indicates that flexible design standards are key to keeping costs low and increasing access to these services. Brazil has shown great success in the use of appropriate technologies and standards for urban infrastructure and services, and several cities, including Rio and São Paulo, have incorporated the use of these technologies (such as in water and sanitation) and standards (such as higher maximum densities and reduced road sizes) into formal building, planning and engineering codes. Sub-projects will incorporate these technologies whenever appropriate and feasible, and funds will be allocated to develop a set of parallel development norms and standards for the barrios, recognizing that their conformity to existing norms and standards is impossible.

**3.5 Enabling Markets to Work:** The Bank's policy paper on housing indicates that the poor suffer most when housing markets fail. The research suggests that failures in the housing market often restrict the supply of housing, thus raising the costs of access to formal sector solutions beyond the reach of the poor. The result can be a growth in squatter settlements, as in the case of Venezuela. Failure to address problems of the housing market exerts pressure on the poor to continue to seek housing alternatives outside the formal sector, hindering the long-term sustainability of slum-upgrading programs. Developing a strategy that enables the housing markets to work for all segments of society is essential to easing these pressures and to providing the poor with formal sector housing options.<sup>1</sup> Although this project will not

<sup>1</sup> *Housing: Enabling Markets to Work*, A Bank Policy Paper, April 1993.  
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explicitly confront the broader issue of housing markets in Venezuela, it will include a pilot component aimed at providing a market-based housing improvement loan fund, which will provide access to credit to a large segment of the population currently excluded from formal credit markets and often from government housing subsidies.

#### **4. Indications of borrower commitment and ownership:**

The GOV is fully committed to the Project. The Project's genesis is in the Government's 1994 *Plan Sectorial de Incorporación a la Estructura Urbana de las Zonas de Barrios del Area Metropolitana de Caracas y la Región Capital*, which represents official policy towards the improvement of barrios of Caracas. The Project is fully consistent with the plan, which provides the Project with the proper institutional framework for its implementation. The Project is also supported at all levels of government, with official commitment and financial support being provided by the two municipalities, the State of Sucre and three separate central government agencies - FUNDACOMUN, Hidrocapital and the National Housing Agency (INAVI).

#### **5. Value added of Bank support in this project:**

Bank involvement in the Project adds value in several strategic areas:

- The design of a sustainable barrio-upgrading strategy in Venezuela has benefited from the growing body of Bank experience in the region. During Project preparation important links were established between the GOV and governments of other countries where the Bank is currently implementing upgrading projects. A study trip to Guatemala by representatives from FUNDACOMUN and the Ministry of Urban Development to review the Bank financed Guatemala Municipal Development Project in El Mezquital reinforced the value added of the Bank and led to a three-day regional workshop on participation in slum-upgrading. A study trip to the Brazilian cities of São Paulo, Rio de Janeiro and Belo Horizonte allowed on-site verification and in-depth discussion of alternative approaches and established technical assistance links between the project coordinators in Venezuela and practitioners in Brazil. Many elements of the Brazil experience in São Paulo are incorporated in the Project's technical design. As a result of these links, an informal network of slum-upgrading practitioners has developed whose formalization the Bank is supporting.
- The Project has also benefited from Bank engineering expertise. Original cost estimates for sub-projects were reduced by about 30 percent after Bank experts were able to review sub-project designs and costs. Significant reductions in the amount of resettlement to be required as part of the execution of sub-projects was also a direct result of Bank involvement. In addition, the Bank financed social assessment and economic analysis allowed the GOV to better target its investments and focus on community priorities.
- One of the key benefits of Bank involvement has been the ability to facilitate the coordination of investment activities in the barrios. Because of Bank involvement several government agencies are participating with financial resources in the project. The Bank was the catalyst for bringing these resources together, leveraging additional funds and channeling these through a single entity for a common objective. Facilitating local investment is a primary strength of the Bank in this Project.

#### **E: Summary Project Analysis (Documents in the Project File are listed in Annex 14)**

##### **1. Economic** (see by Annex 4):

[ X ] Cost-Benefit Analysis:

The Project economic analysis underwent several iterations during the preparation process, resulting in subtle design changes in order to maximize the financial and economic returns of the Project. As the project includes many sector investments, an economic analysis was conducted independently for each separate sector investment, where feasible, in order to maximize benefits vis-à-vis the costs for each separate investment component. In investments where it was not possible to make cost-benefit calculations, a set of guidelines was established to be used during project implementation to evaluate the economic feasibility of these specific sub-components, as in the case of micro-drainage works and land titling. In addition, cost-effectiveness factors were established for each of the components to verify that total investment costs on a per-capita basis were effective. Included in the economic analysis was a distributive poverty impact assessment for each of the sector investments.

It should be noted that while improvements will be made on an integrated basis, a cost-benefit analysis of each separate activity has been done (i.e. - separate C/B for water, sanitation, accessibility, etc.). This was done to ensure that subcomponents did not artificially support one another in terms of the economic returns, and to establish investment parameters that are cost-effective. The C/B analysis also allowed the project team to make cost adjustments in subcomponents.

## **2. Financial** (see Annex 11):

The total project cost is US\$152.2 million equivalent, of which the Bank loan of US\$60.7 million will finance 39 percent. Government counterpart funds are the equivalent of US\$60.0 million, comprising US\$50.0 million from the Central Government through FUNDACOMUN and US\$10.0 million in direct investment from the Municipalities of Sucre and Libertador. Hidrocapital, the Water Company, will provide additional financing of US\$20.0 million. INAVI will finance US\$6.2 million in housing costs, and the State of Miranda housing agency will finance an additional US\$6.0 million in resettlement housing costs. The Project will be executed over a period of five years beginning in January 1999. Recurrent costs account for 1 percent of total project costs.

The Project is expected to have the following fiscal impacts: With regard to water and sanitation, the monthly cost per family is Bs\$5,400 in Petare Norte and Bs\$7,300 in La Vega. The social tariff (Bs\$200/month/connection) that is charged is significantly below the long-run marginal cost of system expansion. The Social Assessment indicates levels of willingness to pay of up to Bs\$5,600 and 7,600 (depending on estimation method) in Petare Norte and of Bs\$6,540 and 5,320 in La Vega. These results suggest that there is both willingness and capacity to pay, as a commitment of approximately 3 percent of average family income in both barrios. It is therefore possible to provide these public services with near complete cost recovery in these areas. A study of alternative water and sanitation management schemes for Petare Norte and La Vega, including a suitable tariff policy, shall be presented to the Bank within four years of Project effectiveness. In the case of other services, it is important to separate accessibility, drainage, slope stabilization, and land titling, from resettlement, which comprises 50 percent of this remainder. It is possible to recover the near totality of the former group of services by means of charging US\$890/parcel in Petare Norte and US\$750/parcel in La Vega. The costs of resettlement are a social cost to be imputed to the State and indirectly to the general taxpayer.

The total costs of the Project per beneficiary households are US\$2,770 in Petare Norte and US\$4,100 in La Vega, which represents a monthly cost of US\$27 and US\$40 (assuming a discount rate of 10 percent in 20 years). Again, these amounts represent about 7 to 10 percent of monthly incomes.

## **3. Technical:**

The Project has been subjected to extensive technical reviews. These included: (i) an engineering review of the proposed water and sanitation infrastructure; (ii) an impact and engineering review of the proposed road infrastructure; (iii) a review of geotechnical risk in the Project's targeted barrios; and (iv) a review of resettlement requirements due to road works, geotechnical risk minimization and other neighborhood upgrading activities. Also studied in detail were issues relating to land tenure, and legal and institutional issues regarding access to micro-credit. With regard to the neighborhood micro-level works, a detailed cost review was completed using data from pilot projects, and costs estimated in the Gov.'s Plan Sectorial.

## **4. Institutional:**

In-depth assessment of the mandate, institutional and financial capacities of central, state and municipal government agencies and public utilities as relate to their potential role and track record in addressing slum upgrading issues was undertaken. At the onset of Project preparation, a Technical Committee -- comprised of FUNDACOMUN, INAVI, CONAVI, the Municipalities of Libertador and Sucre, the State of Miranda, the Government of the Federal District, Hidrocapital, Eletro Caracas, *Fundación Bomberos*, *Universidad Central de Venezuela*, *Comisión de Equipamiento de Barrios*, various NGOs -- was established to prepare the Project. This Committee met regularly to review advances in Project preparation and to define institutional responsibilities in Project implementation.

Detailed studies were conducted to determine the structure, responsibilities, and staffing of the Project Management Unit. Considerable attention was given to its relationship with all parties involved, in particular with FUNDACOMUN. In some cases, it was found that some agencies (such as Hidrocapital and, to some extent, INAVI, and the municipalities) preferred to delegate not only coordination but execution responsibilities to the PMU. In addition, legal and institutional studies were carried out regarding alternative models for long-term management of slum upgrading programs in the MAC, as well as regarding the local co-management model.

**5. Social:**

A social assessment was conducted as part of project preparation. The social assessment (SA) provided information on infrastructure priorities, land tenure, community organization, attitudes toward basic service delivery in the barrios, and willingness-to-pay for improvement of water and sanitation systems. The information gathered was used to identify risks and produce recommendations to refine project design. In addition, the information's generated in the SA furnished key data for the resettlement plan, the economic analysis, and project evaluation program. The analysis was based on three sources of information: (i) a survey of 2,312 households; (ii) 16 focus group workshops; and (iii) 20 interviews with key informants. Survey interviews were completed in approximately 79 percent of the sample, divided evenly between the three agglomerations initially targeted by the Project (La Vega, Petare Norte and Cotiza)<sup>1</sup>. The focus groups were carried out within a sub-sample of the same barrios surveyed. Workshops included four types of focus groups (groups made up of community leaders, of women, of men, and of both genders). The SA provided data for the Economic Analysis, the Resettlement Plan and the Project Monitoring Plan. A summary of its findings is presented in Annex 5.

**6. Environmental Assessment:**                      Environmental Category                       A     B     C

**6.1 Natural Resources Management and Pollution Control:** Although the project will generate substantial benefits to the urban and surrounding natural environment, the proposed urban upgrading activities could cause limited alterations to the environment that would minimize the benefits if not handled in a proper manner. Potential impacts pertain directly to the management of the construction process (nuisance, dust and noise from construction activities; disposal of construction wastes; increased traffic; timing of construction, and pedestrian safety). Of additional concern are the long-term management of solid and liquid waste collection and the control of urban growth towards green protection areas. Importantly, the project creates opportunities to develop new methodologies for environmental management of urban construction, which could be extended to other areas of the metropolitan region.

A rapid environmental assessment was conducted and the following steps are proposed to minimize potentially negative environmental impacts:

- execution of an environmental management plan using community groups and participation to protect and manage any environmentally protected areas adjacent to the Project sites;
- development of a manual of environmental specifications for all small-scale infrastructure construction projects to be executed in the barrios;
- preparation of guidelines for the treatment and disposition of solid waste generated during the construction process;
- development of general guidelines for the organization of community managed solid waste collection programs (household solid waste);
- design of a community environmental education program; and
- identification of additional studies to be undertaken during project implementation which will assist in improving the integration of environmental aspects into the urban development process.

**6.2 Resettlement:** It will be necessary to resettle an estimated 2,500 families (7.6 percent of the total number). Population displacement is required for two reasons: (i) to undertake infrastructure improvements (mostly road widening and construction, and drainage canals), entailing in some cases the opening up of space and reordering of existing layouts; and (ii) to remove housing structures that are either located in high geotechnical risk areas or that are structurally unsound.

During project preparation, a systematic effort was made to reduce the need to remove existing structures, resulting in a

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<sup>1</sup> Cotiza was dropped from the final Project design due to the low willingness to participate in that community.  
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significant reduction of affected housing units to about half the number originally envisaged. To address the cases where resettlement is unavoidable, a reference Resettlement Action Plan (RAP) has been prepared by the Borrower in accordance with OD 4.30. The RAP has been finalized and approved by all agencies involved in its implementation. Its discussion with the two target communities is a condition for effectiveness. Its general approach is to:

- Involve the community in all aspects of the neighborhood upgrading process, ensuring that households that will require resettlement are well informed and active participants in the decision making process.
- Undertake full socio-economic studies of each of the families and housing units to be displaced, and establish the tenure, occupation and use patterns that will determine the specific menu of resettlement options and support mechanisms to be offered.
- Provide fair compensation for lost assets.
- Offer a menu of options for relocation within the same neighborhood, comprising equivalent or better housing than displaced occupants previously had.
- Formulate appropriate designs and construct new replacement housing before displacement takes place, avoiding the use of temporary housing wherever possible.
- Provide legal, organizational, social, and economic assistance to the families requiring resettlement.

The RAP is summarized in Annex 7. Site-specific resettlement plans for the 12 UDUs will be prepared following guidelines of the reference RAP, in parallel with feasibility studies and detailed design of the neighborhood level urbanization projects. This will take place during the first year of implementation. The RAP will be carried out in full compliance with the Bank's directive, with careful monitoring and evaluation by the community, the Bank and Borrower's Project Implementation Unit.

#### **7. Participatory approach:**

a. Primary beneficiaries and other affected groups: As indicated, the project included an extensive social assessment that was used to confirm the Project approach and to refine that approach in an effort to respond to the concerns of the Project beneficiaries. In addition to the social assessment household surveys, focus groups and direct interviews, several informal meetings were held in Petare Norte and La Vega with religious leaders and community activists from community groups and local NGOs to discuss the Project objectives and listen to the concerns of the community. During execution, the community will be the central actor in the urbanization process - taking the lead in the process of negotiation, decision-making, design and execution, as co-manager of the sub-projects.

b. Other key stakeholders: In addition to the participation of the direct beneficiaries in the Project design, a logical framework workshop was held over a two day period in Caracas, in order to put together the conceptual framework for the project. This workshop included representatives from all levels of government, as well as individuals active in the informal sector, including representatives from several local NGOs. These actors were then continually consulted during the preparation period, forming a technical advisory group that met periodically to provide input into the Project design.

### **F: Sustainability and Risks**

#### **1. Sustainability:**

Sustainability is derived from two key factors. First, the project relies heavily on the participation of the community in the decision making process and in the management and/or execution of sub-project works. This has been identified as a necessary condition for the physical sustainability (upkeep of structures, maintenance and operations of communal service facilities) of upgrading projects. Without active community participation, the long-term sustainability of the project would not be possible. In addition, the community ownership of the Project is key to implementing a cost-recovery strategy which is another essential ingredient to sustainability.

Second, sustainability is derived from creating a specialized agency which can coordinate and manage investment and research in the barrios of Caracas. Given the overlapping jurisdictions and responsibilities for the provision of urban infrastructure and services, it is essential to have this coordinated at a level which allows for a view of the entire metropolitan region, while involving all the principal governmental actors and/or service providers in the

organizational scheme.

**2. Critical Risks (reflecting assumptions in the fourth column of Annex 1):**

Risk	Risk Rating	Risk Minimization Measure
Annex 1, cell "from Outputs to Objective"		
Active participation of community does not occur as envisaged.	N	Social Assistance Outreach will reinforce role of community
Land titling bottlenecks due to weak implementation capacity on the part of INAVI and municipalities	M	Special unit devoted to land titling and technical assistance to be given directly to INAVI and municipalities.
Community mobilization and initiation of sub-project design takes longer than expected.	M	Intensive Social Assistance Outreach is planned at Project outset.
Communities fail or experience delay in reaching agreement on neighborhood improvement plans (NIP)	N	Social Assistance Outreach will inform, clarify and attempt to mediate differences in views on the part of the community
Annex 1, cell "from Components to Outputs"		
Lack of adequate capacity to manage the Project	M	Current capacity is substantial of core of PMU. Critical functions will be outsourced. Staffing will be periodically assessed. Bank will closely supervise Project implementation.
Availability of timely counterpart funding	M	Bank funds are financing part of all components and activities. Board presentation is conditional to presentation of convenios between FUNDACOMUN and implementing agencies, specifying technical and financial obligations.
Election year politics will delay Project	M	There is broad support for project.
Private banks not willing to participate in the micro credit scheme.	N	MOUs will be signed. Guarantee fund provides adequate security.
Suitable land is not available within the barrio to accommodate displaced.	S	Current assessments indicate that land is a minor issue in La Vega, and a substantial concern of the population in Petare. Every effort will continue to be made to reduce the need for resettlement, by downscaling physical and pursuing less impact layouts and

passageways. Densification through use of low-rise vertical solutions is being studied. If, in worst case scenario, there is still a shortage of land, alternative locations in the urban area of the same municipality will be provided. Two preliminary studies indicate that resettlement can be carried-out in both Petare and La Vega.

Overall Risk Rating

M

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Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N (Negligible or Low Risk)

### 3. Possible Controversial Aspects:

This Project has two potentially controversial elements:

- Land titling implies the redistribution of wealth away from the State and from presumably wealthier segments of the private sector. It is thus open to opposition on the part of affected parties. For this reason, the Project chose to work with barrios located on public lands. In addition, because decision making power lies with the State, the awarding of land titles can be used as political currency. To avoid differential treatment, the Project requires agreement on the part of all agencies that titles will be awarded to all barrio dwellers.
- Local co-management of Project design and implementation implies power sharing. Few agencies and local administrations are willing to do so. Others often believe that low-income communities do not have and cannot quickly develop the capacity to adequately manage planning processes and ultimately funds. On the other hand, the task at hand is so daunting that agencies and local administrations recognize that they cannot undertake it without some degree of power sharing.

## **G: Main Loan Conditions**

### **1. Conditions for Loan Processing**

#### **1.1 Negotiations (all conditions have been met by the Borrower)**

- Submittal of all draft legal agreements as summarized in pages 15-17 of the draft Project Agreement;
- Submittal, in a form acceptable to the Bank, the Terms of Reference for the elaboration of the Project Operations Manual;
- Submission to the Bank Terms of Reference for a cost recovery study;
- Creation of the Project Management Unit by resolution of the Board of Directors of FUNDACOMUN; and
- Approval of the RAP by the Board of Directors of FUNDACOMUN, INAVI and IVI-Miranda.

#### **1.2 Board Presentation**

- The final version of the RAP will be approved by the Board of Directors of FUNDACOMUN;
- The final version of the RAP will be discussed with community representatives and potentially affected groups;
- A participation agreement will be signed between FUNDACOMUN and INAVI for the construction of resettlement housing;
- An agreement will be signed between the Government of the State of Miranda and FUNDACOMUN for the financing and/or direct provision of resettlement housing in Petare Norte;
- An agreement between CONAVI and FUNDACOMUN will be signed which allows for the assignment of INAVI funds to be used for the construction of resettlement housing in Petare Norte and La Vega; and
- An agreement will be signed between FUNDACOMUN and Hidrocapital for the assignment of financial resources to the Project Management Unit for the financing of water and sanitation sub-projects;

#### **1.3 Effectiveness**

- An agreement will be signed between FUNDACOMUN and the Municipalities of Libertador and Sucre regarding cooperation in land titling in the project neighborhoods and the co-financing of sub-projects;
- An agreement will be signed between FUNDACOMUN and INAVI regarding cooperation in land titling in the project neighborhoods;
- Firms will have been selected and approved by the Bank for the principal functions as indicated in the organizational chart of the Project Management Unit;
- The key personnel of the Project Management Unit, which include two Project Coordinators, a procurement and contract administration specialist, and a manager for each of Petare Norte and La Vega, will have been selected and approved by the Bank;
- The general Project design and the RAP will be approved by the communities of Petare Norte and La Vega;
- The Project Operations Manual will be submitted to and approved by the Bank;

- The Project Management and Financial Control System will be fully operational;
- The "Master Plans" for Petare Norte and La Vega will have been completed in a form satisfactory to the Bank. The corresponding municipal ordinances will be approved by the Municipalities of Libertador and Sucre during Project implementation;
- The firms to execute the Social Assistance Outreach sub-component in each of the Urban Design Units will have been selected and approved by the Bank;
- The Environmental Education Plan will have been drafted to the satisfaction of the Bank; and

2. **Other [classify according to covenant types used in the Legal Agreements.]:**

- Prior to initiating the bidding of any UDU level works, the Bank will have reviewed and approved the Neighborhood Improvement Plans including the site specific resettlement plans;
- No works which require the resettling of families will commence unless the resettling those families has been completed to the satisfaction of the Bank;
- The Project Management Unit will (i) maintain a body of personnel with experience and qualifications satisfactory to the Bank at all times; (ii) maintain an organizational structure, modes of transportation, personnel and financial resources according to criteria established by the Bank; and (iii) prepare and submit to the Bank, quarterly reports summarizing Project progress, problems and recommendations for solving any problems;
- A study to determine the feasibility, and to design, the creation of a Metropolitan Barrio Improvement Agency in Caracas will be concluded prior to the end of the fourth year of Project execution; and
- The Environmental Management Manual will be approved by the Bank prior to bidding any neighborhood improvement works.

**H. Readiness for Implementation**

[ ] The engineering design documents for the first year's activities are complete and ready for the start of project implementation. [ X ] Not applicable. First year of project implementation will be design and engineering of neighborhood works, and finalization of engineering for UPF (macro) level works.

[ X ] The procurement documents for the first year's activities are complete and ready for the start of project implementation. A list of first year contracts is available, with timetable for preparation of documents, invitation, decision and execution.

[ X ] The Project Implementation Plan has been appraised and found to be realistic and of satisfactory quality.

[ ] The following items are lacking and are discussed under loan conditions (Section G):

**I. Compliance with Bank Policies**

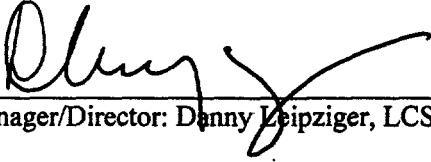
[ X ] This project complies with all applicable Bank policies.

[ ] [The following exceptions to Bank policies are recommended for approval: . The project complies with all other applicable Bank policies.]





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**Annex 1**  
**Project Design Summary**  
**Caracas Slum-Upgrading Project**

Narrative Summary	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
<p><b>Sector-related CAS Goal:</b>  “...reduce poverty through sustainable economic growth with stability and increased efficiency in the provision of basic services ...by, (i) improving basic infrastructure services; (ii) improving income and social conditions of the most vulnerable poor; and (iii) improving the efficiency and effectiveness of the public sector.</p>	<p>Not available from CAS</p>	<p>Not Available from CAS</p>	<p>(Goal to Bank Mission)  Not Available from CAS</p>
<p><b>Project Development Objective:</b> The objective of the Project is to improve the quality of life of the inhabitants of a selected number of barrios<sup>1</sup> (representing 15 percent of total barrio population) in the Metropolitan Area of Caracas (MAC), through the development and implementation of a community driven, sustainable and replicable infrastructure improvement program.</p>	<p>Principal Impact Indicators:</p> <ol style="list-style-type: none"> <li>1. Measured change in property values and land market activities in the targeted barrios, and control group.</li> <li>2. Measured comparison in perceived quality of life, measured against baseline Social Assessment Survey.</li> <li>3. Measured/observed changes in economic differentiation, solidarity and centrality in the target barrios at year 0, 3 and 5.</li> </ol>	<ol style="list-style-type: none"> <li>1. Continual monitoring of land values and activity in the targeted barrios in comparison with a control group (see attached description, Exhibit 1-1)</li> <li>2. Focus groups and household surveys to determine perceived quality of life changes, ex-post, using Social Assessment base-line data as a point of comparison.</li> <li>3. Collection and processing of data to develop a scalogram analysis of targeted barrios and control area. (see attached description, Exhibit 1-2).</li> </ol>	<p>(Objective to Goal)</p> <p>In order to implement systems of impact monitoring, it is assumed that the proper analytical tools will be developed and in-place in a timely manner, and the local capacity will be available to execute these. It is essential that the project management and information systems are developed to accommodate these outputs, and that it be developed for operation prior to project effectiveness.</p>

<sup>1</sup> Although barrio in Spanish means generically “neighborhood”; in Venezuela it is used solely to denote informal settlement.  
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	<p>4. Measured quality impacts of the direct physical investments.</p> <p>5. Measured change in capacity to target and coordinate investment in Metropolitan Caracas.</p>	<p>4. Collection and processing of data with regard to quality of services (see attached description, Exhibit 1-3).</p> <p>5. Mid-year, and ex-post independent evaluation of project executing agency.</p>	
<p>Outputs:</p> <p><u>Basic Level:</u></p> <p>Constitution of local co-management groups in each of the Project's urban design units (UDU)</p> <p>Development of neighborhood improvement plans (NIP), including management of resettlement</p> <p>Execution of barrio improvement plans</p> <p>Provision of legal title and registration of titles in targeted barrios.</p> <p><u>Institutional Level:</u></p> <p>Improved capacity to carry out and coordinate upgrading projects at the community, municipal and metropolitan levels.</p> <p><u>Special:</u></p> <p>Increased access to housing improvement credit by low-income households in barrios.</p>	<p><u>Basic Level:</u></p> <ul style="list-style-type: none"> <li>• # of co-management groups constituted in first year of project;</li> <li>• # of implementation-ready barrio improvement plans constituted at end of year one;</li> <li>• # of new "legal" household water, sewer and electricity connections;</li> <li>• percent change in public lighting coverage in barrios;</li> <li>• # of kms of drainage constructed or rehabilitated;</li> <li>• % change in conduction capacity of drainage;</li> <li>• # of kms of new and/or rehabilitated primary and secondary access roads constructed;</li> <li>• # of kms of pedestrian paths and communal space improved or constructed;</li> <li>• # of new retaining walls constructed;</li> <li>• # of families resettled due to geotechnical risk;</li> <li>• # of new property titles issued.</li> </ul>	<p>Monitoring and evaluation of the outputs will be conducted by the Project Executing Agency's quality control teams, which will include the PMU, and the individual technical and control units for Petare Norte and La Vega. All project information will be fed into the central management information system, and requisite data on project execution will be shared between all levels of project administration including at FUNDCOMUN, the PMU, the Management Units for Petare Norte and La Vega, and the local Co-Management groups. Monitoring will include monthly generation of management reports, and periodic impromptu site visits to ensure quality control.</p>	<p>(Outputs to Objective)</p> <p>The management information system will be able to track all the physical output data necessary to ensure quality.</p> <p>Annual time-bound output projections will be established against which progress can be tracked.</p> <p>Appropriate "flag" indicators will be established so as to allow management to take appropriate actions regarding project outputs if projections are not being met.</p>

	<p><u>Institutional Level</u></p> <ul style="list-style-type: none"> <li>• Creation and adoption of new ordinance for barrio layout and construction and service standards;</li> <li>• Adoption by municipalities of methodology to register new titles, and update the cadastre;</li> <li>• Adoption of cost-recovery mechanism at municipal level, for barrio upgrading projects.</li> </ul> <p><u>Special:</u></p> <ul style="list-style-type: none"> <li>• # of housing improvement loans issued in the barrios.</li> </ul>		
<p>Project Components/Sub-components: (see Annex 2 for project description)</p> <p>1. Urban Upgrading</p> <p>2. Institutional Development</p> <p>3. Micro-Credit Pilot Project for Housing Upgrade</p>	<p>Inputs: (budget for each component, costs are rounded and exclude contingencies)</p> <p>1. La Vega US\$52.0 M. 41 percent of base costs. Petare Norte US\$61.0 M, 49 percent of base costs)</p> <p>2. US\$11.5 M, 9 percent of base costs.</p> <p>3. US\$1.15 M, 1 percent of base costs.</p>	<p>Monthly progress reports on project execution including physical execution, flow of funds, procurement and contract administration and auditing.</p> <p>At least twice-yearly supervision missions during project implementation, with quarterly supervision missions during the first year of implementation, and at least three supervision missions during the second year of implementation (first year of works execution).</p>	<p>(Components to Outputs)</p> <p>Adequate capacity of PMU to Manage the upgrading process including finance and administration, as well as technical and social aspects of the project.</p> <p>Timely availability of counterpart and other government funding.</p> <p>Election year politics will not delay project start dates.</p> <p>Adequate support for project at community and government levels will ensure that changes in political leadership do not threaten project.</p>

			<p><b>Municipalities retain political will to engage in institutional strengthening, passage of ordinances and processing of land titles.</b></p> <p><b>Private Banks continue to see adequate security in loan guarantee fund to initiate and continue micro-credit program.</b></p>
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**Exhibit 1-1****Land Market Monitoring Study**

The main objective of the land market study is to assess the impacts of the project on land and property markets. Specific questions the land market study seeks to assess are:

- What is the impact of titling on land and property values in the project area?
- What is the impact of titling on land and property transactions in the project area?
- What is the impact of public investments on real property prices in the project area?

**Basic Options for Assessing Land Market Impacts of the Project** There are three ways for the assessment to be carried out: (i) time series assessment of changes in the project property market (prices, values, transactions, investments, land uses, etc.); (ii) a comparison of the project area with a control area; and (iii) a combination of the time series and comparison approach. The main shortcoming of the first method is that data need to be collected on the project area for a considerable time period, including past project completion. The second method has the advantage of simplified data collection but cannot capture the temporal effects of the project.

The recommended method is the third one: to combine the time series and project-control area comparisons. This approach is more data intensive, but it will help to minimize estimation errors and lead to a more sophisticated assessment of impacts. It also permits mid-course and early assessments of impacts. Here data are collected for both project and control areas over time. The model may take the following generalized form:

$$V_t = a + bI_t + cT_t + d_iX_{it}$$

where  $V_t$  is land value in time  $t$ ,  $I_t$  is a dummy variable indicating the existence of infrastructure services in time  $t$ ,  $T_t$  is the dummy variable for the existence of title at time  $t$ , and  $X_{it}$  is a vector of variables reflecting various locational and non-project factors in time  $t$ . Through a statistical regression estimates for coefficients  $a, b, c$  and  $d$  can be obtained,  $b$  and  $c$  capturing the effects of infrastructure investments and titling on property values in time  $t$ .

**Data Collection.** Collection of data commences before the start of the project and continues over the course of project execution. Periodically, analyses can be done to assess interim impacts and to gauge how exogenous factors are affecting the control and project areas. Two control areas (one each for La Vega and Petare Norte) should be selected so that they very closely match the existing conditions found in the project area. The control areas must not be so close to the project areas to avoid spillover effects.

Collecting property data from the control and project areas is complicated since the data must come from informal transactions lacking a property title (at least until project titling kicks in and transactions in the project area, are registered). There are two possible data collection strategies: 1) capture sales transaction data from notaries and, as the project starts to register properties, collaterally capture transactions from the municipal registry, and 2) conduct structured interviews with local real estate brokers to get them to estimate the value of various types of properties. The preferred approach is to use the informal sales contract recorded in local notary and registry offices. These data will be based on an accurate recording of actual sales price, and provide direct measures of property transactions. Broker-derived data, on the other hand, can only generate estimates of value of hypothetical properties. The key will be to determine which notary offices should be included to cover the project and control areas. If the survey is successful it may be possible to capture the following information (control variables) from the sales contracts:

1. name of seller
2. civil status
3. description of the property
4. address
5. boundary description
6. sale price
7. existence of bienhechuria (and serial number)

8. acceptance of buyer to terms
9. number of rooms
10. number of baths, kitchens
11. constructed area
12. general statement of services.

As the project starts to record property titles, sales transactions will also need to be collected from the municipal registry. Collection of these data will not be difficult and it may be possible to purchase these data from a commercial enterprise such as AKROS.

**Possible problems** Although the sales contract-notary approach looks promising, at this stage in the design process it is not clear that the survey can effectively capture the sales contract data from notaries. This is due to several problems. First, there is no precise requirement that sales contracts be notarized at a particular location. This means that a number of notary offices will need to be surveyed to systematically capture informal transaction data for project and control areas. Second, capturing the transactions themselves will be complicated since the system is manual, and although the records are public, there may be resistance from the staff of the notary office to cooperate. Third, assuming that we can examine the copies of notarized transactions, the surveyor will need to record information about each transaction. Since these transactions use no standard form, critical data about the transaction may be missing.

A pilot study will be undertaken to assess these problems, particularly: (i) number of transactions per time period; (ii) variables that can be consistently extracted; (iii) data collection time; and (iv) willingness of notaries to cooperate. Depending on the results of this pilot, the study might be undertaken.

**Other Issues** In addition to the recommended approach, there are several other issues that need to be addressed. First, it is not feasible for the monitoring system to separate out the effects of specific infrastructure investment components such as public street lighting, water, public facilities, roads, etc. This is due to several factors: (i) it is most likely that some if not all of the improvements will be bundled together and provided simultaneously and therefore it would be impossible to unravel their effects; (ii) even if the infrastructure were developed step by step, not concurrently, it would be difficult to find control areas with the precise mix of infrastructure combinations. Given these difficulties, the best is to split titling and infrastructure.

Second, separating the effects of titling from infrastructure may be tricky. Being able to isolate the effects of titling and infrastructure will require that there be a sufficient number of transactions with title but no infrastructure and no title but with infrastructure.

Third, it is probably not feasible for the land monitoring system to provide spatially desegregated estimates of the impacts of either titling or infrastructure. This is due to the fact that the level of specific property transactions in the project and control areas is likely to be very low (perhaps in the order of 1 to 2 percent of the current housing stock). It would therefore not be possible to desegregate the data sets into areas and maintain statistical validity.

**Exhibit 1-2**  
**Scalogram**

As an input to assessing if the Project is meeting its development objectives, a scalogram approach will be used to measure the soundness and determine the socioeconomic structure of the targeted barrios of La Vega and Petare Norte, and to measure changes over time. A structural analysis will be developed and implemented utilizing Guttman scales to determine the presence or absence of certain types of socioeconomic activity in the targeted barrios. Utilizing a comparative approach over time, this tool will be used to measure changes in the socioeconomic vitality of the targeted areas over the project implementation period. Changes will be measured in the targeted communities of La Vega and Petare Norte, against the same control areas as identified for the Land Market Study. The Guttman scales will be used to identify the presence or absence of certain types of socioeconomic activity in order to determine a scale of: (i) differentiation; (ii) solidarity; and (iii) centrality.

- Differentiation defines the complexity of a neighborhood's economic structure, using number and type of commercial establishments as a proxy for economic strength, and its ability to remain attractive to residents and commercial enterprises.
- Solidarity is used to measure the social cohesiveness of a particular community by using the presence of "social service" institutions as a proxy for social cohesion and problem solving ability of the community. The notion is that the number and diversity of social service institutions (non-profit organizations, non-governmental organizations, community and neighborhood groups, etc.) can illustrate the general cohesiveness of a particular community.
- Centrality measures the degree to which a particular community is connected or integrated into the urban hierarchy. In measuring centrality, the unit of analysis is "civic institutions" such as fire, police, schools, libraries, post offices, radio stations, etc., which serve a wider range than the immediate neighborhood. The premise here is that the greater the presence of these institutions in the neighborhood, the higher the degree of centrality of the neighborhood within the urban hierarchy.

A set of variables to be used in measuring these three classes of analysis will be developed as part of the design of the Project Management Information System. These will then be measured during the first year, at the mid-point and end-year of the project, to measure changes in the socioeconomic soundness and structure of the target areas, which will also be compared with a control group. It should be noted that this analysis is only instructional and would not be used as a tool for determining future investment in the neighborhood, but rather would be used to identify socioeconomic imbalances which might exist in the communities and how these may change over time. A major benefit of the methodology is that it is simple, with straight-forward data gathering, making it easy for community lay persons to be actively involved in the data gathering process and allowing for easy understanding of the processed data.



**Exhibit 1-3****Quality Impacts of Physical Investments**

The following variables will be used to measure the quality of the physical direct investments to be made in La Vega and Petare Norte:

<b>Investment Area</b>	<b>Indicator</b>	<b>Responsible</b>
Water Service	Saturation Index: # of days/week when service is available.  Duration of service: # of hours of continuous service/day of service.	To be measured annually by HIDROCAPITAL, the local water utility.
Sanitary Sewerage	Coliform Index: percent of fecal matter in the sewer and drainage canals	To be measured annually by either HIDROCAPITAL, the municipalities, or contracted out.
Improved Drainage Systems	same as above	same as above
Improvement and Provision of Access Roads (primary and secondary)	1. Average commuting time.  2. Change in cost of commodity transport.  3. Average number of floors that inhabitants must ascend or descend to reach nearest access road. This is measured using the points of most difficult access, already predetermined prior to Project execution. The distance from each of these points to the nearest access road is converted into floor equivalents by using a conversion factor of 2.5 meters:1 floor.	The PMU will be responsible for ensuring that an ex-post survey will be undertaken, for comparison with baseline data obtained from the Project's Social Assessment.
Change in Geotechnical Risks	Annual # of accidents due to geotechnical causes (people or structures)	The municipality manages this information.

Note also that focus groups, together with an ex-post survey, will be used to determine beneficiaries' attitudes with regard to barrio livability, and satisfaction with the Project process and results.

**Annex 2**

**Caracas Slum-Upgrading Project  
Project Description**

**Project Component 1: Urban Upgrading - US\$136.1 million** (total cost of component including contingencies; Petare Norte = US\$74.52 million and La Vega = US\$61.53 million).

The following presents a general description of the urban upgrading component of the Project. Explained in this section is the background of the Project's guiding framework, a general description of the living conditions in Petare Norte and La Vega, as well as a general overview of the works to be executed under this component. Also highlighted in this section, because of their relative importance to the Project, are Resettlement, Social Assistance Outreach and Land Tenure Regularization aspects of the Project.

**1. Background:** In 1994 the Urban Planning Ministry (MINDUR) contracted with the *Asociación Civil Encuentro Internacional por la Rehabilitación de Barrios del Tercer Mundo*, to develop the *Plan Sectorial de Incorporación a la Estructura Urbana de las Zonas de Barrios del Area Metropolitana y de la Región Capital (Plan Sectorial)*. As part of this plan, the 144 barrios that exist in the metropolitan region were consolidated into 24 Physical Planning Units (UPFs), each of which represents relatively contiguous agglomerations of barrios with similar physical problems. Each UPF is divided into smaller units known as Urban Design Units (UDUs), which are comprised of one or more barrios corresponding to generally recognized neighborhood boundaries.

Some of the defining characteristics of the UPFs are:

- The level of urbanization constitutes a medium-sized urban environment within the urban hierarchy;
- Improvement of existing access networks would allow for a more fundamental connection of these areas to the formal urbanized area;
- The areas correspond to existing systems of drainage, potable water and disposition of effluents; and
- The total population of the UPF is on average 43,000 persons, with an average area of 172 hectares.

The UPFs represent 90 percent of the total area and population of low-income barrios in the MAC.

The UDUs are subdivisions of the UPFs, which were created taking into account not only demographics, geography and functionality, but also the need to establish manageable design units for physically improving these areas. Some of the defining characteristics of the UDUs are:

- They represent a basic urban service zone in the urban hierarchy;
- Access systems have a local character;
- Sanitation systems correspond mainly to residential uses;
- The average area is 37 hectares with approximately 9,000 inhabitants on average per UDU.

The Municipalities of Libertador and Sucre contain 16 of the 24 UPFs (11 in Libertador and 5 in Sucre), and 67 of the 115 UDUs. In order to select the zones that would be targeted by the Project (Petare Norte and La Vega), a set of criteria was established:

- The highest level possible of community organization should exist;
- There should be a minimum of geotechnical, seismic and hydrological risk;
- The illegal occupation should be predominantly over publicly owned land (municipal or national);
- The amount of resettlement for reasons of risk and/or works should be minimized, based on existing available data with regard to conceptual plans for barrio improvement; and
- There should be a minimum of zoning and/or land use obstacles to executing an improvement plan.

Taking into account these criteria, a series of studies were undertaken to establish a ranking of possible entry points for a

first stage of what is conceptualized as a long-term process of barrio upgrading in Caracas. Based on the weighting of the above criteria, it was determined that Petare Norte, La Vega and Cotiza should be the entry points for the Project. Cotiza was later eliminated after the Social Assessment results indicated a low-level of community preparation or willingness to participate. As a result, the Project will intervene in the UPFs of Petare Norte and La Vega.

## 2. General Living Conditions in Petare Norte and La Vega (See the Social Assessment Summary for more details)

**Petare Norte (UPF 4):** Petare Norte is located in the eastern section of the city in the municipality of Sucre. It is known for its sheer size, and includes the largest barrio in Caracas, José Felix Ribas (part of which spills over into Agricultura). The UPF is bordered to the west, north and south by the highway Petare-Guarenas and to the west by the formal urbanization of Petare - Palo Verde and the highway Mariches. The process of urbanization in this area began in the 1960's and today covers an area of 227.16 hectares and has a population of approximately 102 thousand inhabitants, resulting in a density of 448 persons/hectare. It is estimated that Petare Norte is home to 20,014 families living in a total of 18,195 housing units in four UDUs.

Petare Norte UPF No. 4	Population	Area (hectares)	Density (Hect/Per)	Quantity of Families	Quantity of Housing Units
4.1 Antonio José de Sucre	9,609	21.05	456	1,884	1,712
4.2 Agricultura	38,434	75.97	506	7,536	6,851
4.3 José Felix Ribas	24,783	61.30	404	4,859	4,418
4.4 Julián Blanco	29,245	68.84	425	5,734	5,213
Total	102,072	227.16	448	20,014	18,195

An evaluation of the level of service in these areas indicates the following:

- Potable water coverage by network is approximately 98 percent, of which 80 percent is self-constructed outside of the technical norms of the local Water Company.
- Approximately 26 percent of the population has water service on a continual basis, while 33 percent receive water less than 10 days per month.
- 99.7 percent of the population has a household connection to the sewerage systems, but 80 percent of the systems have been constructed outside of any technical norms by the community itself.
- 85.1 percent of the population is not connected to the telecommunications systems, but nearly 10 percent do have access to cellular service.
- The road network reaches indices of 90 linear meters/hectare and 5.48 square meters/hectare of urbanization.
- The average hillside grade is 40.15 percent.

**La Vega (UPF 10):** La Vega is located in the southwestern sector of Caracas, bordered on the north by the town of La Vega and the formal urbanization of La Paz-Motalbán and on the east, south and west by undeveloped land including the parks of Vicente Emilio Sojo and Leonardo Ruiz Pineda. The eastern part of the UPF constitutes the majority of the population and physical continuity corresponding to the barrios of Carmen and Los Paraparos in the north to Los Mangos in the south. To the west, on the other side of the town of La Vega, are the grounds of a cement factory and a group of barrios separated from the rest of La Vega - La Ladera, San Miguel, La Amapola and La Luz.

The process of occupation of La Vega began in 1917, with the founding of the barrio San Miguel. Today it contains a population of 82 thousand over an area of 293.68 hectares with an average density of 326 persons/hectare. The average hillside slope is 45.48 percent. La Vega is connected to the formal city through access roads - Real de La Vega and the Pan American Highway. The highest point of La Vega is 1,250 meters above sea level, with the lowest elevations at 900 meters. It is estimated that La Vega is home to 15,480 families living in a total of 14,811 housing units in 8 UDUs.

<b>La Vega UPF No. 10</b>	<b>Population</b>	<b>Area (hectares)</b>	<b>Density (Hec/Per)</b>	<b>Quantity of Families</b>	<b>Quantity of Housing Units</b>
10.1 El Carmen	8,431	20.62	409	1,653	1,503
10.2 Vista Hermosa	18,590	24.42	761	3,645	3,314
10.3 Los Naranjos	4,822	24.42	197	946	860
10.4 Los Paraparos	6,995	32.65	214	1,372	1,247
10.5 Los Congilones	5,969	24.35	245	1,170	1,064
10.6 Los Mangos	20,478	112.28	182	4,224	3,840
10.7 Las Torres	4,519	26.59	170	886	806
10.8 San Miguel	12,214	28.35	431	2,395	2,177
<b>Total</b>	<b>82,018</b>	<b>293.68</b>	<b>326</b>	<b>20,014</b>	<b>14,811</b>

Due to the results of the economic analysis, the barrios of Los Mangos and Las Torres were eliminated from the Project. Thus, in La Vega the Project will focus only on UDUs 10.1, 10.2, 10.3, 10.4, 10.5 and 10.8.

An evaluation of the level of service in these areas indicates the following:

- Water coverage by household connection to the water distribution system is 98 percent, with 82 percent of the network constructed informally by the residents, outside the norms of the water utility.
- 21.8 percent of the population has continuous water service, while 35.7 percent receive water less than 10 times per month.
- Roughly 98 percent of the housing units are connected to the sewerage network, 60 percent of which was constructed informally by the residents themselves.
- Approximately 73 percent of the population are not connected to the telecommunications network.
- The UPF has 64 linear meters of vehicular access/hectare and 3.83 square meters of access/hectare of urbanization. Standards for the formal sector in Caracas are 125 linear meters/hectare and 14 square meters/hectare of urbanization.

**3. Summary Description of Physical Investments:** The direct physical investments will be of two types: works which seek to integrate and improve general conditions of the UPF, and those whose benefits are more localized in nature, corresponding to the UDU level. The following is a summary description of the works to be undertaken in Petare Norte and La Vega.

**UPF Level:**

- **Resettlement Housing** (US\$27.1 million base costs): Resettlement of 6-9 percent families living in the Project area will be required for reasons of geotechnical risk and to allow for the execution of works, principally the widening and extension of roadways and new access road construction. Resettlement will be carried out in strict accordance with Bank Operational Directives and the Borrower's Resettlement Plan.
- **Principal Accesses** (US\$5.1 million base costs): The Project will improve principal accesses, with the objective of minimizing the time and distance required, on average, to reach a vehicular street and allowing for adequate transit by public transport, solid waste collection, and other services, and to guarantee adequate space for the installation of sewerage and drainage infrastructure.
- **Potable Water** (US\$4.1 million base costs): Investments in primary network infrastructure will include construction or rehabilitation of pumping stations, transmission pipes and storage and compensation tanks.
- **Sewerage** (US\$.63 million base costs): Investments at the UPF level in sewerage are minimal and are concentrated in Petare Norte. These include the rehabilitation and construction of principal collectors, including standard systems and special collectors for wastewater required in areas of steep hillsides.
- **Geotechnical Risk Mitigation** (US\$2.5 million base costs): Works include the stabilization of hillsides in order to minimize possibilities of disaster due to geotechnical risk.

#### UDU Level Works

- **Secondary Vehicular and Pedestrian Access** (US\$20.3 million base costs): The project will finance the new construction and improvement of existing internal UDU vehicular and pedestrian access, including areas for parking. Included in this will be surface drainage compatible with the new accesses.
- **Additional Drainage** (US\$9.6 million base cost): Additional drainage in rear yards, will be necessary in areas where the surface drainage cannot be taken advantage of. Also included is bank stabilization in natural drainage areas.
- **Local Water Distribution Network** (US\$12.0 million base costs): Also included in the Project is the construction and improvement of the local water distribution networks, including household connections.
- **Local Sewerage** (US\$20.7 million base costs): In order to service areas that cannot be reached by the primary drainage system, "condominial" sewerage will be constructed in private areas to accommodate these households, and would include passage of these networks along rights-of-way until arriving at the public network.
- **Public Lighting and Electricity** (US\$2.8 million base costs): This would include increasing the level of public lighting in public areas and improving the low tension distribution system up to the household connection.
- **Community Service Centers** (US\$1.5 million base costs): Community services centers in each of the Project UDUs will accommodate social activities in the barrios.

#### 4. Other subcomponents. Central to the implementation of Component 1 are the following:

**4.1 Social Assistance Outreach(US\$4.9 million):** Community participation occupies a central place in the execution of the Project. It is an essential pre-condition to the successful undertaking of the proposed neighborhood improvement program, which in turn is necessary in order to integrate the barrios into the formal fabric of the city. Preliminary studies have indicated moreover that the potential exists to incorporate local communities in a leadership role in the process of barrio upgrading. To this end, the requisite assistance will be provided to constitute and strengthen local groups, enabling them to actively participate and if possible co-manage, together with the PMU, the upgrading process, including preparation, negotiation, approval, execution, monitoring, and evaluation of Project activities. The Social Assistance Outreach subcomponent is a combination of processes oriented at incorporating the communities into the urbanization process, in all these phases. The Program is described in Annex 6.

**4.2 Resettlement:** To address the cases where resettlement is unavoidable, a reference Resettlement Action Plan (RAP) has been prepared by the Borrower in accordance with OD 4.30. The RAP comprises general and operational guidelines, including criteria for the valuation of lost assets, a typology of housing solutions and other modes of compensation, provision for local co-management of the resettlement process, and a monitoring and evaluation plan. It also sets forth a budget and timetable for preparation and implementation for site-specific neighborhood RAPs. Annex 7 summarizes estimates of affected units and the general principles, operational guidelines, programs, budget and timetable of the RAP.

**4.3 Land Titling:** Ownership of land is a key precondition to the general improvement of living conditions and welfare of barrio residents, to investment in housing improvements and incorporation of barrios into the formal city. The objective of this sub-component is to regularize land tenure for all the families living in the Project areas. These areas are: La Vega (all UDUs except 10.6 and 10.7) and Petare Norte (all UDUs), with 9,631 and 20,013 families respectively. Annex 8 provides a detailed description of this sub-component

**4.4 Environmental Action Plan:** The Environmental Action Plan will be finalized during the first year of the Project execution and will outline the environmental guidelines to be followed during the execution of sub-project works, and corollary programs. The Environmental Action Plan is summarized in Annex 9.

**Project Component 2: Institutional Development - US\$14.94 million** (total cost of component including contingencies)

The following presents an overview of the Institutional Development Component of the Project.

**1. Project Management (US\$14.14 million):** Funds for this component will also be used to finance the PMU over the course of the five year execution period. The PMU will be a special unit within FUNDACOMUN charged with executing the Project. All functions will be contracted and outsourced, primarily to firms. Also to be financed under this component is a study to determine the feasibility to spin off the PMU into an autonomous Metropolitan agency, whose responsibility would be to coordinate and manage investment in the barrios of Caracas and continue its Project management responsibilities in future projects. Additional studies to those listed below, include project cost recovery, and land markets monitoring.

**2. Municipal Capacity Building (US\$0.8 million):** This sub-component consists of: (i) urban cadastre; (ii) technical norms and standards; and (iii) finance and cost recovery strategies.

**Urban Cadastre (US\$500,000):** The objective of this activity is to develop a cadastral system which can serve as a planning base and tool for future investment in the two barrios of Petare Norte and la Vega, and which will serve as the basis for more fully incorporating these and other informal sectors into the planning cadastres of the Municipalities of Libertador and Sucre. Technical assistance will be provided to the two municipalities for this purpose, and will involve incorporating the planning cadastres developed in the design phase of the urbanization sub-projects into the formal planning cadastres of the municipalities.

**Finances and Cost Recovery (US\$200,000):** The objective of this activity is to increase the capacity of the municipalities to collect taxes and lessen its dependence on intergovernmental transfers. Emphasis will be on short-term results and technical assistance will consist of developing an updated and user-friendly fiscal cadastre, which has proven to be an appropriate medium for increasing local revenues.

**Technical Norms and Standards (US\$100,000):** Improving the physical conditions of the barrios necessitates operating outside of the traditional urban development norms and standards of the formal city. The *Ley Organica de Ordenamiento Territorial* recognizes this fact and states that projects executed in the informal barrios are subject to Special Plan considerations, which allow for alternative urban design standards. Technical assistance will be provided to develop general indicators of appropriate urban design standards to be followed in urbanization projects in the barrios.

**Project Component 3: Housing Improvement Pilot Program - US\$1.2 million (total cost of component including contingencies)**

In Venezuela private financing for housing improvement is virtually non-existent for families earning less than five times the minimum wage. This component will finance the development and operation of a market-based housing improvement loan fund which will provide consumer credit to low-income households residing in the barrios to finance improvements to their housing unit, working through a partnership between private banks and a non-governmental organization (NGO). The expectation is that, over a two-year period, US\$ 5 million will be secured from local financial institutions to fund over 5,000 loans for low-income families earning 1.5 to 5 times the minimum wage.

The objectives of this component center upon identifying funding and operating mechanisms which:

- Promote private capital flow in a financially sustainable manner for housing improvement programs with low-income families;
- Result in environmentally and socially-sound technical housing solutions;
- Center upon models and institutions that can be scaled-up in a cost-effective manner within other urban settings in Venezuela; and
- Minimize and leverage government funding.

The pilot program's strategy rests upon (i) developing a privately-funded and market-based program to deliver housing improvement loans to low-income populations, (ii) applying non-traditional lending methodologies to reach low-income populations (e.g. application of joint liability mechanisms), (iii) establishing a guarantee fund, in favor of the participating banks, designed to demonstrate borrower capacity and willingness to pay, as well as provide a hedge against macroeconomic shock risk, (iv) providing technical assistance to the borrowers to ensure that they build with the right structural integrity, target priority investments (e.g. build a bathroom before a porch), and receive the expected benefit of the housing improvement efforts and not just "four walls without a roof" should say budgets be poorly prepared, and (v) leveraging government resources through access to private funding and allocating risks to those parties best able to manage or assess them.

A detailed description of this component is presented in Annex 10.



**Annex 3**  
**Caracas Slum-Upgrading Project**  
**Estimated Project Costs and Timetable**

Venezuela  
 Low-Income BarriosII-Caracas  
**Components Project Cost Summary**

	(US\$ '000)			% Foreign Exchange	% Total Base Costs
	Local	Foreign	Total		
<b>A. Urban Upgrading</b>					
La Vega	32,783.2	19,201.4	51,984.6	37	41
Petare	37,206.4	23,647.5	60,853.8	39	48
<b>Subtotal Urban Upgrading</b>	69,989.6	42,848.8	112,838.4	38	89
<b>B. Institutional Development</b>	5,316.0	7,754.0	13,070.0	59	10
<b>C. Microcredit for Housing Upgrade</b>	1,150.0	-	1,150.0	-	1
<b>Total BASELINE COSTS</b>	76,455.6	50,602.8	127,058.4	40	100
Physical Contingencies	7,195.9	4,178.3	11,374.3	37	9
Price Contingencies	8,426.1	5,304.4	13,730.5	39	11
<b>Total PROJECT COSTS</b>	92,077.6	60,085.5	152,163.1	39	120

**Annex 3**  
**Caracas Slum-Upgrading Project**  
**Estimated Project Costs and Timetable**

Venezuela  
 Low-Income BarriosII-Caracas  
**Expenditure Accounts Project Cost Summary**

	(US\$ '000)				
	Local	Foreign	Total	% Foreign Exchange	% Total Base Costs
<b>I. Investment Costs</b>					
<b>A. Civil Works</b>					
<b>1. Urban Inter-Connection Works</b>					
Resettlement	5,403.4	2,601.6	8,005.0	33	6
Vehicular Access	3,472.3	1,671.9	5,144.2	33	4
Water System	2,750.2	1,324.2	4,074.4	33	3
Sewerage System	427.0	205.6	632.6	33	-
Risk Mitigation	1,664.1	801.3	2,465.4	33	2
<b>Subtotal Urban Inter-Connection Works</b>	<b>13,717.1</b>	<b>6,604.5</b>	<b>20,321.6</b>	<b>33</b>	<b>16</b>
<b>2. Neighborhood Upgrading Works</b>					
Resettlement	9,537.8	4,592.3	14,130.0	33	11
Vehicular Access	13,711.7	6,602.0	20,313.7	33	16
Water System	8,124.1	3,911.6	12,035.7	33	9
Sewerage System	13,965.9	6,724.3	20,690.2	33	16
Drainage System	6,484.5	3,122.2	9,606.7	32	8
Electricity and Lighting	1,872.9	901.7	2,774.6	33	2
Community Services	1,049.0	505.1	1,554.1	33	1
<b>Subtotal Neighborhood Upgrading Works</b>	<b>54,745.9</b>	<b>26,359.1</b>	<b>81,105.0</b>	<b>33</b>	<b>64</b>
<b>Subtotal Civil Works</b>	<b>68,463.0</b>	<b>32,963.6</b>	<b>101,426.6</b>	<b>33</b>	<b>80</b>
B. Land Titling	815.4	2,180.2	2,995.6	73	2
C. Engineering Designs	711.3	2,838.7	3,549.9	80	3
D. Studies	400.0	400.0	800.0	50	1
E. Technical Assistance	800.0	-	800.0	-	1
F. Social Accompaniment	-	4,866.3	4,866.3	100	4
G. Project Management (PMU and PEU)	2,166.0	7,354.0	9,520.0	77	7
H. Equipment and Furniture	420.0	-	420.0	-	-
I. Guarantee Fund	1,000.0	-	1,000.0	-	1
<b>Total Investment Costs</b>	<b>74,775.6</b>	<b>50,602.8</b>	<b>125,378.4</b>	<b>40</b>	<b>99</b>
<b>II. Recurrent Costs</b>					
A. Project Administration/FundaComun	1,680.0	-	1,680.0	-	1
<b>Total Recurrent Costs</b>	<b>1,680.0</b>	<b>-</b>	<b>1,680.0</b>	<b>-</b>	<b>1</b>
<b>Total BASELINE COSTS</b>	<b>76,455.6</b>	<b>50,602.8</b>	<b>127,058.4</b>	<b>40</b>	<b>100</b>
Physical Contingencies	7,195.9	4,178.3	11,374.3	37	9
Price Contingencies	8,426.1	5,304.4	13,730.5	39	11
<b>Total PROJECT COSTS</b>	<b>92,077.6</b>	<b>60,085.5</b>	<b>152,163.1</b>	<b>39</b>	<b>120</b>

**Annex 3**  
**Caracas Slum-Upgrading Project**  
**Estimated Project Costs and Timetable**

Venezuela  
 Low-Income BarriosII-Caracas  
 Expenditure Accounts by Components - Base Costs  
 (US\$ '000)

	Urban Upgrading		Institutional Development	Microcredit for Housing Upgrade	Total	Physical Contingencies	
	La Vega	Petare				%	Amount
<b>I. Investment Costs</b>							
<b>A. Civil Works</b>							
<b>1. Urban Inter-Connection Works</b>							
Resettlement	1,770.0	6,235.0	-	-	8,005.0	10.0	800.5
Vehicular Access	1,857.8	3,286.4	-	-	5,144.2	10.0	514.4
Water System	3,782.7	291.7	-	-	4,074.4	10.0	407.4
Sewerage System	-	632.6	-	-	632.6	10.0	63.3
Risk Mitigation	1,393.0	1,072.4	-	-	2,465.4	10.0	246.5
<b>Subtotal Urban Inter-Connection Works</b>	<b>8,803.5</b>	<b>11,518.1</b>	<b>-</b>	<b>-</b>	<b>20,321.6</b>	<b>10.0</b>	<b>2,032.2</b>
<b>2. Neighborhood Upgrading Works</b>							
Resettlement	5,660.0	8,470.0	-	-	14,130.0	10.0	1,413.0
Vehicular Access	10,648.7	9,665.0	-	-	20,313.7	10.0	2,031.4
Water System	5,703.2	6,332.5	-	-	12,035.7	10.0	1,203.6
Sewerage System	9,376.9	11,313.3	-	-	20,690.2	10.0	2,069.0
Drainage System	5,018.9	4,587.8	-	-	9,606.7	10.0	960.7
Electricity and Lighting	1,341.1	1,433.5	-	-	2,774.6	10.0	277.5
Community Services	560.3	993.8	-	-	1,554.1	10.0	155.4
<b>Subtotal Neighborhood Upgrading Works</b>	<b>38,309.1</b>	<b>42,795.9</b>	<b>-</b>	<b>-</b>	<b>81,105.0</b>	<b>10.0</b>	<b>8,110.5</b>
<b>Subtotal Civil Works</b>	<b>47,112.6</b>	<b>54,314.0</b>	<b>-</b>	<b>-</b>	<b>101,426.6</b>	<b>10.0</b>	<b>10,142.7</b>
B. Land Titling	924.5	2,071.1	-	-	2,995.6	5.0	149.8
C. Engineering Designs	1,648.9	1,901.0	-	-	3,549.9	5.0	177.5
D. Studies	-	-	800.0	-	800.0	5.0	40.0
E. Technical Assistance	-	-	650.0	150.0	800.0	5.0	40.0
F. Social Accompaniment	2,298.5	2,567.8	-	-	4,866.3	5.0	243.3
G. Project Management (PMU and PEU)	-	-	9,520.0	-	9,520.0	5.0	476.0
H. Equipment and Furniture	-	-	420.0	-	420.0	5.0	21.0
I. Guarantee Fund	-	-	-	1,000.0	1,000.0	-	-
<b>Total Investment Costs</b>	<b>51,984.6</b>	<b>60,853.8</b>	<b>11,390.0</b>	<b>1,150.0</b>	<b>125,378.4</b>	<b>9.0</b>	<b>11,290.3</b>
<b>II. Recurrent Costs</b>							
A. Project Administration/FundaComun	-	-	1,680.0	-	1,680.0	5.0	84.0
<b>Total Recurrent Costs</b>	<b>-</b>	<b>-</b>	<b>1,680.0</b>	<b>-</b>	<b>1,680.0</b>	<b>5.0</b>	<b>84.0</b>
<b>Total BASELINE COSTS</b>	<b>51,984.6</b>	<b>60,853.8</b>	<b>13,070.0</b>	<b>1,150.0</b>	<b>127,058.4</b>	<b>9.0</b>	<b>11,374.3</b>
Physical Contingencies	4,954.9	5,758.4	653.5	7.5	11,374.3	-	-
<b>Price Contingencies</b>							
<b>Inflation</b>							
Local	26,004.5	42,444.9	4,537.6	50.7	73,037.7	-	-
Foreign	1,641.3	2,920.4	742.6	-	5,304.4	-	-
<b>Subtotal Inflation</b>	<b>27,645.9</b>	<b>45,365.3</b>	<b>5,280.2</b>	<b>50.7</b>	<b>78,342.1</b>	<b>-</b>	<b>-</b>
Devaluation	-23,052.0	-37,452.9	-4,060.7	-45.9	-64,611.6	-	-
<b>Subtotal Price Contingencies</b>	<b>4,593.8</b>	<b>7,912.4</b>	<b>1,219.5</b>	<b>4.8</b>	<b>13,730.5</b>	<b>8.4</b>	<b>1,158.9</b>
<b>Total PROJECT COSTS</b>	<b>61,533.3</b>	<b>74,524.6</b>	<b>14,943.0</b>	<b>1,162.3</b>	<b>152,163.1</b>	<b>8.2</b>	<b>12,533.1</b>
Taxes	9,260.2	11,073.6	75.6	-	20,409.5	9.1	1,852.1
Foreign Exchange	22,568.3	28,632.9	8,884.3	-	60,085.5	7.6	4,595.0

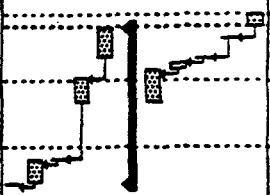
**Annex 3**  
**Caracas Slum-Upgrading Project**  
**Estimated Project Costs and Timetable**

Venezuela  
Low-Income BarriosII-Caracas  
Expenditure Accounts by Years -- Base Costs  
(US\$ '000)

	Base Cost					Total	Foreign Exchange	
	1999	2000	2001	2002	2003		%	Amount
<b>I. Investment Costs</b>								
<b>A. Civil Works</b>								
<b>1. Urban Inter-Connection Works</b>								
Resettlement	-	1,405.0	2,250.0	2,250.0	2,100.0	8,005.0	32.5	2,601.6
Vehicular Access	-	-	1,028.8	2,057.7	2,057.7	5,144.2	32.5	1,671.9
Water System	-	2,386.3	1,688.1	-	-	4,074.4	32.5	1,324.2
Sewerage System	-	-	126.5	316.3	189.8	632.6	32.5	205.6
Risk Mitigation	-	771.7	1,693.7	-	-	2,465.4	32.5	801.3
<b>Subtotal Urban Inter-Connection Works</b>	-	4,563.0	6,787.2	4,624.0	4,347.5	20,321.6	32.5	6,604.5
<b>2. Neighborhood Upgrading Works</b>								
Resettlement	-	1,835.0	5,853.0	3,332.0	3,110.0	14,130.0	32.5	4,592.3
Vehicular Access	-	4,280.4	8,176.8	4,658.1	3,198.5	20,313.7	32.5	6,602.0
Water System	-	4,669.9	4,348.3	2,016.2	1,001.3	12,035.7	32.5	3,911.6
Sewerage System	-	5,777.5	8,761.4	4,023.7	2,127.6	20,690.2	32.5	6,724.3
Drainage System	-	2,892.5	4,002.7	1,423.7	1,287.9	9,606.7	32.5	3,122.2
Electricity and Lighting	-	884.4	986.4	572.0	331.8	2,774.6	32.5	901.7
Community Services	-	-	267.0	492.0	795.0	1,554.1	32.5	505.1
<b>Subtotal Neighborhood Upgrading Works</b>	-	20,339.7	32,395.6	16,517.7	11,852.1	81,105.0	32.5	26,359.1
<b>Subtotal Civil Works</b>	-	24,902.6	39,182.8	21,141.6	16,199.5	101,426.6	32.5	32,963.6
<b>B. Land Titling</b>	1,078.1	1,265.0	129.0	523.5	-	2,995.6	72.8	2,180.2
<b>C. Engineering Designs</b>	3,549.9	-	-	-	-	3,549.9	80.0	2,838.7
<b>D. Studies</b>	300.0	500.0	-	-	-	800.0	50.0	400.0
<b>E. Technical Assistance</b>	280.0	130.0	130.0	130.0	130.0	800.0	-	-
<b>F. Social Accompaniment</b>	-	1,220.4	1,943.7	991.1	711.1	4,866.3	100.0	4,866.3
<b>G. Project Management (PMU and PEU)</b>	2,324.0	1,924.0	1,624.0	1,624.0	2,024.0	9,520.0	77.2	7,354.0
<b>H. Equipment and Furniture</b>	360.0	-	60.0	-	-	420.0	-	-
<b>I. Guarantee Fund</b>	1,000.0	-	-	-	-	1,000.0	-	-
<b>Total Investment Costs</b>	8,892.0	29,942.0	43,069.5	24,410.2	19,064.7	125,378.4	40.4	50,602.8
<b>II. Recurrent Costs</b>								
<b>A. Project Administration/FundaComun</b>	336.0	336.0	336.0	336.0	336.0	1,680.0	-	-
<b>Total Recurrent Costs</b>	336.0	336.0	336.0	336.0	336.0	1,680.0	-	-
<b>Total BASELINE COSTS</b>	9,228.0	30,278.0	43,405.5	24,746.2	19,400.7	127,058.4	39.8	50,602.8
<b>Physical Contingencies</b>	411.4	2,759.0	4,129.4	2,294.4	1,780.0	11,374.3	36.7	4,178.3
<b>Price Contingencies</b>								
<b>Inflation</b>								
Local	905.4	11,480.8	24,875.6	17,963.5	18,012.5	73,037.7	-	-
Foreign	176.1	789.5	1,653.0	1,345.7	1,340.2	5,304.4	100.0	5,304.4
<b>Subtotal Inflation</b>	1,081.5	12,270.3	26,328.5	19,309.1	19,352.7	78,342.1	6.8	5,304.4
<b>Devaluation</b>	-820.4	-10,233.4	-21,833.3	-15,834.5	-15,890.1	-64,611.6	-	-
<b>Subtotal Price Contingencies</b>	261.1	2,036.9	4,495.2	3,474.6	3,462.6	13,730.5	38.6	5,304.4
<b>Total PROJECT COSTS</b>	9,900.6	35,073.9	52,030.1	30,515.2	24,643.3	152,163.1	39.5	60,085.5
<b>Taxes</b>	64.3	4,798.5	7,795.6	4,330.3	3,420.9	20,409.5	-	-
<b>Foreign Exchange</b>	6,002.7	13,594.5	19,132.3	11,817.9	9,538.1	60,085.5	-	-



		Champion 4 - Home Center																							
		01/1/2011	01/15/2011	02/1/2011	02/15/2011	03/1/2011	03/15/2011	04/1/2011	04/15/2011	05/1/2011	05/15/2011	06/1/2011	06/15/2011	07/1/2011	07/15/2011	08/1/2011	08/15/2011	09/1/2011	09/15/2011	10/1/2011	10/15/2011	11/1/2011	11/15/2011	12/1/2011	12/15/2011
01	Inventory on hand																								
02	10% Budget overrun																								
03	Sub-lets																								
04	Resignation of architect																								
05	Construction																								
06	Subcontractors																								
07	10% Budget overrun																								
08	10% Budget overrun																								
09	Sub-lets																								
10	Resignation of architect																								
11	Construction																								
12	Subcontractors																								



Project Name: 11/1/11

Task: Project

Start: 01/01/2011

End: 01/01/2011

Duration: 0 days

Project Name: 11/1/11

Project Name: 11/1/11

Project Name: 11/1/11

Project Name: 11/1/11

Project Name: 11/1/11

Project Name: 11/1/11

Project Name: 11/1/11



Project	Task	Critical Task	Progress	Program	Managers	Summary	Need Up Task	Need Up Milestone	Need Up Program	Need Up Milestone	Need Up Program	Need Up Milestone	Need Up Program	Need Up Milestone	Need Up Program	Need Up Milestone	Need Up Program	Need Up Milestone	Need Up Program	Need Up Milestone
Project Name: The 7/1/00	Task Critical Task	Progress	Managers	Summary	Need Up Task	Need Up Milestone	Need Up Program	Need Up Milestone	Need Up Program	Need Up Milestone	Need Up Program	Need Up Milestone	Need Up Program	Need Up Milestone	Need Up Program	Need Up Milestone	Need Up Program	Need Up Milestone	Need Up Program	Need Up Milestone



## Annex 4

**Caracas Slum-Upgrading Project  
Cost Benefit Analysis Summary  
(US\$, 1998)**

**1. Summary of costs and benefits**

The strategy of the project is to follow an integrated process of improving the quality of basic services and infrastructure in the targeted barrio groupings of La Vega and Petare Norte, including: primary and secondary access; potable water, sewerage and drainage, geotechnical risk reduction, electrification and public lighting, and land tenure regularization. In undertaking the economic analysis, several key assumption were used, including: (i) a discount rate of 10 percent; (ii) a time horizon of 20 years; and (iii) the conversion of financial prices to economic prices considering a standard conversion factor of .962, a skilled labor factor of .819, a non-skilled labor factor of .745 and an elimination of direct taxes. Resettlement costs are included in these calculations. The integrated strategy of the Project notwithstanding, an economic analysis was conducted for each sub-project, to the extent possible, in order to determine the economic feasibility of each sub-component independently. Detailed summary results are presented in the following manner: potable water; sewerage; access; drainage and titling, the latter two of which are guides for assessing the costs and benefits once more information is known. Table 4.1 summarizes the results of the economic analysis. Cost effectiveness indicators are presented at the end of this annex.

**Table 4.1  
Summary of Benefits and Costs  
(US\$ January 1998)  
US\$1=508Bs)**

<b>Investment Sector</b>	<b>Areas</b>	<b>Total Actualized Benefits</b>	<b>Total Actualized Costs</b>
<b>Potable Water</b>	Petare Norte	23,946,340	6,794,654
	La Vega	13,846,420	11,352,428
	Sub Total	37,792,760	18,147,082
<b>Sewerage</b>	Petare Norte	10,334,718	10,838,359
	La Vega	5,599,685	6,574,626
	Sub Total	15,934,403	17,412,985
<b>Access Principal</b>	Petare Norte	13,271,200	4,449,700
	La Vega	3,006,700	1,841,600
	Sub Total	16,277,900	6,291,300
<b>Secondary</b>	Petare Norte	42,205,318	19,289,636
	La Vega	29,146,957	17,219,813
	Sub Total	71,352,275	36,509,449
	<b>Total</b>	<b>141,357,338</b>	<b>78,360,816</b>

## 2. Potable Water

### 2.1 Petare Norte

Table 4.2 summarizes the results of the C/B analysis. The total cost of rehabilitating the Bolivar water tank is the equivalent of US\$126,850 and the number of beneficiaries of the sub-project would be 81,244 within Petare Norte, in addition to non-targeted beneficiaries outside of Petare Norte of 665,405. In terms of costs in the evaluation of this sub-project, only the 11 percent corresponding to the direct beneficiaries in Petare Norte were considered. In the case of the construction of the pumping station adjacent to the Bolivar water tank, the total investment cost is US\$169,130 with beneficiaries totaling 18,501, all within Petare Norte's higher elevations. Included in the evaluation of costs of each of these major connecting works are the corresponding costs and benefits of the neighborhood level distribution works to be undertaken. A more detailed cost breakdown is presented in Table 4.3.

Project	Cost		Net Present Value of Flows		FIRR	ERR
	Financial Prices	Economic Prices	Financial Prices	Economic Prices		
Feeder sub-system "Norte Mariche" - Rehab of tank "Bolivar (9 percent)" and related neighborhood distribution works in areas 4.1, 4.2, 4.3, 4.4	\$4,279,569	3,442,637	\$11,994,406	\$12,159,456	48%	58%
Feeder sub-system "Norte Mariche" and construction of pumping station (2%) and related neighborhood distribution works in areas 4.1, 4.2, 4.3, 4.4	\$1,535,984	\$1,240,526	\$2,458,074	\$2,580,584	33%	39%
East feeder and related neighborhood distribution works	\$1,918,481	1,543,160	\$3,176,612	\$3,330,331	33%	40%

Costs include the 10.5 percent premium to the base costs

Operating costs are expected to decrease by 5 percent with the rehabilitation of the Bolivar tank, due to a decrease in energy consumption. Annual benefits to the end user correspond to the number of beneficiaries multiplied by the willingness to pay for improved water services (\$13.94/family/month, \$166.80/family/year); it is assumed that over the next 20 years the number of connections will not increase due to the population saturation of Petare Norte. Annual benefits due to the rehabilitation of the Bolivar tank will be \$1,972,410 per year. The benefits of the construction of the Bolivar pumping station will be \$477,382 per year and the annual benefits of the improvement of the East feeder network is the equivalent of \$608,653 per year.

The evaluation period was for 20 years and does not include re-investments during this period. The residual value of the internal distribution system corresponds to 33 percent of the direct costs of the networks and a factor of 10.5 percent was

applied to the total investment costs, corresponding to the costs of program administration, contingencies and community outreach. A discount rate of 10 percent was used to determine the market and economic net present values. It is concluded that the three water projects in Petare Norte are economically viable projects, with substantial margin of confidence in the results.

**Table 4.3**  
**Sub-project Costs**  
**(US\$)**

	<b>Investment Costs of Connecting Works</b>	<b>Costs of Neighborhood Level Works</b>	<b>Total Costs</b>
Feeder sub-system "Norte Mariche"	Rehab. Bolivar Tank \$11,416	4.1 \$1,097,361 4.2 \$417,539 4.3 \$1,229,556 4.4 \$1,117,042	\$3,872,914
Feeder sub-system "Norte Mariche" -	Pumping Station \$169,130 Add. Bolivar Tank \$2,537	4.1 \$338,855 4.2 \$17,091 4.3 \$431,209 4.4 \$431,209	\$1,390,031
East Feeder		4.2 \$1,065,526 4.3 \$670,656	\$1,736,182

Costs are bases costs

The distributive impact of the water distribution network rehabilitation, shown in Table 4.4, takes into account that the poverty line for Venezuela is the equivalent of 1.8 times the minimum salary of Bs100,000/month.<sup>1</sup> From the Project Social Assessment, it was determined that the percentage of beneficiaries at, or below, the poverty line in Petare Norte is 54.2 percent. Adjusting for differences in the willingness to pay by the beneficiaries in Petare Norte, the total percentage of poor beneficiaries is 44 percent, with non-poor beneficiaries of 56 percent of the total direct beneficiaries.

**Table 4.4**  
**Distribution of Costs and Benefits**  
**(US\$)**

	<b>Public Sector</b>		<b>Beneficiaries</b>		<b>Total</b>
	<b>Hidrocapital</b>	<b>Government</b>	<b>Poor</b>	<b>Non-Poor</b>	
Benefits					
- Benefits for Willingness to Pay			\$11,256,804	\$12,177,815	\$23,434,619
- Benefits for costs savings	\$255,215				\$255,214
- Tariffs	\$648,967		\$(351,740)	\$(297,227)	0
Costs					
- Investment	\$6,762,841	\$812,073	\$(259,528)	\$(89,047)	\$(7,462,624)
- Taxes		(815,857)			815,857
Totals	\$(5,858,660)	\$3,784	\$11,164,592	\$11,969,635	\$17,279,350

<sup>1</sup> Ministerio de Coordinación y Planificación  
OSD PAD Form: July 30, 1997

## 2.2 La Vega

**Table 4.5**  
**Rehabilitation of Water Distribution Network- La Vega**  
**Summary Results**  
**(US\$)**

Project	Cost		Net Present Value of Flows		FIRR	ERR
	Financial Prices	Economic Prices	Financial Prices	Economic Prices		
Pumping station and transmission pipes, "Coche Caricua" and corresponding neighborhood distribution works in 10.3, 10.4, 10.5	\$3,785,113	\$3,097,329	\$82,325	\$563,750	10%	13%
Feeder "Yaguara" and related neighborhood distribution works in 10.1, 10.2, 10.3, 10.4	\$3,717,179	\$2,989,973	\$2,413,010	\$2,692,043	19%	22%

Costs include a 10.5% premium

The total cost of rehabilitating the connecting and neighborhood works are presented in Table 4.6. The indicative costs correspond to the total costs of each set of works; in the case of rehabilitating pumping stations, main transmission pipes, and tanks, the beneficiaries include the population within La Vega and outside of La Vega. The proportion of beneficiaries within La Vega is 28 percent, with 72 percent of the beneficiaries of these works outside of La Vega. Costs are distributed accordingly. The costs of transmission pipes in Los Mangos are attributed 100 percent to La Vega. With respect to the operating costs of the sub-project "Coche Caricua," a saving of 50 percent in pumping energy costs is expected, representing a cost saving of \$393,703 annually and reduction in annual maintenance costs from \$139,480 to \$24,119 per year.

**Table 4.6**  
**Sub-project Base Costs**  
**(US\$)**

	<b>Investment Costs of Connecting Works</b>	<b>Costs of Neighborhood Level Works</b>	<b>Total Costs</b>
Pumping station and transmission pipes, "Coche Caricua" and corresponding neighborhood distribution works in 10.3, 10.4, 10.5	Rehab. of Pumping Station \$746,588 Rehab. of Transmission Pipes \$81,689 Construction of 3 tanks \$207,084 Construction of transmission pipes in Los Mangos \$52,850	10.3 \$418,360 10.4 \$1,017,851 10.5 \$901,020	\$3,425,443
Feeder "Yaguara" and related neighborhood distribution works in 10.1, 10.2, 10.3, 10.4		10.1 \$756,750 10.2 \$847,350 10.3 \$505,989 10.4 \$181,752 10.8 \$1,072,120	\$3,363,962

The annual benefits to the end user correspond to the number of beneficiary households multiplied by the willingness to pay for improved water service that is \$13.80/family/month or \$165.60/family/year in La Vega. The number of beneficiaries of the sub-project "Coche-Caricua" correspond to the number of connections per year multiplied by the willingness to pay. A 1 percent annual growth rate in the number of connections is assumed for La Vega. Therefore, the number of beneficiaries in year 0 for this sub-project is 2,509 families. For the sub-project Yaguara, there are 7,614 connections, with an estimated 1 percent annual increase in the number of connections. However, to meet the benefits estimated in the willingness-to-pay projections, it would be necessary to increase service an additional 45 liter/second which would imply a cost of \$.45/cubic meter.

The evaluation period was for 20 years and does not include re-investments during this period. The residual value of the internal distribution system corresponds to 33 percent of the direct costs of the networks; a factor of 10.5 percent was applied to the total investment costs, corresponding to the costs of program administration, contingencies and community outreach. A discount rate of 10 percent was used to determine the market and economic net present values. It is concluded that the two water projects in Petare Norte are economically viable projects, with the sub-project "Coche-Caricua" at the margin of economic feasibility. The costs of this sub-project will be further revised during project implementation.

The distributive impact of the water distribution network rehabilitation, shown in Table 4.7, takes into account that the poverty line for Venezuela is the equivalent of 1.8 times the minimum salary of Bs100,000/month.<sup>1</sup> From the Project Social Assessment, it was determined that the percentage of beneficiaries at, or below, the poverty line in La Vega is 58.6 percent. Adjusting for differences in the willingness to pay by the beneficiaries in La Vega, the total percentage of poor beneficiaries is 44 percent, with non-poor beneficiaries comprising 56 percent of the total direct beneficiaries.

<sup>1</sup> Ministerio de Coordinación y Planificación  
OSD PAD Form: July 30, 1997

	<b>Public Sector</b>		<b>Beneficiaries</b>		<b>Total</b>
	<b>Hidrocapital</b>	<b>Government</b>	<b>Poor</b>	<b>Non-Poor</b>	
<b>Benefits</b>					
- Benefits for Willingness to Pay			\$7,876,625	\$7,155,103	\$15,031,728
- Benefits for costs savings	\$305,219				\$305,219
- Tariffs	\$323,439		\$(189,535)	\$(133,904)	0
<b>Costs</b>					
- Investment	\$6,485,392	\$787,741	\$(228,290)	\$(80,384)	\$(6,964,459)
- Taxes		\$(791,488)			\$791,488
<b>Totals</b>	<b>\$(5,856,734)</b>	<b>\$3,747</b>	<b>\$7,915,380</b>	<b>\$7,101,583</b>	<b>\$9,163,976</b>

### 3. Sewerage

The costs of the sub-projects includes the replacement of sewerage networks at both the neighborhood level and connecting level in the case of Petare Norte. The connecting works include two collectors that have as an impact zone the entire geographic area of Petare Norte, with benefits corresponding to the entire population of that area. In La Vega, the sub-project contains only neighborhood level works, which consist of improvements in the existing improvisational sewerage network.

<b>Project</b>	<b>Cost</b>		<b>Net Present Value of Flows</b>		<b>FIRR</b>	<b>ERR</b>
	<b>Financial Prices</b>	<b>Economic Prices</b>	<b>Financial Prices</b>	<b>Economic Prices</b>		
Petare Norte	\$12,673,517	\$9,951,572	\$(297,602)	\$1,630,875	10%	12%
La Vega	\$7,716,236	\$6,050,908	\$(974,942)	\$232,466	8%	11%

Costs include 10.5 percent premium

<b>Geographic Area (UPF)</b>	<b>Cost of Connecting Works</b>	<b>Cost of Neighborhood Network Works</b>
Petare Norte (4)	Construction of Collectors \$632,680	4.1 \$1,196,828 4.2 \$3,361,222 4.3 \$2,928,295 4.4 \$3,350,224
La Vega (10)		10.1 \$ 926,690 10.2 \$1,038,820 10.3 \$1,131,170 10.4 \$1,471,100 10.5 \$1,103,110 10.8 \$1,312,130

Costs are base costs

Benefits were quantified for both Petare Norte and La Vega using willingness-to-pay data obtained from the Social Assessment, which yielded a willingness-to-pay of \$6.30/month/family or \$75.60/month/family in La Vega and Petare Norte. Benefits were obtained by multiplying the number of beneficiary households by the willingness-to-pay. In the case of Petare Norte it was assumed that the number of households would not increase over the 20 year time horizon, resulting in annual benefits of \$1,333,453 per year during the 20 year evaluation period. In the case of La Vega it was assumed that the growth in the number of households would be 1 percent per year, with net annual benefits increasing from \$664,581 in year 1 to \$787,066 in year 19.

The evaluation period was for 20 years and does not include reinvestments during that period. The residual value of the internal networks corresponds to 60 percent of the direct costs of the network. Added to the investment costs is a 10.5 percent premium that corresponds to administration, contingencies and community outreach. Financial and economic flows were calculated using a 10 percent discount rate, with the conclusion that both sets of investments are at the margin of economic feasibility. Final designs will take into account possible cost savings to improve the economic and financial returns of these investments.

To determine the distribution impact of the sub-projects, shown in Table 4.10, the willingness-to-pay results were applied to the household income, indicating that 44 percent of the sub-project beneficiaries in Petare Norte are at or below the poverty line, and 52.4 percent of those in La Vega. In terms of the impact on Hidrocapital, it has been considered that 20 percent of water consumed is used for sanitary sewerage and represents 20 percent of the tariff charges.

	<b>Public Sector</b>		<b>Beneficiaries</b>		<b>Total</b>
	<b>Hidrocapital</b>	<b>Government</b>	<b>Poor</b>	<b>Non-Poor</b>	
<b>Benefits</b>					
- Benefits for Willingness to Pay			\$5,101,726	\$6,493,106	\$11,594,832
- Benefits for costs savings	\$162,242				\$305,219

- Tariffs	\$323,439		\$(87,935)	\$(74,307)	0
Costs					
- Investment	\$10,659,778	\$1,330,719	\$(634,908)	\$(198,903)	\$(11,156,686)
- Taxes		\$(1,337,403)			\$1,337,403
Totals	\$(10,497,536)	\$6,684	\$5,648,699	\$6,617,702	\$1,775,549

#### 4. Access

##### 4.1 Connecting Roads

Access is divided into primary, or connecting roads, and secondary, which include internal neighborhood access roads and pedestrian ways. The basic premise behind the improvement of accesses is that the very limited access conditions in the barrios impose significant transport costs in both time and money on the local residents. In addition, the restricted access greatly impedes public services in these areas, makes maintenance of infrastructure systems very difficult, and severely limits the availability of emergency services such as fire, rescue and police. The Project will widen existing, and in some cases construct new, connecting roads in the areas of Petare Norte and La Vega, in order to reduce transport costs and remove bottlenecks which impede adequate circulation for public services and transport.

The cost benefit/analysis for these works was conducted by TRASPLAN, a Venezuelan transportation engineering firm. The methodology utilized in the analysis of these works was a traditional model used for these types of projects, comparing the situation with and without the project, and the impact on travel time and vehicle operating costs. In this situation, TRASPLAN applied the model being utilized in the *Programa de Transport Urbano del Fondo de Transporte Urbano* (FONTUR), which was developed in 1991. The analysis included an inventory of existing road networks, classified traffic counts, origin and destination surveys, vehicle occupation rates and measuring of traffic speed. The following table presents the values utilized in the model in terms of time value and occupation rates. The value corresponds to 30 percent of the average hourly wage of salaried workers. It should be noted that one limitation of this model is that times savings and operation costs are in 1991 dollars, as no adjustments have been made for current dollars by either FONTUR or TRASPLAN.

Mode of Transport	Hour Value of Trip (US\$)	Occupation rate
Private Automobile	\$2.68	1.8
Public Transport (Jeeps)	\$2.11	7.5

##### La Vega

Original works contemplated for La Vega included road connection between the sectors of Los Laureles-Cementario, Barrio San Andrés-Coche and Vías Las Torres and Calle Zulia. These were eliminated from consideration as preliminary analysis indicated little demand for circulation in these areas, and negative returns. The final determination was only to widen Vía Las Torres in areas of significant bottlenecks and the entire Calle Zulia to 8.4 meters, as these represent the only available access in certain sectors of La Vega and current physical conditions greatly restrict traffic flow. Some basic information is presented below:



	Vía Las Torres	Calle Zulia
Length (kms)	5.0	1.5
Traffic (Veh/hr over 12 hour period)	119	120
Private Autos	28	41
Public Transport (Jeeps)	67	51
Trucks	24	28
Speed (kms/hr of Jeeps))		
-Without Project	8.00	4.00
- With Project	9.00	7.00

**Table 4.11**  
**Summary of Cost/Benefit Results**  
**Connecting Roads – La Vega**  
**(1998 US\$)**

	Vía Las Torres	Zulia Street
Investment Cost	\$362,000	\$1,479,600
Present Value of Maintenance Costs	\$82,700	\$338,100
Present Value of Operational Costs		
- Autos	\$18,800	\$127,300
- Jeeps	\$292,200	\$598,500
- Trucks	\$135,100	\$330,000
Present Value of Time Savings		
- Autos	\$32,400	\$219,600
- Jeeps	\$411,000	\$841,800
Present Value of Total Benefits	\$889,500	\$2,117,200
Net Present Value at 10% Discount	\$477,700	\$434,000
Internal Rate of Return	26.3%	13.9%
B/C Ratio	2.20	1.26

Investment costs include total direct investment plus imputed costs for utilities and general contractor costs, contingencies, supervision and design of the works. In the case of Calle Zulia, the cost of resettling 40 families is included at a unit cost of US\$10,000. Maintenance costs are set at 2 percent of the direct investment costs.

Benefits include savings in operational costs of vehicles and time savings of the users. The majority of the benefits accrue to public transport, representing 79 percent for Vía Las Torres and 68 percent for Calle Zulia.

A discount rate of 10 percent was used resulting in a positive net present value. In the case of Calle Zulia, the returns are marginal and great care must be taken in containing costs during the final engineering phase.

#### Petare Norte

In Petare Norte the works fundamentally consist of improving the accessibility of the traffic routes Guaicaipuro-San José and the principal streets of José Felix Ribas and Ayacucho. In order to improve the flow of traffic and reduce the significant bottlenecks, these latter sub-projects would widen existing roads and provide adequate pedestrian access in areas of particular concern to pedestrians.

	Ayacucho Sur	Ayacucho Norte	J.F. Ribas Sur	J.F. Ribas Norte	Guaicaipuro	San José
Length (kms)	1.8	6.00	.75	1.23	1.72	.27
Traffic (Veh/hr over 12 hour period)	35	183	465	130	67	150
Private Autos	20	95	210	57	20	55
Public Transport (Jeeps)	3	50	182	52	40	79
Trucks	12	38	73	21	7	16
Speed (Kms/hr of Jeeps)						
- Without Project	5.40	9.00	5.40	5.40	2.80	8.10
- With Project	7.00	7.00	8.50	8.50	4.30	8.10

The original plan of the Ministerio de Urbanismo (MINDUR) in the Plan Sectorial, projected the widening of these routes to 12 meters, including the sidewalk. Given the significant costs of that proposal, an alternative was analyzed which considered widening the routes to 7.5 meters, an investment cost of 25 percent of the original proposal. The following table presents the results of the economic analysis.

	Ayacucho	J.F. Ribas	Guaicaipuro-San Jose
Investment Cost	834,600	1,400,000	2,215,100
Present Value of Maintenance Costs	283,400	475,400	752,200
Present Value of Operational Costs			
- Autos	1,376,900	301,600	84,500
- Jeeps	1,786,600	1,003,900	638,500
- Trucks	1,741,300	521,100	144,300
Present Value of Time Savings			
- Autos	1,051,400	520,100	145,700
- Jeeps	1,645,400	1,412,000	898,100
Present Value of Total Benefits	7,601,500	3,758,700	1,911,000
Net Present Value at 10% Discount	6,559,400	2,010,700	(854,900)
Internal Rate of Return	98.2%	27.4%	4.2%
B/C Ratio	7.29	2.15	.69

In determining the cost of each sub-project, the cost of resettling families as a result of the works was incorporated into the overall costs, and was a major consideration in reducing the scale of the individual works. The economic feasibility of the sub-projects Ayacucho and J.F. Ribas are significantly economically feasible. In the case of the sub-project Guaicaipuro-San José, the weak returns will require that the feasibility of that sub-project be re-evaluated during final design, and perhaps limited to improvements only in the areas where the most severe bottlenecks occur.

In order to determine the distribution aspects of these projects in Petare Norte and La Vega, the following criteria were used:

- In the case of private autos and the savings in cost of operation and time, it was assumed that these benefits would not accrue to the low-income.
- In the case of trucks it was assumed that the benefits in time savings and operational cost savings would accrue to the owners of these vehicles, or the owners of the cargo, and are not considered to be low-income. The possible savings in prices of the cargo sold in the barrios to the end consumer were not considered for simplicity.

- It was assumed that the savings in operating costs of public transport, and the time savings, would accrue 100 percent to the users of these services. Given that 55 percent of the residents (average) of the barrios are low-income by official measurements, this percentage was applied to determine the distribution of these benefits between low-income and others, resulting in 23 percent of these benefits accruing to low-income families.

Table 4.13 presents the distribution impact of these works in present value.

	<b>Low-Income</b>	<b>Others</b>	<b>Total</b>
<b>La Vega</b>			
Vía Las Torres	280	610	890
Zulia Street	573	1,544	2,117
Total	853	2,153	3,007
<b>Petare Norte</b>			
Ayacucho	1,460	6,142	7,602
J.F. Ribas	962	2,797	3,759
Total	2,421	8,939	11,360

#### **4.2 Secondary Roads**

Secondary, or internal barrio access, roads are an important part of the Project's integrated upgrading strategy. In La Vega and Petare Norte there is nearly a complete absence of any internal vehicular access and limited pedestrian access, due to density, difficult terrain, and the absence of any formal public planning or investment in these areas. The project aims to provide a minimum acceptable level of internal access in order to:

- Allow residents to access their housing with a minimum of time cost and effort, reducing costs associated with local cargo costs of household goods such as gas canisters and construction materials.
- Increase the number of trips that families will be willing to take.
- Improve the availability, installation, operations and maintenance of public services.
- Allow for access of emergency vehicles such as fire, police and rescue.
- Improve the productive use of available terrain by making commercial activities more attractive and prevalent in the barrios.

The Project's Social Assessment collected information with regard to time, frequency and purpose of household trips, as well as information regarding the need to pay for cargo transport, or the additional time needed for special cargo transport due to physical constraints. Using this information, it was possible to construct an analysis of the time cost of families and effort required to make certain trips, and/or engage in activities requiring the hauling of cargo such as garbage or gas canisters in the barrios. Some results of cargo costs are presented below:

<u>Activity</u>	<u>Type</u>	<u>Measurement</u>
Self Cargo Costs	Solid Waste Collection Points	The average time needed to carry household waste to the nearest collection point is 6-8 minutes, 5-6 times per week. This results in 1,900 minutes per year needed for this task in both Petare Norte and La Vega.
	Canisters of Cooking Gas	50 percent of households haul their own cooking gas to their household from the distribution point, approximately 1.3 times per week, resulting in 759 minutes per year in La Vega and 853 minutes per year in Petare Norte.  Using the money value of time, this results in US\$1.6 million of costs in La Vega and US\$3.2 million in Petare Norte. It is estimated that the provision of internal access will reduce the time values by 50 percent.
Direct Hauling Costs	Canisters of Cooking Gas	In La Vega, 19 percent of families pay someone to haul their cooking gas for them. This is done an average of 1.2 times per week at a market rate of US\$.50/time resulting in an annual total cost of US\$73,000
	Solid Waste Collection	An additional 10 percent of families pay to have their household waste hauled to the nearest collection point, at the same rate, resulting in a total cost of US\$91,000.  In Petare Norte equivalent dollar values are US\$358,000 and US\$686,000. It is estimated that the provision of internal access will reduce these costs by 30 percent.

Another important factor considered in the analysis was the number of trips made per day, the trip motive and the time it took to arrive at the destination. It is significant, for example, that the average time required to reach a vehicular street from a household's door is 8 minutes in La Vega and 5 minutes in Petare Norte. In addition, the time required to reach a bus stop or a metro terminal, the principal transport method of the barrio residents, is 16 minutes and 31 minutes in La Vega, and 16 minutes and 21 minutes in Petare Norte, respectively. The Social Assessment indicates that approximately 3.15 trips per household/day are made, with many individuals making only one trip per day. To determine the time cost of these trips, the FONTUR figure of US\$2.11/hour was applied to the total number of trips made, resulting in a total cost of US\$15.0 million in La Vega and US\$19.0 million in Petare Norte. Indicative estimates were made to determine the savings that would result through the construction of internal access roads and sidewalks. In this case it was determined that improved access would reduce travel time by 20 percent resulting in cost savings of US\$3.0 million in La Vega and US\$3.8million in Petare Norte.

Tables 4.14 through 4.17 provide more detail on cargo and travel costs and savings.

**Table 4.14**  
**Expense and Transportation Time - La Vega**

<b>Transportation Costs</b>	<b>Gas Canisters</b>	<b>Trash</b>	<b>Const. Mater.</b>	<b>Other</b>	<b>Total</b>
% of households that pay	19.10%	10.30%	4.30%	1.40%	
N° trips per week	1.23	4.45	1	1	
Cost of trip (Bs./un.)	255	221	2,538	4,081	
Cost of trip (Bs./sem)	330	761	2,538	4,081	
Cost/year (Bs.)	36,645,049	45,571,138	63,449,480	33,217,170	178,882,837
Cost/year (US\$)	73,290	91,142	126,899	66,434	357,765
% saved	30%	30%	30%	30%	
Savings per year (US\$)	21,987	27,343	38,070	19,930	107,330
<b>Transportation Time</b>					
% of household that travel	49.30%	86.80%	1.40%	1.40%	
N° of trips per week	1.29	4.82	1	1	
Time/trip (min)	11.2	7.9	27.8	21.3	
Total time (min)	14.6	36.8	27.8	21.3	
Total/year (min/household)	759	1,914	1,446	1,108	
Total year (hrs)	69,746	309,517	3,771	2,890	385,924
Person that travels					
Man	77.10%	52.90%	100%	66.70%	
Woman	16.50%	44.70%	0%	33.30%	
Child	8.70%	13.60%	0%	0%	
Time value per trip (US\$/hr)					
Man	4.22	4.22	4.22	4.22	
Woman	4.22	4.22	4.22	4.22	
Child	4.22	4.22	4.22	4.22	
Total cost of trips (US\$)	294,326	1,306,161	15,915	12,194	1,628,596
Savings %	50.00%	50.00%	50.00%	50%	
Value of savings (US\$)	147,163	653,081	7,957	6,097	814,298

**Table 4.15**  
**Expense and transportation time - Petare Norte**

<b>Transportation Costs</b>	<b>Gas Canisters</b>	<b>Trash</b>	<b>Const. Mat.</b>	<b>Other</b>	<b>Total</b>
% of households	15.00%	5.80%	3.10%	1.00%	
N° trips per week	137	5.09	1	1	
Cost of trip (Bs./un.)	355	196	5,211	2,950	
Cost of trip (Bs./sem)	573	903	5,211	2,950	
Cost/year (Bs.)	89,450,221	54,506,875	168,119,583	30,701,356	342,778,035
Cost/year (US\$)	178,900	109,014	336,239	61,403	685,556
% savings	30%	30%	30%	30%	
Savings per year (US\$)	53,670	32,704	100,872	18,421	205,667
<b>Transportation Time</b>					
% of household that travel	50.9%	92.5%	1.7%	0.7%	
N° of trips per week	1.29	5.96	1.00	1.00	
Time/trip (min)	13.2	6.4	39.5	32.0	
Total time (min/week)	16.4	37.4	39.5	32.0	
Total/year (min/household)	853	1,945	2,054	1,664	
Total year (hrs)	144,792	600,064	11,647	3,885	760,388
Person that travels					
Man	68.10%	47.00%	90%	75.00%	
Woman	23.50%	47.50%	0%	25.00%	
Child	8.70%	16.80%	10%	0%	
Time value per trip (US\$/hr)					
Man	4.22	4.22	4.22	4.22	
Woman	4.22	4.22	4.22	4.22	
Child	4.22	4.22	4.22	4.22	
Total cost of trips (US\$)	611,024	2,532,270	49,152	16,396	3,208,842
Savings %	50.00%	50.00%	50.00%	50%	
Value of savings (US\$)	305,512	1,266,135	24,576	8,198	1,604,421

**Table 4.16**  
**Time Saved for Trip - La Vega**

Number of trips according  
to mode and destination  
(trips de ida, daily)

Mode	Destination			
	Within barrio	Term. Bús	By Metro	Total
Work	74	588	106	768
Education	66	70	10	146
Purchases	73	125	5	203
Recreation	160	157	21	338
Health	13	49	1	63
Other	84	161	10	255
<b>Total</b>	<b>470</b>	<b>1150</b>	<b>153</b>	<b>1773</b>

Travel time according to  
mode and destination  
(minutes for travel de ida)

Mode	Destination			
	Within Barrio	Term. Bus	By Metro	Total
Work	13.8	16.3	28.9	
Education	10.9	18.3	36.5	
Purchases	7.3	13.9	46.0	
Recreation	7.4	22.4	23.1	
Health	13.1	17.0	45.0	
Other	11.4	15.5	33.0	
<b>Total time traveled (Hrs/yr)</b>	<b>1,107,912</b>	<b>4,699,020</b>	<b>1,091,747</b>	<b>6,898,679</b>
<b>Cost of travel time (US\$)</b>	<b>2,337,693</b>	<b>9,914,932</b>	<b>2,303,587</b>	<b>14,556,212</b>
<b>Project Savings</b>	<b>20.00%</b>	<b>20.00%</b>	<b>20.00%</b>	
<b>Cost of Savings (US\$)</b>	<b>467,539</b>	<b>1,982,986</b>	<b>460,717</b>	<b>2,911,242</b>

**Table 4.17**  
**Time Saved per trip - Petare Norte**

Number of trips according  
to mode and destination  
(trips one way, by day)

Mode	Destination			Total
	Within Barrio	Term. Bus	By metro	
Work	46	420	168	634
Education	20	36	13	69
Purchases	59	102	21	182
Recreation	165	134	58	357
Health	1	26	11	38
Other	72	95	38	205
<b>Total</b>	<b>363</b>	<b>813</b>	<b>309</b>	<b>1485</b>

Travel time according to  
mode and destination  
(travel minutes one way)

Mode	Destination			Total
	Within Barrio	Term. Bus	By Metro	
Work	7.6	15.5	19.3	
Education	9	17.2	15.3	
Purchases	5.1	14.0	15.4	
Recreation	6.1	13.9	17.7	
Health	10	12.8	10.5	
Other	9.6	17.1	17.6	
<b>Total Time Traveled (hrs/yr)</b>	<b>1,097,795</b>	<b>5,353,210</b>	<b>2,411,499</b>	<b>8,862,504</b>
<b>Cost of Travel Time</b>	<b>2,316,347</b>	<b>11,295,274</b>	<b>5,088,262</b>	<b>18,699,883</b>
<b>Project Savings</b>	<b>20.00%</b>	<b>20.00%</b>	<b>20.00%</b>	
<b>Savings (US\$)</b>	<b>463,269</b>	<b>2,259,055</b>	<b>1,017,652</b>	<b>3,739,977</b>

Considering a time horizon of 20 years, the sub-projects of internal access yield economically viable results at a 10% discount rate, with the principal benefits accruing from time savings in local trips made. The cost benefit ratio results in a reasonable margin of security in the viability of the sub-projects. Table 4.18 summarizes the results of the economic analysis for accesses.



<b>Table 4.18</b> <b>Summary of Economic Analysis</b> <b>Secondary Roads</b> <b>La Vega</b> <b>(US\$)</b>		
Present Value at 10% Discount Rate	Investment \$16,758,878	Net Benefit \$11,927,143
No of Inhabitants	57,021	
No of Households	11,181	
EIRR	19.7%	
B/C	1.69	
<b>Petare Norte</b> <b>(US\$)</b>		
Present value at 10% Discount Rate	Investment US\$18,883,159	Net Benefits US\$22,915,682
No of Inhabitants	102,071	
No of Households	20,014	
EIRR	25.9%	
B/C	2.19	

## 5. Drainage

Uncontrolled development and construction of housing in Petare Norte and La Vega has reduced natural drainage ways and increased run-off, erosion, and deforestation in these areas. At times, inadequate drainage systems have resulted in street flooding and consequent damage to people, property and obstruction of roadways. The Project would include the construction of new and adequate drainage systems, principally micro-drainage at the neighborhood level. However, at this time it is not feasible to determine the full extent of drainage works that will be needed, until a hydrological study is completed as part of Project implementation. To a large extent much of the drainage will be incorporated into the design and development of the internal vehicular and pedestrian access. Although the full scale of the drainage works for Petare Norte and La Vega are not yet defined, some guiding principles have been used to determine preliminary crude cost estimates of these works for budgeting purposes. These are:

### Actions:

- Construction and capacity expansion of collectors;
- Construction of sediment collectors and traps for solid waste;
- Installation of sewer grates;
- Construction of street curbs;
- Conservation and protection of tributary creeks;
- Reforestation of hillsides;
- Regulation of land use in the barrios; and
- Environmental education.

### Criteria:

- Separation of surface water and black water;
- Drainage canals at off- frontage areas will have a section of .6 meters wide by .4 meters high.

The measurable benefits to families for micro-drainage works will be the avoided costs of flood damage on homes and streets. These costs are valued indirectly as the increased value of homes once the barrio conditions are improved due to construction of drainage systems. According to the Government studies, these benefits are equal to 11.2 percent of the average value of homes in each flood prone area. The Social Assessment provides estimates of average home values in each UPF. In Petare Norte the average value is US\$8,705, resulting in a benefits estimate of US\$975/household. In La Vega, the estimates are US\$7,476 and US\$837 respectively. These benefits should be quantified only for those homes that are located in flood prone areas of the barrios, as to be identified in the proposed hydrological studies.

As a result of the current information deficiencies, it is not possible to present an economic evaluation for drainage projects. The following outlines the studies and economic criteria that should be used to define, elaborate and select projects to be executed:

- If the indicator  $\text{cost/house} > \text{benefit per house}$ , reject project and costs should be revised.
  - carry out a hydrological study within each UPF considering at least three time horizons for calculating returns: 2, 4, and 6 years. The short periods reflect the fact that the projects address frequently occurring local problems;
  - identify the flood prone areas within each UPF and consider the three time horizons for returns;
  - for each flood prone area, define the necessary micro-drainage works and corresponding investment costs;
  - quantify the number of households within the limits of each flood prone area;
  - construct a cash flow, including investment, operations and maintenance costs, for each identified flood prone area;
  - construct a cost indicator for each flood prone area. Consider total costs (investments, operations and maintenance), use a discount rate of 10 percent, and divide by the number of houses corresponding to the area in question;
  - for each flood prone area, select the least cost per house for each of the three time horizons;
  - compare the selected value with the benefit per house (Petare US\$975 and La Vega US\$837).
  
- If the indicator  $\text{cost/house} < \text{benefit/house}$ , accept project.

To determine the distributive impact, we can apply the poverty line index to the data from the Social Assessment Survey, 54.2 percent of the families in Petare 58.6 percent in La Vega can be considered low income. The same survey provides average home value of poor families and non-poor families. To determine the distribution of benefits from drainage projects among these families, the coefficient of 11.2 percent would be applied to home values of poor families.

## **6. Land Regularization**

There are two types of costs associated with land regularization. The first are the direct cost of the process (survey, assessment, processing, etc.). The second is the price the owner charges for the land. Because there is no recognized market value for untitled land, this cost is unknown. The value of these properties may even be close to zero because the removal of squatters is nearly impossible, and, if possible, the occupants would have to be compensated for the improvements they have introduced on the land. However, the occupants reap benefits from regularization in the form of more secure possession and access to credit.

There are several ways to estimate the property values. One methodology is to compare barrio land prices with that of similarly serviced land with secure tenure. However, there are few such cases in MAC. A second method would be

through contingent valuation, directly asking residents what they would be willing to pay to regularize their land occupancy. While the SA established that residents are willing to pay for regularization, amounts were not obtained. The methodology applied takes as a point of reference the value of land and houses in social housing projects. Data from several projects shows that, in urbanized lots, land value is roughly 7 to 10 percent of the total property value. Estimates for the Program are shown in Table 4.19. It should be noted that these values are an approximation of willingness to pay resulting from the market equilibrium value and may underestimate the willingness to pay for property.

	<b>Petare</b>	<b>La Vega</b>
House Value (US\$)	8,705	7,476
Land Value (10%)	870	747
Lot Size (m <sup>2</sup> )	67	111
Value m <sup>2</sup> (US\$)	13	7

In addition, land values will differ according to the characteristics of lot location. In particular, the analysis of the cost should include a value for the travel distance from the house to the nearest roadway accessible by vehicle. The Social Assessment included an analysis of the time to arrive at a street passable by jeep or car. This information was crossed with reported home value. The results depicted in Table 4.20 show an important association between price and household location. The price difference likely reflects not only distance, but also the presence of other characteristics or attributes of the properties that are positively correlated to distance.

UPF	Time Travel (round-trip minutes)	Property Value (Bs)	Factor
Petare	0-8	4,929,367	1.3
	9-19	3,763,193	1.0
	>20	3,681,578	0.9
La Vega	0-8	4,704,903	1.4
	9-19	3,199,367	1.0
	>20	2,481,791	0.7

Given the above analysis, a basic formula for incorporating the distance factor into land price is estimated as a 15 percent decrease in price for each 100 meters from a vehicle access point (taking into account that in one minute an individual can travel approximately 100 meters). These estimates take into account the maximum value feasible to charge for barrio homes, and incorporates the differential prices accounting for land locations near auto accessible roadways.

Distance	Land Price (US\$/m2)
<b>Petare Norte</b>	
Up to 400 mts.	15
400 mts. - 1,000 mts.	13
More than 1,000 mts.	11
<b>La Vega</b>	
Up to 400 mts.	8
400 mts. - 1,000 mts.	7
More than 1,000 mts.	6

In determining the distribution impact of the land-titling component, the benefits are estimated at 10 percent of the home value. This value will be paid to the municipality, National Housing Institute or private landowners. As a result, the distributive impact analysis shows that the families included in the project will not capture these net benefits. Assuming the total value of land goes to the municipality; it will receive US\$15,829,650 from Petare Norte (18,195 lots to regularize at 10 percent of average home value), and US\$7,592,508 from La Vega (10,164 lots to regularize at 10 percent of the average home value). However, non-quantifiable benefits will accrue in the form of secure property rights and increased access to credit to population living in the two barrios.

#### 7. Cost-effectiveness indicators<sup>1</sup>

Table 4.22 presents the cost effectiveness indicators of the various investment sub-projects. To determine a reasonable magnitude of the investment costs, a cost comparison between family income and average cost per family was made, setting a hurdle rate of affordability of no more than 10 percent of average household income. Using this standard, the sub-project investments are determined to be cost effective, as investments in both Petare Norte and La Vega are below the 10 percent threshold.

Sector	Petare Norte		La Vega	
	Actualized Cost/Family in US\$	US\$/Month/Family	Actualized Cost/Family in US\$	US\$/Month/Family
Potable Water	370.30	3.60	670.70	6.50
Sewerage	632.40	6.20	690.00	6.70
Drainage	185.60	1.80	716.60	7.00
Land Titling	69.00		69.0	
Access	1510.00	14.70	1963.00	19.20
Total Cost	2767.30	26.30	4109.30	39.40
Monthly Income		415.00		403.00
Total Cost/Income		6.30%		9.8%

<sup>1</sup> These indicators should compare the project with a suitable comparator, e.g., unit project costs of alternative project designs or international standards.

**Annex 5**  
**Caracas Slum-Upgrading Project**  
**Social Assessment Summary**

**Introduction.** The PROMUEBA Caracas Social Assessment (SA) provides information on infrastructure priorities, land tenure, community organization and attitudes toward basic service delivery in the barrios. The information gathered was used to identify risks and produce recommendations to refine project design. In addition, the information generated in the SA furnishes key data for the resettlement plan, the economic analysis, and project monitoring system. The following summary will briefly present the SA methodology and findings.

**Methodology.** The analysis is based on three sources of information: (i) a survey of 2,312 households; (ii) 16 focus group workshops; and (iii) 20 interviews with key informants. The survey sample consisted of 2,312 households in 69 different barrios. Survey interviews were completed in approximately 79 percent of the sample, divided evenly between the three UPF of the project area. The focus groups were carried out within a sub-sample of the same barrios surveyed. Workshops included four types of focus groups; groups of community leaders, of women, of men, and of both genders.

**Community Characteristics.** The demographic characteristics of the barrios resemble those of the MAC. Population growth is minimal due to low fertility and migration rates. In the barrios, the number of couple, male and female headed households are approximately the same. On average, the level of education of women heads of households is less than that of men, with 25% of men finishing primary school versus 18% of women.

The survey revealed that incomes of barrios residents are generally higher than assumed. Average monthly income is estimated at Bs.213,000 or US\$426. Residents are highly integrated into the labor market. Over 75% of income is generated from salaries; of the remaining, 21 percent is from businesses, and 4% from other sources. In total, 50 percent of the barrio population is employed. Of these, 59% earn a salary from which social security is deducted, and which can be used as a proxy for formal sector employment. Formal sector employment is highest in Cotiza, possibly related to the area's location near the city center. Interestingly, the average salary varies little between the formal and informal sectors. This data confirms the existence of capacity to pay for improved services, with the exception of a small population of extreme poor within the barrios.

The majority of dwellings are of stable building and materials, demonstrate decades of gradual investment. Still, the barrios demonstrate characteristics of informal urban growth, specifically a chaotic transportation network, vertical growth on unstable lands, and a paucity of public spaces. Further details on housing characteristics are shown in Table 5.1.

	Cotiza	Petare	Vega
	(%)		
Single Family Home	87	>95	>95
Direct Auto Access	33	19	25
Inferior Bldg. Materials	97	96	10
Residing for > 10 yrs.	63	55	53

**Current Services and Investment Priorities:** Details of current basic services, as well as willingness to pay for services are presented in Table 5.2.

Table 5.2: Service Characteristics		
Service	Existing Quality	Disposition to Pay/ Current Charges
Water	<ul style="list-style-type: none"> <li>98% of barrio households have piped water from HIDROCAPITAL, but transmission lines are illegal, and self-constructed.</li> <li>56% of resident in Cotiza receive constant service, 26% in Petare and 22% in La Vega.</li> <li>32% of households in Petare, 23% in La Vega and 23% in Cotiza normally use alternative water resources. In Petare and La Vega, neighbors provide the most volume of alternative water sources, in Cotiza it is community stand pipes.</li> <li>Only a small portion (14%) of these can demonstrate a water bill, indicating that HIDROCAPITAL is not charging a majority of users, in cases where connections are registered.</li> <li>Users would like regular formal service (81% in Petare, 78% in La Vega, and 64% in Cotiza).</li> <li>63%-68% of respondents favor billing according to consumption.</li> <li>In terms of preferred service delivery agent, 38% referenced HIDROCAPITAL, 20% a private company, and 13% a community organization.</li> </ul>	<ul style="list-style-type: none"> <li>Expenditures for alternative water sources per household/mo. are on average Bs.3,219 in Cotiza, Bs.3,109 in Petare, and 1,744 in La Vega.</li> <li>There is high Willingness to Pay (WTP) for improved water services; in Cotiza Bs 2,794/mo. (log. est.) and Bs. 3,135 (linear est.); in Petare Bs. 5,649 and Bs. 7,007 (respectively), and in La Vega Bs. 6,540 and Bs. 5,324 (respectively).</li> <li>The average WTP is 2.5% of income in Cotiza, 3.4% in Petare, and 3.4% in La Vega: numbers well within the WHO recommended amount of 3.5%.</li> <li>Residents are unwilling to pay for connections, explaining that they have built their own connections.</li> </ul>
Wastewater	<ul style="list-style-type: none"> <li>Sewer system coverage is generally high; 100% in Cotiza, 99.7% in Petare, and 96% in La Vega. These are improvised systems.</li> <li>Respondents reported a high incidence of problems with the systems: 51% of respondents in La Vega, 41% in Petare, and 37% in Cotiza. Problems most frequently mention were filtration and blocks of piping, and consequent wastewater draining in the street.</li> <li>In La Vega there is a clear correlation between inferior sanitary conditions and health problems.</li> </ul>	<ul style="list-style-type: none"> <li>WTP for sewer system improvement is Bs. 2,004 (log est.) and Bs. 2,738 (linear est.) in Cotiza, Bs. 2,5589 and Bs. 3,024 in Petare, and Bs. 2,341 and Bs. 3,024 in La Vega.</li> <li>Response to capacity to pay questions reveals a capacity superior to WTP, with the majority stating capacity to pay of Bs.6,000/mo.</li> </ul>
Solid Waste	<ul style="list-style-type: none"> <li>The majority of respondents consider waste collection services insufficient, particularly in the high elevations. Where services are not available, residents frequently dispose of waste in the nearest open land space.</li> </ul>	<ul style="list-style-type: none"> <li>Not estimated/reported</li> </ul>
Electricity and Telephone	<ul style="list-style-type: none"> <li>Electricity coverage is high at 97%, and 78% with meters ( proxy for formal service)</li> <li>Most consumers would like a metered connection.</li> <li>Service quality is poor. Illegal connections create fire risk, power surges, damage to household equipment and difficulties in tariff control.</li> <li>Payment for electricity service is more common than for water service.</li> </ul>	<ul style="list-style-type: none"> <li>Average monthly expenditure is Bs. 3,531 in Petare, Bs. 3,226 in Cotiza, and Bs. 2,742 in La Vega.</li> </ul>
Telephone	<ul style="list-style-type: none"> <li>Coverage is 39% in Cotiza, 5% in Petare and 2% in La Vega.</li> <li>Cellular use is 10% in La Vega, 3% in Cotiza and 4% in Petare.</li> </ul>	<ul style="list-style-type: none"> <li>Not estimated/reported</li> </ul>
Transportation and Access	<ul style="list-style-type: none"> <li>Time to arrive at a street accessible by auto is 4.6 minutes in Cotiza, 5.5 minutes in Petare and 7.6 minutes in La Vega (round trip averages).</li> <li>Respondents cited problems with barrio entrances being closed or blocked, most frequently in La Vega. 10% of La Vega respondents said the entrance had been blocked for four days in the last month.</li> </ul>	<ul style="list-style-type: none"> <li>In the week previous to the survey, residents reported how much money and time (given in dollar equivalent) they expended in hauling goods to and from inaccessible homes: Bs. 724,000 in Cotiza, Bs. 5,700,000 in Petare and Bs. 4,200,000 in La Vega.</li> </ul>

The principal problems identified by respondents are security and water. In Petare and La Vega residents voice similar concerns: security (24 percent and 25 percent respectively), followed by water service (26 percent and 22 percent), drainage (10 percent and 14 percent), and barrio access (6 percent and 14 percent). The problem of access is particularly marked in La Vega. In Cotiza, the predominate problem is security (38 percent), and the previously named problems relatively less crucial according to residents. Participant discussions during the focus groups reinforced the survey results. Notably, the focus groups demonstrated some variation in priorities between and within barrios, pointing to the importance of community participation in investment decisions.

**Land Tenure and Access to Credit.** Barrio residents lack full title to their properties, and most frequently hold two alternative forms of property ownership, private contracts of sale and supplemental titles. The latter are recognized as registered home ownership but fail to provide land rights. The supplemental title appears to stimulate investment in housing improvements, and is required to access formal electricity services. Residents with supplemental titles unanimously expressed their desire to obtain full titles and the majority voiced a willingness to pay to obtain such titles.

Residents indicated that full title will provide tenure security, stimulate further investment in household improvements and provide access to housing loans.

Those without title named the main obstacles to legalizing their tenure as the lack of resources and information. The cost of obtaining title varies between Bs. 13,000 and 25,000. In general, residents do not invest in title if these cost surpass their perceived home value. Average home value is approximately Bs 4.5 million (US\$9000). Higher average values are clearly correlated with supplementary titles. However, this does not indicate that values increased due to the title. The results may simply represent the fact that occupants of more valuable property tend to seek title.

%	Cotiza	Petare Norte	La Vega
Owners	76	75	86
Renters	19	22	11
Squatting	4	3	3
Supplemental Title	48	50	48
Private Sale Contract	26	22	28

Survey results show that residents seldom access credit. Only 5 percent of homes have a loan of any type; however, the value of these loans is substantial (Bs 432,000 or US\$850). Approximately 45 percent of these loans are used for housing related purposes.

**SA Results and Project Strategy:** The results of the SA confirm the appropriateness of the PROMUEBA strategy and the communities' willingness to take part in the project, a key element to the projects consortium approach. The Assessment identified a high number of community organizations. The focus groups, however, revealed limited knowledge of the organizations, possibly indicating that the groups incorporate only small portions of the barrio population. The majority of survey respondents consider their neighborhood organization representative of the community.

**Box 1: Community Willingness to Participate.**

*"If we are going to talk about general labor, I think that we would (volunteer) because it will benefit everyone, us and our children." Resident de Pelayo/Caraballo, Cotiza.*

*"As a community, we can provide skilled labor...In terms of materials, we cannot yet promise that the materials will be of good quality so that the works would last for 10, 15, 20 years. For us, we will be set if you provide materials. Over there we built a capilla. President Paiba brought the plastic pipes and the community installed the piping and tank. ..."Community leader, de Valle Alegre, la Vega.*

*"Here 90% of the work we have done ourselves. The people volunteer. We obtain the materials and the local people are the ones that work." Resident of 24 de marzo, Petare Norte.*

The consortium model also relies on local labor for construction to multiply the economic impact of project funds on the barrios. The focus groups identified few microenterprises working in construction, but, respondents advised that a large number of high quality construction workers reside in the communities. According to the key informants, communities are accustomed to lending support in the form of voluntary labor.

**Implications for Project Design:** The SA reveals a high degree of agreement in the priorities identified in the household survey, focus groups and interviews with key informants. Moreover, there is little variation according to age, gender, education or income. This united vision facilitates the building of consensus by community leaders and provides greater assurance that leaders truly represent the interests of their communities.

<b>Table 5.4: SA Links to Project Activities</b>	
<i>Activity</i>	<i>SA Contribution</i>
Economic Analysis	<ul style="list-style-type: none"> <li>Quantitative estimates of economic benefits of improved water and wastewater services, and improved access. Estimates made by contingent valuation, revealed preference and time value estimates.</li> </ul>
Resettlement Plan	<ul style="list-style-type: none"> <li>Confirms community support of resettlement for the purpose of improving accessways and increased public areas.</li> <li>Community conditions for relocation include that the project is widely understood, that the relocated families are notified well in advance, the replacement house is of similar quality to the original, and similar services, that the new site not be far from the original dwelling.</li> </ul>
Project Monitoring	<ul style="list-style-type: none"> <li>Baseline data (quantitative and qualitative) for monitoring project impact: includes data on water consumption, land values, perceived changes in quality of life.</li> </ul>

The SA highlighted the demand for improved water services and safety, indicating a need for re-engineering the internal street network and provision of public lighting. Based on these needs, the communities have accepted relocation of some households in order to widen streets and walkways and provide for public spaces.

There is strong support for regularizing land tenure and the provision of public services. Regular land tenure is considered crucial to improving access to capital markets and accelerating private investment in housing. Importantly, there is high willingness to pay for titling.

Similarly, the SA shows a high willingness and capacity to pay for improved water and wastewater services. However, residents will not accept retro-active charges nor connection charges. Historically, high connection charges have been used to limit connections. Under the current tariff structure, consumption charges are set below cost. As a result, increased connections may result in losses to the service provider. Moreover, government maybe unable to finance subsidies due to the water company for the services provided to an increasingly large number of barrio connections. Given this background, the formalization of water services should be accompanied by a rationalization of HIDROCAPITAL charges.

While disposition to pay is high, a minority of residents are unwilling to pay for services. The income data reveals a group of barrio residents for whom services fall outside of their capacity to pay. The SA analysis point to the importance of legitimizing formalization of services through community organizations, and possible use of subsidies targeted to this group of extreme poor.

-project puts emphasis on institutional and organizational problems, not just physical. this is because they consider the physical dichotomy between the barrios and the rest of the city has its origins in the institutional dichotomy.  
 -the project proposes an integral approach to the barrio problems. The project will look at the problems of each barrio and look for the responses necessary to resolve their particular problems.



**Annex 6**  
**Caracas Slum-Upgrading Project**  
**Social Assistance Outreach Program**

**Objectives:** Community participation occupies a central place in the execution of the Project. It is an essential pre-condition to the successful undertaking of the proposed neighborhood improvement program, which in turn is necessary in order to integrate the barrios into the formal fabric of the city. Preliminary studies have indicated moreover that the potential exists to incorporate local communities in a leadership role in the process of barrio upgrading. To this end, the requisite assistance will be provided to coalesce and strengthen local groups, enabling them to actively participate and if possible co-manage, together with the PMU, the upgrading process, including preparation, negotiation, approval, execution, monitoring and evaluation of Project activities.

**Scope:** The Social Assistance Outreach subcomponent is a combination of processes oriented at incorporating the communities into the urbanization process, in all its phases - preparation, negotiation, approval and implementation. This comprises detailed design of the UPF works (already available as pre-feasibility studies) and full development of UDU level proposals, as well as their implementation. The group of actors providing the Social Assistance Outreach support will be mobilized from the earliest phases of the project cycle to project completion, providing an important degree of continuity and stability throughout the process. The sub-component will:

- Design and systematize a community outreach program previous to engaging the community in design of local improvement programs;
- Develop a process for engaging the community and initiating the process of information sharing about the objectives of the Project;
- Support and provide technical assistance to the community, so that it can effectively participate in the process of formulation and negotiation of neighborhood upgrading projects and resettlement plans; Provide capacity building to the community so that it can organize and maintain a functioning co-management group to lead the process of urban design and execution if it so desires.

**Methodology:** The methodology for community involvement in detailed Project design and implementation advances from the initial point of community contact to the eventual incorporation of the community into a role of co-manager, comprising the following phases:

- Engagement of the community
  - Preparation of a detailed assessment of physical and socio-economic conditions
  - Preparation of neighborhood upgrading projects
  - Implementation and evaluation
- **Engagement of the Community:** This entails systematically contacting the community and its organizations, with the intention of openly discussing the goals and objectives of the Project, and actively motivating and engaging the community in the neighborhood improvement process.

The engagement processes consist of:

- Information, motivation and mobilization of the community;
- Identification of local problems and perceived priorities with respect to neighborhood improvement;
- Promotion of community organization; and
- Design and discussion of conceptual neighborhood upgrading proposal.

In order to guarantee that these processes are handled in the most appropriate manner, the consultants executing the Social Assistance Outreach Program, must be facilitators, with experience in the design and development of Social Assistance Outreach strategies for local communities. The consultants must therefore be skilled in: communicating

and mobilizing; engaging and managing groups; negotiation and persuasion; management and systematization of social information; managing urban design and resettlement.

- **Preparation of a detailed assessment of physical and socio-economic conditions:** This phase consists of assessing tenancy and household occupation, land tenure situation, physical characteristics of the housing, socioeconomic and demographic information of the families requiring resettlement, etc.

The assessment processes consist of:

- Developing a cadastre of housing, land tenure, land use, household occupation and physical condition of housing;
- Executing a socioeconomic and demographic study of those requiring resettlement; and
- Preparing a diagnostic of the social organization of the community.

Executing this phase requires the use of consultants with technical expertise in cadastres; design and development of social investigation procedures; quantitative and qualitative analysis of social information; and knowledge of municipal legal frameworks.

- **Preparation of Neighborhood Upgrading Projects:** This phase is oriented to the active incorporation of the community into the design and negotiation of the urbanization sub-projects, as well as the strengthening of the technical capacity of community organizations.

The preparation processes consists of:

- Developing the urbanization and services sub-projects;
- Carrying out the engineering studies (including preparation of budgets, timetables, and implementation sequencing);
- Negotiating compensation packages and resettlement alternatives;
- Providing support to families to be resettled;
- Strengthening communities for co-management;
- Definition of financial management model; and
- Legalization of community co-management groups (if not done previously).

The fundamental actors of this phase are the facilitators of the Social Assistance Outreach, as well as firms with a specialty in urban design and civil engineering, the communities and the local governments. Technical competencies include: urban design; urban planning; engineering; design and negotiation of compensation packages and resettlement alternatives; community organization and management; and social work.

- **Implementation and Evaluation:** This phase consists of the integrated management of the administrative, technical and social aspects of the neighborhood upgrading sub-projects.

The execution processes consist of:

- Installation of the management/co-management model;
- Transfer and administration of sub-project funds to local co-management groups<sup>1</sup> (if chosen model);
- Programming, contracting, execution and monitoring of works;
- Social support;
- Legal accompaniment; and

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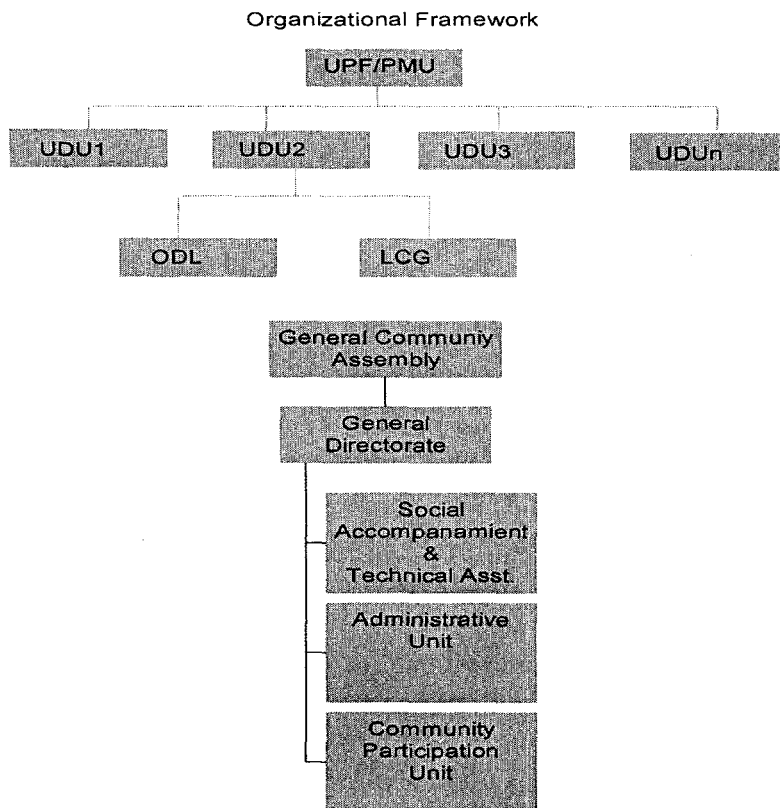
<sup>1</sup> In some cases, the local community co-management group may have the capacity to manage the entire works execution phase, including all contracting, disbursements, etc. This would be handled by setting up a trust fund to be managed by the co-management group, who would follow all Bank requirements for procurement, disbursements, auditing, etc. This option is expected only in exceptional cases where local capacity has been judged to be exceptionally strong. In most cases, the PMU will handle the procurement, disbursements, etc. of urbanization sub-projects, through a co-management agreement with the community.

- Sub-project evaluation.

The fundamental actors of this phase are the local co-management groups, the Social Assistance Outreach facilitators, engineering and urban design specialists; general contractors, the PMU and the local governments.

In sum, the Social Assistance Outreach methodology proposes to ensure that, at all phases of Project implementation, community participation and pro-activism is stimulated and harnessed, and the capacity to develop integrated physical and social neighborhood improvement plans is made available, either through local co-management or through the services of the PIU. In either case, the Project will finance an experienced team of professionals who can work with the community to provide them with the proper tools to actively participate and eventually take the lead in the design and implementation of neighborhood improvement plans. These teams must have interdisciplinary depth to manage the social, technical and administrative process at each phase. Finally, the process, as outlined, must be flexible to accommodate change, as may occur given the unique conditions of each community.

**Organizational framework:** . The Social Assistance Outreach sub-component will be coordinated and supervised by the two decentralized UPF-Project Management Units (see Section 4 of the main body of the PAD for overview of institutional arrangements). The UPF-Project Management Units will consist of seven professionals: (i) Chief Coordinator of the Unit; (ii) Strategic Planner; (iii) Engineer; (iv) Urban Planner/Designer; (v) Community Outreach Coordinator; (vi) Resettlement Coordinator; (vii) Land Titling Coordinator. These two units (La Vega and Petare) will interface with the Local Design Offices (LDOs) or the Local Co-Management Groups (LCGs), composed of technical consultants and community representatives, so as to ensure the smooth operation of all facets of the Project at the field level. The sub-component will be carried out through third party consultant contractors who will work together with the two PMUs and with the LDOs or the LCGs at each UDU.



It should be noted that during the design phase of the Project, a Local Design Office will be created at the UDU level. At the end of the UDU design phase (1<sup>st</sup> year of the Project), the capacity of the LDO will be evaluated, and the decision as to whether the sub-projects will be executed (i) by the UPF-Project Management Unit with assistance from the LDO, or (ii) directly by the Local Design Office, which in this case will be called Local Co-Management Group, with assistance from the UPF-Project Management Group. This will depend upon the capacity existing at the community level. The structure of the LDOs and/or the LCGs are basically as follows:

**The General Community Assembly** will be constituted by the residents of the neighborhoods (UDUs), members of the technical teams as well as the technical consultants assisting in the design of the Neighborhood Improvement Plans. The role of the General Assembly is to approve, as a collective voice, the Neighborhood Improvement Plans, and to act as a mouthpiece for the greater community.

**The General Directorate** is to be constituted by members of the Administration, Technical Assistance and Social Assistance Outreach and Community Participation Units. Its role is to guarantee the effective, equitable and efficient execution of the Neighborhood Improvement Plans and to monitor the technical, financial and social aspects of the project.

**The Administration Unit** will be responsible for monitoring the sub-project budgets, administration and financial control of funds. In the case that the Co-Management Unit has the capacity to act as the executor of the Project, the role of this unit will become one of financial control and management.

**The Community Participation Unit** will be constituted by member of the community and technical consultants. Its role is to ensure the active participation of the community in all aspects of sub-project design and execution.

**The Technical Assistance and Social Assistance Outreach Unit** will provide technical assistance to the community in the design and execution of the Neighborhood Improvement Plans, specifically in the areas of engineering, architecture and urban design. In addition, this unit will provide technical assistance in the design and execution of social, environmental and legal programs which are a part of the Project. It will include community members, and will consist mostly of technical consultant.

**Budget:** A total of \$4.9 million is foreseen for detailed design and implementation of this sub-component.

**Annex 7**  
**Caracas Slum-Upgrading Project**  
**Resettlement Program**

**Introduction**

The proposed Project seeks to improve the quality of life of the urban poor in the barrios of La Vega and Petare Norte, by better integrating these neighborhoods with the surrounding area and by addressing priority problems identified in the Social Assessment and studies of physical conditions of the two barrios carried out during project preparation. To do so, it will require the resettlement of an estimated 2,500 families (7.6 percent of the total number). Population displacement will be brought about for two reasons: (i) to undertake infrastructure improvements (essentially road widening and construction, and drainage canals), entailing in some cases the reordering of existing layouts; and (ii) to remove people living in high geotechnical risk areas or in unsound housing structures.

Resettlement is an essential and integral part of the slum upgrading process in densely occupied and risk-prone areas. It will unquestionably impose costs on a limited number of households in order to benefit the community. It should be noted, however, that, because affected families are to be resettled within the same neighborhood in which they are currently living, they are also direct beneficiaries of the upgrading and rehabilitation works undertaken by Project. This stands in contrast to the case of most sectoral infrastructure investment projects, where resettlement is, at the outset (i.e., in the absence of compensation packages that go beyond replacement of affected property), a cost accruing to population segments that are likely to remain largely unaffected by the stream of project benefits, often entailing resistance, confrontation, lengthy negotiations and grievance settlements. Preliminary discussion of the proposed Project with target communities and pilot projects undertaken in the MAC suggest that communities are willing to collaborate to ensure fair treatment to families that will need to be resettled in the neighborhood upgrading process.

This annex presents the estimated impact of the Project's physical investments, in terms of affected housing structures and families, and summarizes the measures proposed to promote the resettlement of the population displaced by the neighborhood upgrading and rehabilitation process.

**1. The estimated impact of physical works and geotechnical risks**

Given the nature of the proposed Project, estimation of the total number of families that will need to be resettled has been an iterative process throughout project preparation. Revisions will necessarily take place during project implementation. While major works to be undertaken at the UPF level are already specified, the full extent of internal barrio works will only be known as neighborhood plans for the 12 UDUs are developed with participation, and possibly co-management, of the community. It is expected that this would occur during the first year of Project implementation. Notwithstanding, careful assessment of the number of families likely to be affected has been carried out, based on a thorough geotechnical risk analysis, the review of site plans of principal road works (already developed), three preliminary urbanization schemes prepared for the two UPFs (including identification of resettlement needs), as well as experience with small-scale, neighborhood (UDU) level improvements in from pilot projects.

In addition, a systematic effort was made by the Borrower to reduce the need for resettlement through examination of alternative road layouts and redesign of engineering options. Project impacts have been brought down from an initial estimate of around 20,000 affected people to less than half that number. Tables 7.1 and 7.2 present the number of housing units affected by works and living in areas of risk, requiring relocation or rehabilitation.

**Table 7.1**  
**Housing Units Affected due to Works**

<b>Works</b>	<b>Petare Norte</b>	<b>La Vega</b>	<b>Total</b>
Major Road Works (UPF)	574	150	724
Internal Road Works (UDU)	847	566	1413
<b>Total</b>	<b>1421</b>	<b>716</b>	<b>2137</b>

**Table 7.2**  
**Housing Units Affected due to Risk**

<b>Type of Risk</b>	<b>Type of Solution Required</b>	<b>Quantity of Solutions Required</b>		
		<b>Petare Norte</b>	<b>La Vega</b>	<b>Total</b>
Housing located in areas of high risk for landslides, and/or in areas of severe slope, or environmentally fragile areas.	Demolish and relocate	39	87	126
Housing with severe structural problems and/or severe erosion.	Rehabilitation of housing unit.	4	-	4
<b>Total</b>		<b>43</b>	<b>87</b>	<b>130</b>

As shown in the above tables, it is estimated that the total number housing units which will need to be displaced is 2,263 – 1,486 units (8.1 percent of total number) in Petare Norte and 803 (5.5 percent of total number) in La Vega. Since housing units in Petare Norte and La Vega are occupied, on average, by 1.1 families, according to the Social Assessment, it is estimated that the number of families requiring resettlement is on the order of 2,500. Annex 5, which summarizes the results of the Social Assessment, describes the characteristics of households in the two UPFs. Detailed physical assessments of affected housing units and social assessments of affected households will be carried out during project implementation as indicated below.

## **2. The Resettlement Action Plan**

A reference Resettlement Action Plan (RAP), the *Plan de Acción Social para la Sustitución de Viviendas y Rehabilitación Física de los Barrios de Caracas*,<sup>1</sup> has been prepared by the Borrower, and has been approved by all agencies involved in its implementation. The RAP will be discussed with the two communities before effectiveness.<sup>2</sup> Site-specific resettlement plans for the 12 UDUs will be prepared in parallel to feasibility studies and detailed design of the urbanization projects,

<sup>1</sup> Plan in Project files

<sup>2</sup> Preliminary discussions have taken place with the communities regarding the Project in general, and these included discussions of resettlement issues.

with direct involvement of the community and potentially affected households. It is estimated that this would occur during the first year of the Project, as indicated by the general Project timetable. The reference RAP sets forth (i) a policy framework, providing a set of general principles and operational guidelines for the development of the site-specific resettlement plans; and (ii) a set of programs, supporting and complementing other activities in Component 1, to ensure the appropriate handling of resettlement issues during Project implementation.

The RAP is directed to:

- (a) land owners, i.e., the public or private entities or individuals who hold title to lands in the barrio;
- (b) housing proprietors, i.e., those who have built or bought housing units in the barrio; and
- (c) renters of housing units (or parts thereof) in the barrio.

In addition to providing background information on the nature and scope of the Caracas Slum Upgrading project, its likely impact in terms of resettlement and the policies and institutional setups under which barrio upgrading and resettlement will take place, the RAP sets forth an action plan to address resettlement in the context of the Project, comprising the following:

- General principles and operational guidelines
- Summary of resettlement options
- Supporting Programs:
  - Social Assistance Outreach, consisting of actions to inform and strengthen community organizations for participation and co-management in the neighborhood improvement and resettlement processes, and support families to be resettled and other members of the community during the Project implementation process
  - Monitoring and evaluation
- Organizational framework for management of the resettlement process
- Budgets and typical timetables

It should be noted that the RAP draws on and is complemented by other studies and plans carried out during Project preparation, especially the following:

- Social Assessment
- Assessment of Housing Units Affected by Road Works
- Assessment of Housing Units Affected by Geotechnical Risks
- Typology of Resettlement Housing Options
- Preliminary Designs of Neighborhood Upgrading Scheme for Petare Norte (2) and La Vega
- Summary of Organizational Structure and Staffing of the PROMUEBA Caracas Project

## **2.1 General principles and operational guidelines (including resettlement options)**

The compensation of lost assets and resettlement of occupants of affected housing units will be undertaken in accordance with six general principles with corresponding operational guidelines, as follows:

- (a) Resettlement is to be minimized and, when required, should occur within the same neighborhood: This principle has guided pre-feasibility studies of the major infrastructure works carried out during Project preparation. It will be adopted also during detailed development of neighborhood improvement plans. This implies careful balancing of the demand for replacement housing with the availability of land within the barrio, requires the fine-tuning of engineering designs to avoid affecting existing units, and may require as well the eventual densification of some areas through construction of low-rise vertical condominium units. Temporary housing will be avoided by careful sequencing of work fronts. If necessary, however, it will be provided within the same neighborhood.
- (b) Compensation packages will differ according to impact and status:

- households that own and live in a single unit will be offered either cash compensation for lost assets (comprising basically the prior investment in construction of the unit) or a new, equivalent or better housing unit, with a fully titled land parcel;
- proprietors that own but do not reside in an affected housing unit will receive cash compensation for loss of that unit;
- households that rent or “double up” in housing units will be offered the option of buying a new house within the barrio (or 3-months rent if they do not opt for buying a house); and
- current land owners will receive cash compensation.

In the case of cash compensation, households (i) will be assisted in finding alternative applications for funds through a Real Estate Information System and (ii) will receive legal assistance in acquisition of new property. In all cases, the logistics and expenses of moving will be covered by the project.

(c) Participation of the target population is ensured and stimulated: The community will be fully informed and stimulated to actively participate in decision making and, to the extent possible, to co-manage the resettlement process, as is foreseen with respect to all other aspects of neighborhood improvement planning and implementation. More specifically, there should be constant dialogue with the affected households, incorporating them into the process of defining housing options and other aspects of the resettlement compensation package. This process has begun with several meetings with community leaders in Petare Norte and La Vega to discuss the overall concept of the Project. Public discussion with each of the two communities is foreseen once the Project is negotiated. Implementation will necessitate intensified dialogue through information campaigns, public meetings and target group discussions. Community involvement is in effect essential to ensure agreement on and enforcement of eligibility cut-off points, avoiding the increase in the number of barrio households and further investment in structures that are to be replaced, i.e., it is essential to avoid the uncontrolled increase in Project costs, once the Project is launched.

(d) Detailed neighborhood improvement and resettlement plans will be prepared before beginning of construction occurs: For each of the 12 neighborhoods, detailed upgrading projects will be prepared. In addition to the engineering studies for investment in infrastructure works, socio-economic assessment of affected families, physical characterization and economic valuation of housing structures, identification of presumed limits of land parcels and tenure regime, and review of property titles will be carried out. (Community behavior and practices with respect to sanitation and associated health problems will also be assessed.) Based on these studies, the following will be made available before any construction work requiring resettlement takes place:

- general neighborhood improvement plan, indicating affected housing units and location of replacement housing;
- architectural plans for replacement housing;
- detailed sequence of works, indicating the resettlement timeframe and identifying temporary housing solutions if needed; and
- neighborhood improvement plan budget, specifying the resettlement budget.

(e) Physical solutions must be appropriate and must be available in a timely manner: This implies that resettlement of occupants in new housing (or cash compensation, if preferred), in accordance with the terms negotiated with the community and affected households, must occur at least one month before demolition of an existing structure takes place. Physical solutions should make best use of technologies that will expedite construction, minimizing the need for temporary housing. Housing solutions will be generated taking into account both the diverse spectrum of household composition, use of structures and income flow patterns, as well as the need to optimize construction time and costs. A reference typology of new housing solutions has been developed by INAVI consultants. Finished and partially finished housing options will be offered. (The latter have been successfully used in other community-based improvement programs in the MAC, such as Aguachina.) Budgeting and allocation of counterpart funds for resettlement should receive maximum priority to avoid delays in construction and undue hardship on displaced families.



- (f) Compensation of lost assets and financing of resettlement solutions: The Project will adopt criteria for compensation of physical assets based on valuation criteria adopted by the GOV in infrastructure projects, reviewed and adapted to reflect the principle of replacement value (presented in Annexes 3 of the RAP). Replacement housing is estimated to cost an average of \$10,000 per unit. The resettlement of affected households, including the construction of replacement housing, is an integral part of the neighborhood upgrading project cost to be co-financed by the GOV and the Bank.

## 2.2 Organizational Framework for Management of the Resettlement Process

The traditional approach to introducing public infrastructure services in urban neighborhoods is ill-suited to the upgrading and rehabilitation of barrios proposed by the Project. This is due both to the small scale, very site-specific, fine-tuned nature of the interventions, as well as to the need to actively involve the community, from the onset, in a process which could be extremely disruptive, ineffective, and unsustainable if undertaken without full local support and collaboration. In contrast, experience in a number of recently completed or ongoing pilot projects in the MAC<sup>1</sup>, and other parts of the LAC Region, has shown that community-based initiatives, where households are actively involved in decision making and in management of the design and implementation process, have led to projects which enjoy extensive sense of ownership and commitment on the part of the community to ensuring that the stream of project benefits is sustained in the future through proper operation and maintenance.

A key organizational vehicle for implementing the pilot slum upgrading projects referred to above has been the *consortium* model. These typically constitute a forum for negotiation of neighborhood improvement proposals and conciliation of diverse stakeholders' views. Often including or simply interacting in a structured way with public and private entities representing broader urban concerns, the *consortium* operates on the key assumption that sustainable agreements among its members can be reached, in the interest of the community but without undue hardship to individual members. In addition, through the *consortium*, resources have been mobilized to meet the technical, social, financial and managerial demands of neighborhood improvement projects.

The organizational model proposed for this Project is described in Chapter 8 of the RAP and in Section 4 of the PAD. As relates to management of the resettlement process, the following mechanisms are of direct relevance:

- (a) Local Co-Management Group (LCG): Based on the experience of the *consortiums*, and taking into account the requirements associated to the scaling up of the initiatives, two alternatives are proposed and will be negotiated with the communities of Petare Norte and LaVega:
- The *consortium* model would be the basis for constitution of an LCG which would assume a role akin to that of a local urban planning agency, with specific *personalidad jurídica*, independent of its role in the Caracas Barrio Upgrading Project. For the purposes of Project implementation, the *consortium* (or LCG) would be obligated to follow Project guidelines and procedures, including those pertaining to Project design and processes (including resettlement). These responsibilities would be formalized under a Local Project Management Manual and would receive technical assistance and institutional strengthening throughout Project implementation through the Social Assistance Outreach Subcomponent. Working with technical teams of architects, engineers, urban planners, sociologists, etc., under its direct hire, the LCG would have the power to manage the preparation of plans and the execution of construction works at the community level, drawing on a dedicated trust fund.
  - If the community is not ready or does not want to be involved in full co-management of the neighborhood improvement process, local project management responsibilities would be undertaken by the PMU, through a Local Urban Design Office (LDO), which would directly hire, coordinate and supervise project design by consultants and construction work by contractors. Even if a *consortium* is not formed, it is envisaged that a

<sup>1</sup> Experience in other countries as well (for example, El Mezquital in Guatemala, the Favela Bairro Program in Rio de Janeiro, the slum-upgrading project in Belo Horizonte and the Guarapiranga Project in São Paulo, Aguachina, Catuche and El Limon in the MAC) show the effectiveness of slum upgrading schemes which are implemented relying on comprehensive, fine-tuned interventions, with active local participation, even in cases when they are not strictly co-managed locally.

committee would be created, made up of local community leaders, who would be fully involved in the decision making process as the primary interlocutors in the design and implementation of the neighborhood improvement plans. The Social Assistance Outreach Subcomponent would ensure effective information flows, consultations, negotiated agreements and dispute settlement at all stages.

- **(b) The Project Management Unit:** This unit has the key technical and managerial responsibilities for Project implementation and will comprise the following: **Central Unit:** The central PMU will be responsible for general management of all aspects of Project implementation. As regards Component 1, it will be in charge of promoting formal consultations with local communities, once the Project is negotiated, presenting and clarifying overall Project objectives, scope, guidelines and preliminary proposals; participating in the selection and supporting the adoption of the local co-management model; supervising or carrying out the contracting of all studies and works as need; promoting the discussion of and participating in key decision making meetings with regard to neighborhood upgrading proposals; and ensuring that resettlement and other Project guidelines are fully incorporated in the design and implementation of all sub-projects and activities. Specifically, as relates to resettlement, the Central PMU will supervise and provide guidance during preparation of site-specific RAPs; review and approve these plans; and supervise their implementation, monitoring and evaluating processes and outcomes throughout, and taking appropriate corrective action as needed to ensure fulfillment of Project objectives. It will be fully accountable of ensuring compatibility of resettlement activities and the overall implementation of Component 1, especially as relates to ensuring that families are appropriately resettled in replacement housing sufficiently in advance of the beginning of physical works in any neighborhood.
- **Decentralized Units:** Through its decentralized branches in Petare Norte and La Vega, the PMU will specifically supervise the slum upgrading process, including the design and implementation of the neighborhood improvement plans and corresponding site-specific RAPs for the 12 UDU's. The Petare Norte and La Vega sub-units will be responsible for day-to-day planning and supervision of the LCGs, overseeing the use of the local trust fund (when applicable) and ensuring that proper procurement procedures are followed, quality of sub-projects is maintained, works are sequenced and executed in suitable manner, and policies and guidelines endorsed by the Project are fully adhered to. These responsibilities apply to all aspects of the Project directly related to Component 1, including resettlement. These branch PMUs will each be staffed with an engineer, and an urban planner with a minimum of five years of experience in slum upgrading and/or resettlement, and with three professionals (social scientist, engineer or urban planner) each fully dedicated to supervision of the RAP, the Social Assistance Outreach and the Land Titling sub-components, working in close coordination with the multidisciplinary team of the decentralized PMU (UDU) units. In the case of Petare Norte, depending on the sequencing of works, additional dedicated staff will be required.

### 2.3 Supporting Programs

To enable and support general implementation of the Project and specifically ensure that resettlement activities are undertaken in accordance with the RAP, two programs are of special relevance. The Social Assistance Outreach Program, described in Annex 6 of the PAD, comprises actions through which community participation and co-management in all stages of the neighborhood improvement and resettlement processes will be promoted. The Monitoring and Evaluation (M&E) Program, to be carried out by the PMU, will include a sub-component comprising the following two activities specifically related to resettlement:

- **Monitoring and evaluation of advances in implementation of resettlement activities:** This would be a management tool designed to produce (i) detailed, near "real time" information for the Project Manager, the PMU staff and others (including the LCG) directly involved in day-to-day implementation of the Project; and (ii) summary reports for the management of FUNDACOMUN, the Bank, and other agencies involved in Project implementation, produced on a regular (monthly and quarterly) basis or upon request. It is designed to track and compare actual with planned physical activities, timetables, funding and execution of the budget, and to flag critical situations so that appropriate corrective action can be taken. Specifically with respect to resettlement, it would track changes in occupation and physical conditions of affected housing, knowledge of

and adhesion to proposed resettlement options, documentation of property and actions to regularize entitlements, and assessment of assets, through a set of 10 key indicators.

- **Monitoring and evaluation of project outcomes:** One year after resettlement, an evaluation would be undertaken of (i) the impacts of resettlement on the welfare of affected families; and (ii) the satisfaction of these families with the process and outcomes of the resettlement. To this end, a baseline survey of affected families and of a control group would be carried out six months before the move. The evaluation of resettlement impacts and degree of satisfaction would be carried out 12 months after resettlement.

Detailed preliminary designs of the M&E Program, specifying variables and indicators to be tracked are included in the RAP.

#### 2.4 Resettlement Budget

A budget of \$27.1 million (base cost) is reserved for all activities directly related to compensation of lost assets and provision of replacement housing, as well as for programs supporting the resettlement process throughout Project implementation, including Social Assistance Outreach and Monitoring and Evaluation, as summarized in Table 7.3. Contingencies of up to 10 percent are admitted, bringing the total budget up to \$30.3 million. Considering exclusively expenditures on compensation of lost assets and replacement housing (without contingencies), this budget would cover an average cost per displaced household on the order of \$8,850.

**Table 7.3**  
**PROMUEBA Caracas Project**  
**Resettlement Budget (US\$'000)**

Activity	Petare Norte	La Vega	Total
Cash compensation & Replacement housing	14.7	7.4	22.1
Social Assistance Outreach	2.6	2.3	4.9
Monitoring & evaluation	0.3	0.2	0.5
Sub-total (Base Costs)	17.6	9.9	27.5
Contingencies (10%)	1.8	1.0	2.8
Total	19.4	10.9	30.3

#### 2.5 Timetable

The final Project implementation chronogram was confirmed during appraisal and is presented in annex 3.

**Annex 8****Caracas Slum-Upgrading Project  
Land Titling Program**

- **Objective**

The objective of this sub-component is to regularize land tenure for all the families living in the areas of the Project. These areas are: La Vega (all UDUs except 10.6 and 10.7) and Petare Norte (all UDUs), with approximately 9,631 and 20,013 families each (adjusted). The premise is that ownership of land is a key process in the incorporation of invaded areas into the formal city.

- **Estimated property ownership**

La Vega (all UDUs except 10.6 and 10.7)

National Land	70.73 Has
Municipal Land	55.05
Private land	23.4
No information	5.63

**TOTAL** 154.81

Petare Norte (all UDUs)

National land	0
Municipal land	174.17
Private land	44.83
No information	8.1

**TOTAL** 227.16

National land belongs in most cases to INAVI. It is estimated that 1,230 families in La Vega (UDUs 10.8 and 10.5) and 4,500 in Petare Norte (UDU 4.1 and the southern tip of UDU 4.2) occupy private lands. Families living in both public and private lands will be included in the Project. Agreements will be signed between the Project and INAVI, and each municipality. These agreements include commitments on the legal framework (§ 3), private land acquisition (§ 6), cost recovery (§ 8), and institutional arrangements (§ 10).

- **The legal framework**

Many laws and codes are related to land, public land, land acquisition, and land expropriation. These are:

- *Código Civil*: basic definitions
- *Ley Orgánica de Régimen Municipal*: procedures and conditions that allow municipalities to use eminent domain powers on land.
- *Ley de Expropiación por Causa de Utilidad Pública o Social*: establishes the procedures and conditions for private property takings by the government in cases of public interest.
- *Ley de Tierras Baldías y Ejidos*: sets the conditions for concession of ejido lands to municipalities.

There are particular municipal ordinances that describe more specifically the conditions that illegal occupiers of land must follow in order to acquire it. These are:

- Ordinance on the sale and lease of municipal land located in areas of uncontrolled development, Municipality of Sucre (applies to Petare Norte).
- Draft ordinance on the sale and lease of municipal land located in areas of uncontrolled development, Municipality of Libertador (applies to La Vega).
- INAVI's regulations on sale of lands

FUNDACOMUN prepared a new standard ordinance to be used by the three stakeholders for the land included in the Project. This new ordinance is based mostly on the municipality of Sucre's ordinance, but included correcting some of its shortcomings and adding specific policies of the Project (requirements, prices, payment methods, use of funds collected). This ordinance has been discussed with the stakeholders and its approval is a condition for loan effectiveness.

- **Process for public lands**

Public lands are either national or municipal. The process for public lands, from the creation of a Land Legalization Commission to the handing over of titles includes 11 steps. It will take approximately, for a typical barrio, 10 months. The steps are listed below. First are the general Project steps (marked with letters) and then the specific land legalization steps (marked with numbers).

### **Steps Project**

A. Preliminary actions: products, drafts

B. Integrated diagnostic

- Socio-demographic
- Cadastral (acquisition of maps, definition of cadastral perimeters, manual measurement of cadastral perimeters, selection and training of surveyors)
- Social organization
- Land Tenure
- Resettlement plan

C. Design, plans

D. Infrastructure works, resettlement

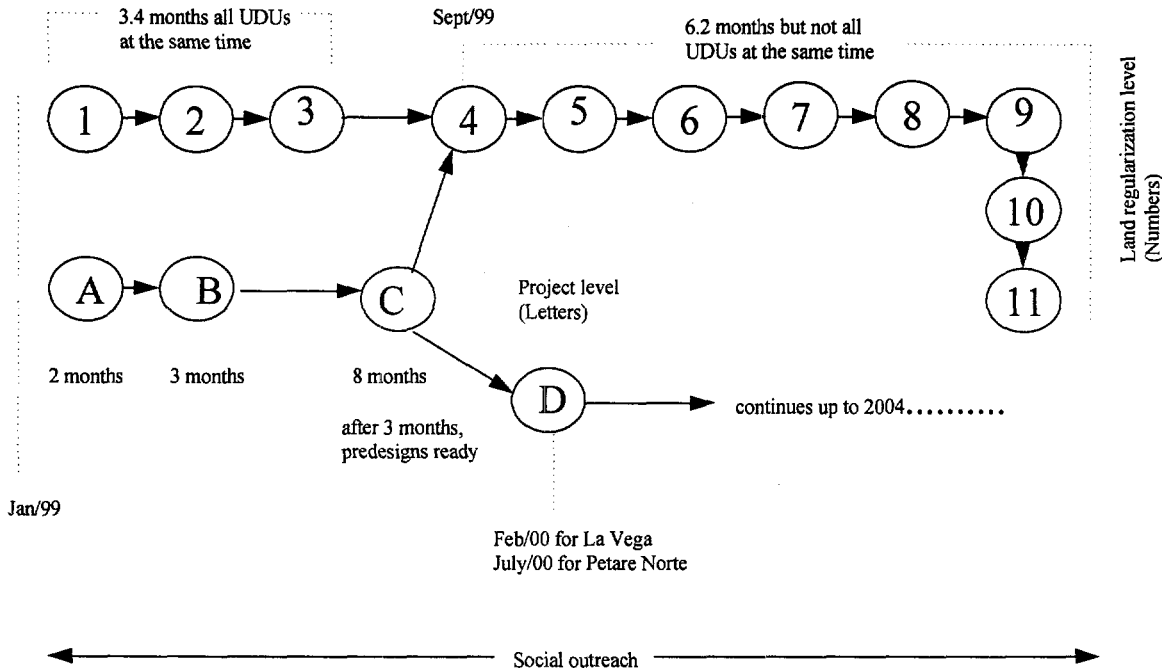
Throughout the Project there will be "Social Outreach" activities.

### **Steps Regularization Process**

1. Creation within each Unit of local co-management (UCL) of a Land Legalization Commission (this activity is part of stage B). The commissions might be created before the UCLs, in which case they will work under the supervision of the cadastre consultants. This option is envisaged in order to speed-up the titling process.
2. Inventory of all families and properties in the barrio (this will be an input for the cadastre)
3. Complete the families' files and application forms and submit
  - 3.1. Identification card
  - 3.2. Work certification
  - 3.3. Family related documents (marriage, birth certificates, etc.)
  - 3.4. Informal title over improvement (título supletorio)
  - 3.5. Estimated value of improvement
  - 3.6. Property location and form sketch
  - 3.7. Receipt for process fee
  - 3.8. Residency card
  - 3.9. Declaration of not owning real property
  - 3.10. Complete application form and annex to file
  - 3.11. Checking completeness of each file
4. Technical and legal study to verify present land ownership
5. Topographic map
6. Land valuation
7. Compilation of applicants' files within institution
8. Directory's decision
9. Preparation of general contract (model) and individual contracts
10. Registration of Property
11. Handing over of titles

These steps are equivalent in INAVI and the Municipalities. The following graph shows the order of these activities and how the legalization process fits into the entire project. Infrastructure works can start after designs are ready and the OSD PAD Form: July 30, 1997

legalization process has officially started (the families' files are complete and application forms ready and submitted).



• **Cost and timing estimations for the public lands case**

Costs and times for the process were estimated by interviewing experienced officials in the Cadastre offices of the Municipalities of Sucre and Libertador, INAVI and the Third Registry of Caracas. The process takes approximately 10 months and costs US\$96/family. It is important to note that there is no experience in Caracas with massive land legalization processes and therefore these estimates must be considered upper limits as economies of scale should take place with the leverage of the Project. The processes will be sped-up considerably in the Project, and costs reduced, by using an improved design (see § 10). The unit of analysis is a barrio, which typically will have 500 families.

**Table 8.1**  
**Estimated Cost and Time of the Land Legalization Process in Caracas**  
**for a 500-family barrio, 1997**

Activities	Time (months)	Cost/family (Bolivares)	Agency	Assumptions
1. Creation of Land Legalization Commission	Time charged to Project	Cost charged to project	Project	
2. Inventory of families and properties	1.4	1,680	Surveyors	6 properties/surveyor/day 3 surveyors/barrio Each surveyor Bs 200,000/month
3. Complete the families' files	2	11,264		

	3.1. Identification card				
	3.2. Working certification			Work place	
	3.3. Family related documents (marriage, birth certificates, etc.)		4,000	Public notary	
	3.4 Informal title over improvement (título supletorio)		1,000	Tribunal	
	3.5. Estimated value of improvement		0	Each household head	
	3.6. Property location sketch		0	Each household head	
	3.7. Receipt for process fee		500	INAVI/Municipality	
	3.8. Residency card		500	Municipality	
	3.9. Declaration of no ownership		5,000		
	3.10. Complete application form and annex to file		0	Each household head	
	3.11. Checking completeness of each file and correcting or adding information		264	Land Legalization Commission	1 person reviewing 20 files/day, 3 community members, each 110,000/month
	<b>4. Technical and Legal study</b>	1.6	9,216	INAVI/Municipality	Team: 1 topographer, 2 assistants, 1 driver: 2 hours/case 4 teams
	<b>5. Topographic map</b>				Produced by the Project in the design stage
	<b>6. Land valuation</b>	1.6	960	INAVI/Municipality	
	<b>7. Compilation of application files within the institution</b>	0.6	0	INAVI/Municipality	
	<b>8. Directory's decision</b> This requires a person to go personally to either INAVI or the municipality to ask whether the applications were approved.	0.4	104	INAVI/Municipality	Time of person checking if decision ready Salary 110,000/month plus transport
	<b>9. Preparation of Contracts</b>	1.4	11,069	Lawyer in	Preparation of

			INAVI/Municipality	model contract Bs 989. Then, 1 lawyer 3 contracts/day 6 lawyers Each lawyer 600,000
<b>10. Registration of Property</b>	0.4	13,460 <sup>1</sup>	Registry	Lawyer fees: 960/case National tax: 2500/case Registry tax: 10,000/case
<b>11. Handing over of titles</b>	0.2		INAVI/Municipality	
<b>TOTAL</b>	9.6	Bs 47,753		
<b>Total in dollars</b>		US\$96		

- **Process for private lands**

The areas that have been identified as private are UDUs 10.5 and 10.8 in La Vega and UDU 4.1 and the southern tip of UDU 4.2 in Petare Norte. In the case of La Vega the owner is a Cement Industry that is located at the skirts of the settlements of La Vega. It employs a large number of La Vega's residents and has several social programs in the area, notably child care and recreation. This company has expressed its willingness to sell its land to Project beneficiaries as this will give tenure security to its own workers. Negotiations will start in the second semester of 1998.

In the case of Petare Norte there are several property owners (5 or 6) still to be identified. The process of identification of parcel delimitations and title investigation is under way. Once the property owners are identified (December/98) a negotiation process will start (first semester of 1999). In case agreement is not reached, these areas will be excluded from the Project, without affecting the infrastructure works in the remaining areas.

The negotiation mechanisms are explained hereby. The municipalities, in consultation with the affected families, will acquire private land by and under the supervision of the Project, through one or a combination of the following mechanisms:

- The municipalities buy the land at low prices, considering that it has almost no value in the present situation and that expropriation could always be used as a negotiation instrument.
- The municipalities exchange the land for other vacant land that they own.
- The municipalities exchange the land for zoning changes, construction permits and other regulations that may facilitate urban development for present property owners in other lands that they hold.
- The affected residents may form a civil association to negotiate directly with the owner, but with strong legal support from the Project.

Once the private lands are acquired the process to title them to the occupiers will follow the same steps and costs for public lands.

- **Sequencing**

The sequencing of the Project is shown in table 8.2. The criteria used are:

- In Petare Norte the first UDU to legalize is 4.1 because it is the one where the works start first.
- The other UDUs in Petare Norte were ranked in time according to the complexity of the infrastructure works.

<sup>1</sup> Includes property transfer tax  
OSD PAD Form: July 30, 1997



- In La Vega the order follows the complexity of the infrastructure works.
- Steps 1-3 can be done in Year 0, given that they do not require any design. They will be undertaken at the same time with Project steps A, B and C.
- Steps 4-11 require preliminary designs. The design phase will take approximately 8 months, but preliminary works (what is required to start the step 4) can be ready in 3 months. Steps 4-11 require 6.2 months but cannot be undertaken simultaneously for all UDUs. What can be done simultaneously is the process in La Vega and Petare Norte since the bulk of the legalization work will be in different institutions.
- Any one UDU should be able to start step 4 two months after the previous, since no single step takes more than 2 months.

**Table 8.2**  
**Number of families to regularize every year**

Area	Steps	UDUs	Year 0 1999	Year 1 2000	Year 2 2001	Year 3 2002
<b>Petare Norte</b>	Steps 1-3	all UDUs	21,574			
	Steps 4-11	UDU 4.1	1,312	707		
	Steps 4-11	UDU 4.3	975	4266		
	Steps 4-11	UDU 4.4		5381	804	
	Steps 4-11	UDU 4.2			650	7479
<b>La Vega</b>	Steps 1-3	all UDUs	9,631			
	Steps 4-11	UDU 10.2	1,523	1,649		
	Steps 4-11	UDU 10.8		2,085		
	Steps 4-11	UDU 10.1		1,439		
	Steps 4-11	UDU 10.3		823		
	Steps 4-11	UDU 10.4		1,060	33	
Steps 4-11	UDU 10.5		662	357		

UDUs that include more than 2,500 inhabitants were broken in 2, 3 and even 4 groups in order to make their legalization process manageable<sup>1</sup>. The core of the legalization work will take place in the first year of the Project.

#### • Cost recovery

The Project will include cost recovery in the form of a single lump sum per family. In order to determine ranges for this payment, ex-post land prices are the best option since they reflect the unimproved land price, plus the title and the infrastructure. Unfortunately, to determine land prices ex-post is impossible at this point. It was decided to use a combination of two criteria: (i) ability to pay; and (ii) expected land prices ex-post. The average sum will be determined on the basis of ability to pay, between 5-10 percent of a minimum monthly salary per m<sup>2</sup> (approximately \$10-20/m<sup>2</sup>). Variations of this average will be calculated on the basis of expected land price iso-curves. These curves will be determined according to distance to main roads, either existing or new ones.

<sup>1</sup> Details:

#### Petare Norte

UDU 4.1: Sept/99-March 15/00

UDU 4.3.3: Mar/00-Sept 15/00

UDU 4.4.3: Sept/01-Mar 15/01

UDU 4.2.3: Mar/02-Sept 15/02

UDU 4.3.1: Nov/99-May 15/00

UDU 4.4.1 : May/00-Nov 15/00

UDU 4.2.1: Nov/01-May 15/01

UDU 4.2.4: May/02-Nov 15/02

UDU 4.3.2: Jan/00-Jul 15/00

UDU 4.4.2: Jul/00-Jan 15/01

UDU 4.2.2: Jan/02- Jul 15/02

#### La Vega

UDU 10.2.1: Sept/99-March 15/00

UDU 10.1: Mar/00- Sept 15/00

UDU 10.5: Sept/00- Mar 15/01

UDU 10.2.2: Nov/99- May 15/00

UDU 10.3: May/00- Nov 15/00

UDU 10.8: Jan/00- Jul 15/00

UDU 10.4: Jul/00- Jan 15/01

The payments will be done by constant installments over a period of 3-4 years and never over 5 years, to ensure that tenure is legalized before the end of the Project. The funds will be collected directly by the municipalities and INAVI. These will be used to invest in other informal areas as required by the Law (article 116 of the *Ley Orgánica de Régimen Municipal*). Titles will be handed over after full payment and not before.

• **Cadastral costs**

A study produced for the Project estimated the costs of developing a full cadastre for the zones of La Vega and Petare Norte (please refer to the report). Some of the cadastral activities can be included in Project stages.

**Table 8.3**  
**Correspondence cadastre activities-project stages**

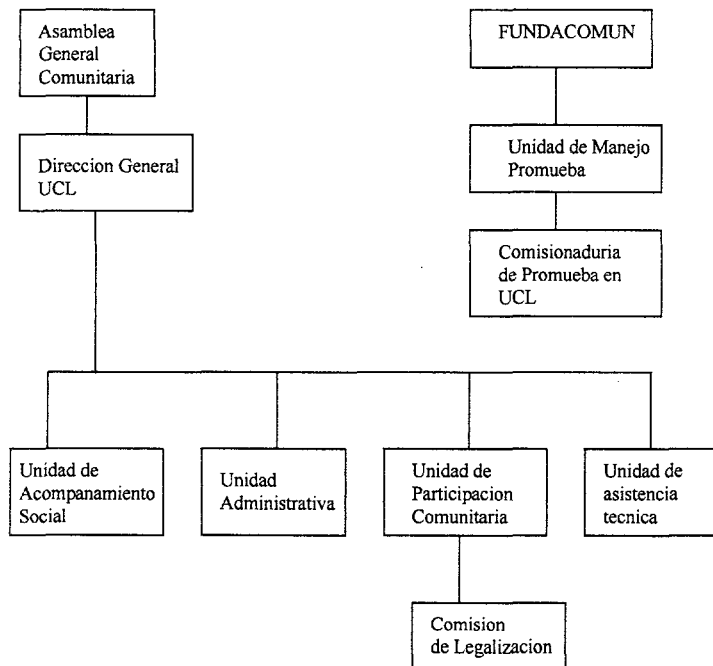
Cadastral study	Project stage
1. Map acquisition, hiring of surveyors	Stage B, integrated diagnostic
2. Census of families and properties	In Legalization component
3. Topographic maps	Stage E, project design
4. Quality Control	Should be done by the cadastral offices of the municipalities

The idea is to hand in to the Cadastral offices of the Municipalities of Sucre and Libertador all the cadastral information collected and processed by the Project.

• **Institutional arrangement**

**Organization.** There will be a Land Legalization Commission within the Unit of local co-management in each Urban Development Unit (UDU). Members of the community will form this commission.

**Unidad de Cogestion Local**



**Functions.** The functions of the commission would be:

- Participate in the inventory of all the families.
- Coordinate the compilation of the families' files.
- Participate in the information campaigns to maintain the community informed.
- Advise families who have problems meeting the requirements.
- Filter conflicts in order to solve directly the simple ones and let the Unit of local co-management handle the more complicated cases.

The work of the Commission will be supervised by the Project and by the cadastre consultants. Training and remuneration will be provided by the Project.

**Large scale legalization.** In order to speed up the operation, it will be necessary to provide additional support to the municipalities and INAVI:

- Steps 1-3 (inventory of families and compilation of documents) will be supported by the Land Legalization Commission under the leadership of the cadastre consultants. Since each UDU has a Commission, these steps can be started simultaneously in all UDUs.
- Steps 4-6 (technical and topographic studies, land valuation) will be produced by the Project in the stage of design. A consultant team (land valuation expert and four assistants) will be hired by the Project to do the land valuations.
- Steps 7-9 (production of individual contracts) will be contracted to three consultant teams (one lawyer and four assistants each team) that will have an office each in INAVI, Municipality of Sucre and Municipality of Libertador. The Project will pay these teams and will provide them with office equipment.
- Step 10 (registration). Each beneficiary will receive a notarized document and will register it whenever convenient. Since registration is the step that makes public the transfer of property, it is important for the Project to make sure that it is complete. The Land Legalization Commissions will include in their communication campaigns information about the need of registration and will make sure that each household head in all the UDUs of the Project registers the notarized document. Additional assistance (equipment, staff) might be provided to the public registries in order to speed up the process, if required.

**Annex 9**  
**Caracas Slum-Upgrading Project**  
**Environmental Action Plan**

An environmental report was prepared for the Project which establishes the guidelines and criteria for formulating the proper instruments to manage and mitigate the environmental impacts resulting from the construction projects in the targeted areas of La Vega and Petare Norte, and for implementing plans which will improve the sustainability of the environment once the project is completed. The environmental report was prepared by an independent consultant contracted by the Government of Venezuela, and reviewed by a representative of the Bank's Environmental Quality Assurance Team. The report, which is summarized in this annex, includes: (i) identification of the environmental legal framework, including areas which require special attention; (ii) identification of the current environmental characteristics in each of the targeted areas; (iii) probable impacts resulting from the execution of works, including criteria for management and follow-up means to control, prevent, correct and mitigate these impacts; and (iv) a chronogram and terms of reference for preparing an Environmental Management Plan.

Areas of Special Consideration

There are three areas which require special attention from a legal perspective.

*National Park, Vicente Emilio Sojo:* The park occupies part of the parishes of Caricuao and La Vega and has a total area of 1,134 hectares, of which 755.9 are in the parish of La Vega, constituting an important green area southwest of the city of Caracas. According to studies conducted by the Urban Metropolitan Planning Office (OMPU) in 1996, approximately 4,700 families have invaded roughly 123.12 hectares within the limits of the Park. This invaded land actually constitutes part of the barrios of Los Mangos, Los Paraparos, Los Naranjos and Las Torres in La Vega. The Park was created as a "Recreational Park of Open Space and Intensive Use," by *National Decree 913 (May 13, 1975)*. For this reason, the regulations of "Areas Under Special Administration Regimens (ABRAE)" do not apply, nor is the area established as a "Protected Area," by legal definition, allowing for multiple uses and co-management of the Park by the community. As part of the Environmental Management Plan, a plan will be developed for the co-management of the Park by the community for its preservation, and the prevention of further occupation.

*Management of Environmental Variables:* *National Decree No. 1257 of March 13, 1996* announced the "Norms for Evaluating Activities Susceptible to Degrading the Environment," which establishes the procedures for conducting environmental impact assessments, and the means of prevention, correction and mitigation of these impacts. An analysis of the law, in particular *Article 6*, indicates that the Project is not subject to an "Environmental Impact Assessment (EIA)" under National Law. Further discussions with the Environment Ministry (MARNR) and subsequent follow-up correspondence from the Ministry, confirm that neither the Project, nor its sub-projects, require prior review/evaluation or approval from the Ministry. In order that environmental impacts be controlled during the construction process, a Manual for Establishing the Environmental Construction Specifications for Infrastructure Projects in the Barrios, will be prepared during the first year of Project execution, and will be approved by the Bank prior to the bidding of any infrastructure works for which the Manual applies, and will be included in all bidding documents, where applicable.

*Zoning Ordinances in the Municipalities of Sucre and Libertador:* The Zoning Ordinance in the Municipality of Libertador establishes the permitted uses in the urban zones of that municipality. In La Vega, there are six different regulatory zones allowing for different uses according to the zoning classification. Consequently, a change in the zoning classification of La Vega will be required in order to accommodate, and validate, the urbanization plan for this sector. The *Organic Law for Urban Order* allows for zoning reclassification (*Article 46*), provided that the objective of the change is to establish a more coherent order. Therefore, as part of the Master Plan which is being developed for La Vega, an ordinance for changing the zoning classification of this area will be included. To this end, the professional team preparing the Master Plan will work in close coordination with the office of the Municipality of Libertador in charge of preparing the Local Urban Development Plan (PDUL), whose administration was included in the elaboration of the Plan Sectorial de Incorporación a la Estructura Urbana de las Zonas de los Barrios del Área Metropolitana de Caracas, which forms the conceptual basis of the Project.

With respect to Petare Norte in the municipality of Sucre, this area is currently designated as an Area Under Review and Study (AE) according to the Zoning Ordinance of the Municipality of Sucre, and no legal restrictions exist.

**Existing Environmental Conditions:** The following is a summary of the principal existing negative environmental conditions of La Vega and Petare Norte.

#### La Vega

- Air quality impacts, particularly in the barrio of San Miguel, resulting from the La Vega Cement Factory, are particularly of concern during times of high winds.
- Problems of flooding in certain low-lying areas due to deficiencies in natural and artificial drainages.
- Presence of debris and sediment in drainage canals resulting from illegal dumping of construction materials and inadequate disposition of solid wastes.
- Obstruction of drainage systems resulting from the “invaded” areas which lack proper services such as water distribution, sewerage, drainage, access and paving, all of which produce excessive sediment in the drainage systems during heavy rain periods.
- Presence of geologically high-risk areas (see complimentary geotechnical study on file).
- Existence of highly environmentally sensitive parks.
- Areas particularly sensitive to impacts caused by construction activities, requiring control and mitigation of increased transit impacts (i.e. school zones).

#### Petare Norte

- Presence of geologically high-risk areas.
- Rapid flows of water in areas causing flooding in low-lying areas.
- Inefficient and deficient management of solid waste, particularly with regard to transport and final disposition.
- Deteriorated sewerage collectors.
- High population density causing a deficiency in adequate transit accessibility, and resultant vehicular congestion in primary access roads and pedestrian routes.

**Construction impacts.** Perhaps the most sensitive issue of the proposed project is the management of environmental and social impacts during construction. Typical construction nuisances (noise, dust, traffic congestion, potential increase in pedestrian accidentality) will be exacerbated by the high population density of the Barrios, the predominance of narrow streets and irregular traffic patterns, and the presence of pedestrian and commercial activities along streets and sidewalks. The demolition of houses along primary and secondary access routes is expected to generate the largest impacts. Additional congestion, noise and dust will particularly be more sensitive in school and health center zones. Disruption of urban services (water, electricity, phones) will require careful planning in order to minimize disruption of commercial and other key activities in the community.

The hauling of construction wastes (estimated at over 100,000 cubic meters) will pose a two-fold concern: (i) potential risks of accidents and damage of urban elements by hauling of debris inside the barrios; and (ii) the disposal of the waste itself in urban areas with little or none available disposal sites.

**Environmental Management Plan.** An Environmental Management Plan was designed in order to address potentially significant negative impacts and to enhance the improved environmental conditions which will be brought about by the project. The main components of the environmental management plan are:

- environmental screening and scoping criteria and procedures have been put in place in order to identify environmental and social concerns of proposed sub-projects during implementation;
- a management plan, including support to establish legally binding agreements, to respect the existing recreational park Vicente Emilio Sojo, around La Vega, with community participation;
- the preparation and implementation of a Manual of Environmental Construction Specifications for Infrastructure Projects in Barrios, which will detail the activities and requirements for the contractor in order to minimize construction related impacts and

nuisances; including traffic management, social communication, work scheduling and restrictions, pedestrian safety, dust and noise reduction measures, and management of wastes. These specifications will be included in all bidding documents and construction contracts and will be enforced during actual construction;

- specific studies to identify suitable disposal sites for all construction wastes and necessary environmental restoration and control measures at each site;
- an environmental education program in each of the communities to raise awareness of environmental issues regarding the protection of recreational areas, the effect of solid wastes on drainage systems and community health, and the risk of development in unstable areas;
- legal assistance to modify zoning ordinance in La Vega which will be required to accommodate the urban improvements brought about by the project.

A schedule for the implementation of the environmental management plan, as well as the institutional responsibilities for implementation, and a cost estimate are presented in the next table. Terms of reference for each activity for each activity have already been prepared and approved by the Bank.

Framework for Development of Environmental Management Plan

<b>Program</b>	<b>Chronogram</b>	<b>Responsible</b>	<b>Executor</b>	<b>Relevant Actors</b>	<b>Estimated Cost</b>
Revise the Environmental Evaluation Manual from PROMUEBA I.	Duration: Three months Completion: December, 1998	PMU	Consultant	FUNDACOMUN	NA
Legal Agreement on acceptable uses in the National Park, V.E.S.	Duration: Three Months Completion: December 1998	PMU	Consultant	FUNDACOMUN, MARNR, Inparques	\$30,000
Manual for Establishing the Environmental Construction Specifications for Infrastructure Projects in the Barrios	Duration: Four Months Completion: July 1999	PMU	International Consultant	FUNDACOMUN Municipality	\$120,000
Strategy for Management and Treatment of Construction Waste Generated by the Project	Duration: Three Months Completion: July 1999	PMU	Consultant	FUNDACOMUN	\$40,000
Community Environmental Education Program	Duration: Four Months Completion: July 1999	PMU	Consultant	FUNDACOMUN Municipalities	\$30,000 design implementation
Plan to manage National Park V.E.S.	Duration: Five Months Completion: December 1999	PMU	Consultant	FUNDACOMUN, MARNR, Inparques, Municipalities, Communities	\$50,000
Modifiacion of Zoning Ordinances in La Vega	Duration: One Month Completion: December 1999	PMU	Consultant	Municipality of Caracas	\$40,000

**Annex 10**  
**Caracas Slum-Upgrading Project**  
**Housing Improvement Pilot Program**

The following presents an overview of the housing improvement pilot program to be incorporated within the Project. With approximately US\$ 1.2 million dedicated for this component, the expectation is that over a two-year period US\$ 5 million will be secured from local financial institutions to fund over 5,000 loans for low-income families earning 1.5 to 5 times the minimum wage.

**1. Objectives:**

The objectives of this component center upon identifying funding and operating mechanisms which:

- Promote private capital flow in a financially sustainable manner for housing improvement programs with low-income families;
- Result in environmentally and socially-sound technical housing solutions;
- Center upon models and institutions that can be scaled-up in a cost-effective manner within other urban settings in Venezuela; and
- Minimize and leverage government funding.

**2. Background and Rationale:**

In Venezuela private financing for housing improvement is virtually non-existent for families earning less than 5 times the minimum wage.<sup>1</sup> Reasons for this include:

- Unstable economic conditions which restrict family incomes, raise interest rates, diminish incentives to save, and shorten lender time horizons;
- Bank credit check and project appraisal procedures which are too expensive and slow, especially given small loan amounts, frequent repayments, heterogeneous nature of technical solutions, and diverse willingness and capacity to pay considerations for housing improvement loans. Likewise commercial banks seek physical collateral which borrowers cannot provide and for which there are legal impediments to the registration, perfection and enforcement of lender security rights<sup>2</sup>; and
- The existence of cultural and gender differences between the banking sector and low-income communities, resulting in significant social barriers to private capital flows between the financial sector and low-income communities.

Consequently the banks have targeted upper-income populations, to the exclusion of approximately 80 percent of the rest of the country. Meanwhile, low-income households finance their needs through personal savings and informal credit sources, including relatives, supplier credits, rotating savings and credit associations and moneylenders (current rates are over 150 percent p.a.). However, these sources are expensive and unreliable, leading families to engage in incremental development, resulting in diseconomies of scale in construction and foregone discounts on purchases of larger materials. In addition, up to 40 percent of homes in the barrios of Caracas suffer from structural flaws as a result of poor design and

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<sup>1</sup> Traditionally, public-sector funding for home improvement, principally provided via INAVI, has been available in sporadic amounts with large subsidies for individual households. However, with recent changes to the Ley Habitacional future amounts will be made available under market terms and conditions.

<sup>2</sup> Titulos Supletorios, which give the lenders a lien on the aboveground improvements, were seen as insufficient in the best of cases and more widely perceived as impossible to enforce regarding future claims.



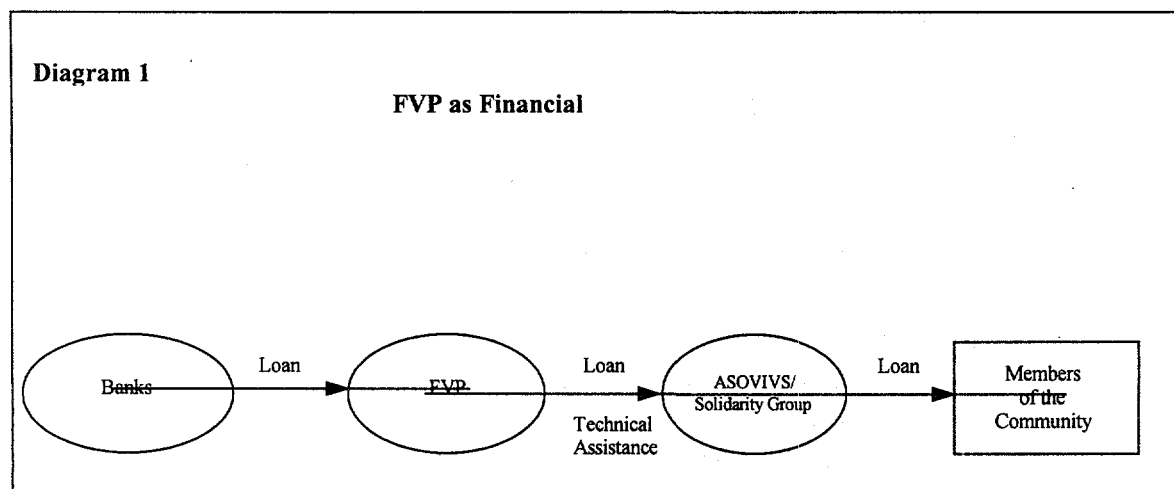
construction techniques, as well as application of substandard building materials.

One institution that has a long and successful track record with housing improvement efforts is *Fundacion para la Vivienda Popular* (FVP). Established as a non-profit organization, FVP has acted as a conduit for government and donor funding through *Asociaciones de Vivienda* (ASOVIVs) for housing rehabilitation credit programs. ASOVIVs, which consist of 20 to 200 families, are legally constituted entities as defined in the *Ley de Politica Habitacional* (LPH) and serve as financial intermediaries for FVP vis-à-vis low-income families. FVP has created 17 ASOVIVs over the last 20 years. In addition to funding, FVP provides technical assistance to the ASOVIVs as it relates to mobilizing the community members, training them in the administrative and financial aspects of the lending exercise, as well as providing individual technical assistance to ASOVIV members regarding selection of the housing rehabilitation design, preparation of budgets, selection of materials, and contracting arrangements with the local "maestros".

However, over the last two years FVP has received no funding from the government. For this reason its housing improvement loan portfolio has dropped from around \$1 million two years ago to only US\$ 125,000, representing 500 loans. It should be kept in mind that FVP is currently identified as the financial intermediary for the pilot project. However, to the extent that other qualified entities exist to perform this function, these may be incorporated into the financing scheme to broaden the scope and market of the pilot. At the present time, however, the FVP is the only organization with the required technical expertise, and existing banking relationships to participate in the pilot program.

### 3. Project Design:

The key features of this pilot program are described below (See Diagram 1):



- Commercial Banks and Savings and Loans will extend lines of credit to FVP, which will then on-lend these funds, typically with repayment periods of between three to five years, to ASOVIVs for housing improvement efforts;
- The ASOVIVs will administer these loans, typically less than US\$ 1,000, among their individual members and will be responsible for appraising and approving individual borrowers, structuring the terms and conditions of individual loans, collecting payment and following-up on any past due loans;
- FVP will help market the program with the communities, as well as establish, train, support loan collection efforts, and supervise the actual housing rehabilitation efforts of individual ASOVIV members;
- Approximately \$200,000 of the Project funds will be applied to fund a technical assistance program for FVP, which might include upgrading its information and accounting systems, training credit officers in loan origination, appraisal and supervision techniques, as well as training architects regarding borrower technical assistance programs such as housing rehabilitation design, preparation of budgets, etc;

- Loans offered under the program by both the banks and FVP would be priced to permit full recovery of related administrative, operating and funding costs; and
- Regarding FVP loans to ASOVIVs, as well as ASOVIV loans to individual members, no physical collateral would be required, rather, the main inducements for borrower repayment would be (i) joint liability of the individual members of the ASOVIVs, (ii) the savings of each ASOVIV pledged as joint collateral for individual loans (see Section 4 for more detail), and (iii) the implicit commitment by FVP of follow-up loans to ASOVIVs that repay their loans on time.
- To support this pilot program, the Banking Superintendent has agreed to provide the necessary exemptions relating to bank provisioning requirements for these loans.

#### 4. Guarantee Fund:

To initially “jump start” private bank interest for this component a guarantee fund will be established equal to 40 percent of the loans made by these financial institutions to FVP. The fund would be established as a private trust, with a technical committee comprised of the participating banks and FVP, and would be capitalized and triggered as follows:

- The first **10 percent of loan defaults** will be covered through the savings of each ASOVIV. Up-front contributions of this savings tranche would be required before any loan would be made by FVP to the ASOVIV;
- For ASOVIV **loan defaults between 10 to 20 percent**, FVP will offer a standby and unsecured guarantee to its syndicate of lenders; and
- To cover **defaults between 20 to 40 percent**, US\$ 1 million of GOV counterpart funds will be channeled to the guarantee fund as a grant, thus leaving the banks exposed if default rates exceed 40 percent. However, FVP will still have the explicit obligation to follow-up on any delinquent loans.

#### 5. Component Timetable:

The following schedule of activities are envisioned to bring the pilot program to implementation:

<u>Activity</u>	<u>Timing</u>
Sign MOUs with Banks, FVP, FUNDACOMUN, World Bank	7/15/98
Complete Due Diligence on FVP	8/15/98
Define FVP Technical Assistance Requirements	8/30/98
Finalize term sheets between the Banks and FVP	9/15/98
Finalize Strategic Plan for Pilot Program	9/31/98
Obtain necessary clearances from the Banking Superintendent	10/15/98
Negotiate Credit Agreements between Banks and FVP	10/30/98

<u>Activity</u>	<u>Timing</u>
Conduct FVP Technical Assistance Program	10/98-12/98
Comply with conditions precedent of the pilot program's respective credit, security and operating agreements	1/99
Establish and capitalize Guarantee Fund	1/99

#### **6. Pilot Program Disbursement Profile:**

Once FVP has established and trained an ASOVIV, loans to individual members can be made at the rate of 20 per month. This represents one ASOVIV receiving one loan from FVP and distributing it to a group of a maximum of 20 people. With 10 ASOVIVs, this represents 200 loans a months, or approximately 2,400 loans a year. If loans are for US\$ 1,000 each, this component could disburse \$2.4 million a year.

It is anticipated that the Project's US\$ 1 million contribution would be disbursed up-front into the guarantee fund to provide a liquid surety for the participating banks.

#### **7. Possible Additional Components:**

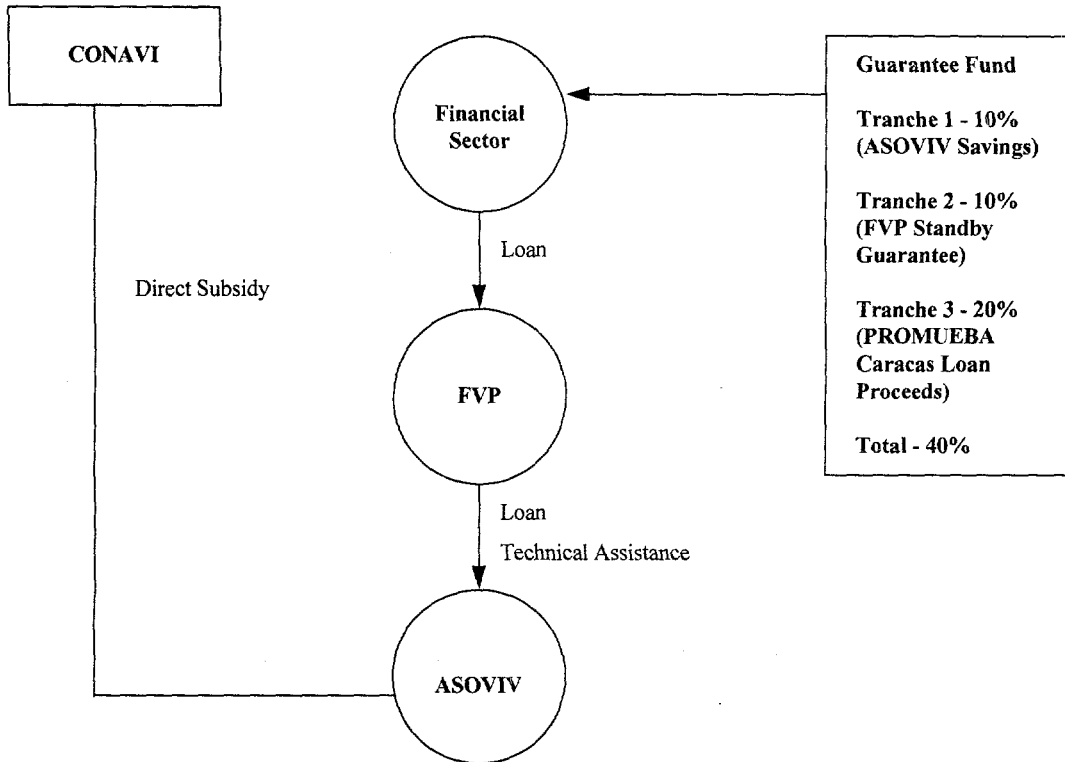
Given that the details of this component are still being fine-tuned at this moment, other facets that may be incorporated into the final project design include the following:<sup>1</sup>

- CONAVI has offered to explore the possibility of providing a direct subsidy to families participating in this program (see Diagram 2). This subsidy would be based on borrower savings contribution and income levels and would serve to complement the financing obtained via the ASOVIV/FVP loan for housing improvement. This possibility would serve to (i) lower borrower debt service payments, (ii) stimulate savings and development of market-based microcredit programs without introducing distortions when subsidies are combined with the financing, and (iii) improve the targeting of public-sector resources.

<sup>1</sup> In the document's annex, an outline of the business plan is presented that will be developed by Capital Advisors Ltd. to detail the project's objectives, design and implementation strategy, and proposed impact indicators.  
OSD PAD Form: July 30, 1997

Diagram 2

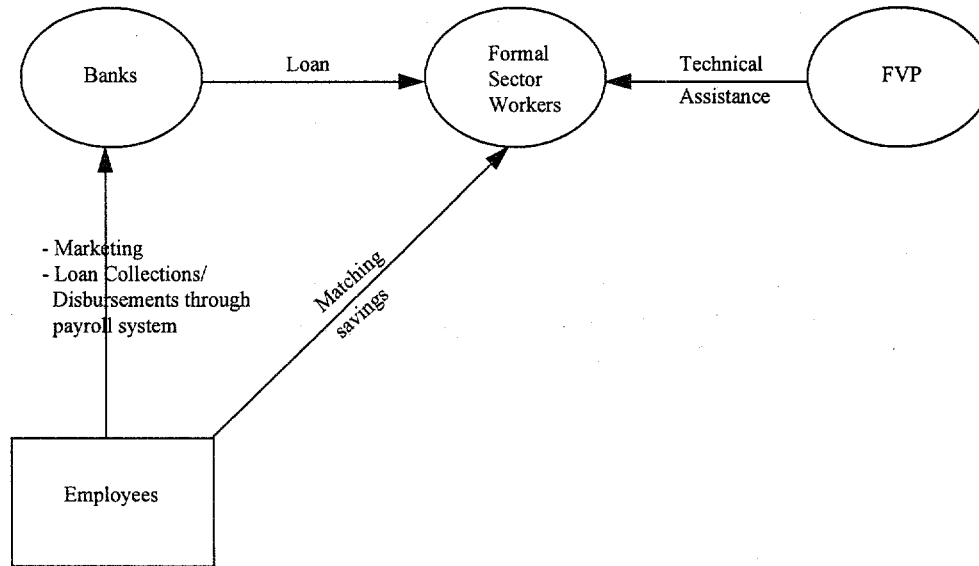
## CONAVI DIRECT SUBSIDY POSSIBILITY



- Linkages with Large Employers:** Given that a significant percentage of the population of the Caracas barrios work within the formal sector, one option would be to work with one or two large employers on a pilot basis, seeking their assistance inter alia in (i) convening the workers and marketing the housing rehabilitation credit program at the workplace, (ii) handling technical assistance sessions with individual borrowers on site (with the company covering at least a portion of their salaries during such training), (iii) disbursing and collecting loans through the company payroll system (thereby at a minimum lowering transaction costs and quite possibly lowering late payment and default rates), and (iv) matching employee savings contributions to increase overall credit capacity and standing of individual borrowers (See Diagram 3). Under this model the Banks would lend directly to the individual or perhaps even solidarity groups, with FVP providing technical assistance for the individual housing rehabilitation effort. Note: One additional impact indicator under this model, would be worker turnover and productivity.

Diagram 3

**Linkages with the Business Community -  
FVP as TA Provider Only**



- **Securitization:** As part of putting together the pilot program, FVP could work with the banks in developing a standardized process for loan underwriting, documentation and servicing. This collaboration would seek to facilitate buyback or securitization operations with the banks to foster over time additional liquidity for FVP. These buyback operations could be conditioned on, among other things, actual performance of the loan portfolio, agreement on the appropriate discount rates, and adherence by FVP to the loan servicing parameters originally established. This design would thus seek to test the feasibility of trying to forge linkages between the informal and formal financial sector for both **primary and secondary** market operations.

### 8. Project Impact Indicators:

Given the expectation that successful housing improvement funding models would be scaled-up through future operations, the following impact indicators will be applied to assess the impact and sustainability of this model:

- Number of loans disbursed (ASOVIV level, ASOVIV-member level)
- Number of participating banks and individual gearing ratios<sup>1</sup>
- Funding costs of ASOVIV loans vis-à-vis informal credit sources
- Operating costs at the ASOVIV, FVP and Bank level
- Return on risk capital (ROA, ROE) for the banks and FVP
- Timing and cost to establish and train ASOVIVs
- Degree of decision making authority granted to FVP by the banks
- Project participant satisfaction survey (ASOVIV members, FVP, Banks, Government)

<sup>1</sup> The expected gearing ratio is 2:5, though some institutions have suggested that they may be willing to lend even greater amounts against the guarantee fund.

- Loan recovery and default rates at the ASOVIV and FVP level.
- Borrower opportunity costs <sup>1</sup>

## 9. Summary:

To facilitate the housing improvement component's objectives, the pilot project's strategy rests upon (i) developing a privately-funded and market-based program to deliver housing improvement loans to low-income populations, (ii) applying non-traditional lending methodologies to reach low-income populations (e.g. application of joint liability mechanisms), (iii) establishing a guarantee fund, in favor of the participating banks, designed to demonstrate borrower capacity and willingness to pay, as well as provide a hedge against macroeconomic shock risk, (iv) providing technical assistance to the borrowers to ensure that they build with the right structural integrity, target priority investments (e.g. build a bathroom before a porch), and receive the expected benefit of the housing improvement efforts and not just "four walls without a roof" should say budgets be poorly prepared, and (v) leveraging government resources through access to private funding and allocating risks to those parties best able to manage or assess them.

## Outline of Housing Improvement Pilot Program Business Plan

The following outline presents inter alia key topics around which the business plan for the program concept will be developed. The actual organization and detail of these issues will be developed by a consulting firm and presented to FVP, FUNDACOMUN, and the World Bank prior to its formal dissemination with the rest of the project's counterparts.

### 1. Project Guiding Tenets and Objectives

As a minimum, this should include:

- Establish feasibility of financially sustainable microcredit for housing initiative
- Link formal and informal sector
- Application of commercial terms and conditions
- Leverage and minimize government support
- Separate subsidies from the financing
- Apply non-traditional banking procedures ("character-based lending")
- Define options for scaling up FVP, the Guarantee Fund, or even the ASOVIVs themselves

### 2. General Program Description

- Housing improvement market overview - level of activity, form of activity (self-help vs. maestro de obra), current available formal and informal sources of funding)
- Program Institutional Structure (e.g. Banks-FVP, ASOVIV-FVP, Banks-FVP-Guarantee Fund, FUNDACOMUN-Guarantee Fund)
- Operative (roles, rights and commitments of the respective program participants)
- Legal and Regulatory (Exemptions from Banking Superintendent, no tangible guarantee to be provided, overview of legal form of guarantee fund, etc.)
- Funding Mechanics (FVP-Banks, FVP-ASOVIV, World Bank-GOV, GOV-Guarantee Fund, CONAVI-ASOVIV-Banks)

### 3. Guarantee Fund

- Purpose (simply a guarantee fund or "one-stop-shop" )

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<sup>1</sup> Borrower opportunity costs, including monetary costs in terms of generating required information, transportation costs, application fees, as well as non-monetary costs such as time spent in marketing and training seminars, time in transport and visits to bank offices, etc.

- Legal form and location and rationale
- Governance arrangements
- Initial and build-up of specific funding arrangements during project implementation
- Operative parameters (collective vs. loan-by-loan) and generalized terms and condition for the guarantee and its disbursement
- Fee and other mechanisms to cover administrative and financial costs of the Guarantee Fund
- Sensitivity analysis of (i) the Guarantee Fund's financial feasibility and (ii) how much exposure the banks, FVP and the Government take on over time

#### **4. ASOVIV Due Diligence**

- Rationale for using existing ASOVIVs versus creating new ones (**note:** if existing, need baseline date. If new, need budget detailing time required and cost for their formation, training, and 10 percent capitalization)
- Expected ASOVIV membership profile - family income and source, household size, land tenure, geographic location, general range of housing improvement (reinforcement of existing housing, addition of bathroom or bedroom, add-on of rental unit, etc.)
- General description of ASOVIV and individual member technical assistance requirements, as well as cost recovery strategies.
- Procedures for evaluating, approving, collecting and following-up on individual member loans
- Generalized terms and conditions of individual loans
- Are ASOVIV contributions provided as saving or share capital? What are the implications vis-à-vis borrower incentives to repay the loan, operational, institutional capacity, and legal implications.

#### **5. FVP Due Diligence**

- Rationale for choosing only FVP as an intermediary
- General due diligence on FVP - Who are they? Historical and current loan portfolio and performance, funding sources, organizational structure, financial statements (if available), etc.
- Historical costs for marketing, establishing, training and administering the ASOVIV lending programs
- Strategy for fulfilling its role as lender, guarantor and provider of technical assistance
- Technical assistance requirements, budget and timetable
- Generalized Terms and Conditions for ASOVIV loans and Bank loans

#### **6. Definition of Program Performance Indicators (input and outputs)**

These might include:

- Number of loans disbursed (ASOVIV level, ASOVIV-member level)
- Gearing ratio
- Funding costs vis-à-vis informal sources
- Operating costs at the ASOVIV, FVP and Bank level
- Return on risk capital (ROA, ROE)
- Timing and cost to establish and train ASOVIVs
- Degree of decision making authority granted to FVP by the banks
- Project participant satisfaction survey (ASOVIVs members, FVP, Banks, Government)
- Loan recovery and default rates at ASOVIV and FVP level.
- Borrower opportunity costs (effects demand and ability to scale up)

## Annex 11

Caracas Slum-Upgrading Project  
Financial SummaryYears Ending December 31  
(US\$, millions, base year =1999)

	Implementation Period					Operational Period
	1999	2000	2001	2002	2003	
<b>Project Costs</b>						
Investment Costs	9.80	34.70	51.40	30.10	24.30	
Recurrent Costs		.44	.65	.33	.30	
Total	10.63 <sup>1</sup>	35.14	52.1	30.43	24.60	
<b>Financing Sources (% of total project costs)</b>						
IBRD/IDA	4.9	13.80	20.40	12.00	9.60	
Government						
Central	5.03	9.97	17.0	10.0	8.0	
Local	.70	2.30	3.40	2.00	1.60	
Hydrocapital		4.47	6.40	5.23	3.90	
IVI Miranda		2.10	2.40	.70	.80	
INAVI		2.50	2.50	.50	.70	
Total	10.63	35.14	52.10	30.43	24.60	

**Main assumptions:** The Project will be implemented over a period of five years, effective January, 1999. The first year of implementation will consist of design and engineering work of the UPF and UDU level civil works projects, and the social outreach activities associated therewith. In years 2-5, the project will focus on the execution of the UPF civil works, and the execution of the community driven urban design plans at the UDU level.



## Caracas Slum-Upgrading Project Procurement and Disbursement Arrangements

### Procurement

Procurement methods (Table A): Major civil works estimated to cost US\$4 million or more will be procured through International Competitive Bidding (ICB) procedures. Civil works estimated to cost between US\$500,000 and US\$4.0 million, up to an estimated aggregate amount of US\$26.0 million, will be procured through National Competitive Bidding (NCB) procedures, using bidding documents which will be approved by the Bank and which will be included in the Operations Manual (OM). Works estimated to cost less than US\$350,000 will be procured under lump-sum, fixed-price contracts awarded on the basis of price quotations from at least three eligible contractors.

Consultant services for engineering and design, project management and control, Social Assistance Outreach and technical assistance and training will be procured under contracts awarded on the basis of QCBS.

Prior review thresholds (Table B): The PMU, under the supervision of FUNDACOMUN, will be responsible for executing the project, including procurement. FUNDACOMUN has experience in procurement under the current Low-Income Barrios Improvement Project (LNG. 3495-VE). However, it was agreed during project preparation that the PMU will include a special procurement and contract administration team, which will be hired using QCBS procedures, and which will have demonstrated expertise in the management of procurement utilizing World Bank procurement procedures. The PMU will be responsible for ensuring that all prior review threshold criteria are met including: (i) the prior review of all ICB civil works; (ii) prior review of the first six (6) NCB civil works contracts; (iii) the prior review of all consultant contracts over US\$200,000 for firms; and (iv) prior review for all consulting contracts for individuals greater than or equal to US\$50,000. All consultant contracts will require review of Terms of Reference only, except those of the PMU, for which the Bank require review and approval of final consultant selections.

### Disbursement

Allocation of loan proceeds (Table C): The loan will be disbursed against: (i) civil works at a rate up to 40 percent of total expenditures, including 27 percent of all resettlement housing costs with the remainder financed by FUNDACOMUN, INAVI and IVI-Miranda through a parallel line of financing, 22 percent of all sewerage costs with the remainder co-financed by Hidrocapital and 40 percent of all other infrastructure costs, including water, drainage, paving, access, public lighting, risk mitigation and community centers, which will be co-financed with GOV counterpart funds from FUNDACOMUN and the Municipalities of Libertador and Sucre<sup>2</sup>; and (ii) consultant funds at a rate of 100 percent of all studies, designs, engineering and technical assistance and training and at a rate of 50 percent for contracts related to the PMU.

Use of statements of expenses (SOEs): Disbursements will be made on the basis of Statements of Expenditures. Supporting documentation with respect to expenditures against contracts for civil works valued up to US\$4.0 million equivalent; and US\$100,000 equivalent for consulting firm services, and US\$50,000 for individual consultants will be retained by FUNDACOMUN/PMU, be available for inspection during supervision missions, and be subject to auditing by external auditors. Expenditures above these limits will be fully documented.

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<sup>1</sup> Note: First year costs include a fee of approximately US\$600,000 which is reflected in total disbursements for first year.

<sup>2</sup> The Project Management Unit of the Project Executing Agency will install and maintain a management and information system sufficient to control for variances in authorized percentage expenditures to be financed from loan proceeds of the different infrastructure works sub-projects

**Annex 12, Table A: Project Costs by Procurement Arrangements<sup>1</sup>**

(in US\$million equivalent)

Expenditure Category	Procurement Method				Total Cost (including contingencies)
	ICB	NCB	Other	N.B.F	
<b>1. Works</b>					
Upgrading Works - Infrastructure and Housing	40.1 (13.2)	66.7 (26.9)	1.0	15.6	123.4 (40.1)
<b>2. Goods</b>					
Computers, Offices Supplies and Vehicles				.5	.5
<b>3. Services</b>					
Technical Assistance, Studies and Designs			25.5 (20.0)		25.5 (20.0)
<b>4. Miscellaneous</b>					
Guarantee Fund				1.0	1.0
Recurrent Costs				1.9	1.9
Fees			0.6 (0.6)		0.6
<b>Total</b>	40.1 (13.2)	66.7 (26.9)	27.1 (20.6)	19.0	152.9 (60.7)

Note: N.B.F. = (i) Electricity and public lighting to be financed 100% by the municipalities, approximately US\$3.4 million; (ii) recurrent costs will be financed 100% by the GOV; (iii) US\$1.0 million of GOV funds will be used to capitalize the micro-credit loan guarantee fund; and (iv) approximately US\$12.2 million of resettlement housing will be financed directly by INAVI and IVI-Miranda through parallel financing.

Figures in parenthesis are the amounts to be financed by the Bank loan/IDA credit

<sup>1</sup> For details on presentation of Procurement Methods refer to OD11.02, "Procurement Arrangements for Investment Operations." Details on Consultant Services can be shown more easily in the Table A1 format (additional to Table A, where applicable).

**Annex 12, Table A1: Consultant Selection Arrangements (optional)**

(in US\$million equivalent)

Consultant Services Expenditure Category	<u>Selection Method</u>							Total Cost (including contingencies)
	QCBS	QBS	SFB	LCS	CQ	Other	N.B.F.	
A. Firms	24.2 (18.6)							24.2 (18.6)
B. Individuals	0.6 (0.6)				0.7 (0.7)			1.3 (1.3)
<u>Total</u>	24.8 (19.2)				0.7 (0.7)			25.5 (20.0)

Note: QCBS = Quality- and Cost-Based Selection  
 QBS = Quality-based Selection  
 SFB = Selection under a Fixed Budget  
 LCS = Least-Cost Selection  
 CQ = Selection Based on Consultants' Qualifications  
 Other = Selection of individual consultants (per Section V of Consultants Guidelines),  
 Commercial Practices, etc.

N.B.F. = Not Bank-financed.

Figures in parenthesis are the amounts to be financed by the Bank loan.

Numbers may not add up due to rounding.

**Annex 12, Table B: Thresholds for Procurement Methods and Prior Review<sup>1</sup>**

Expenditure Category	Contract Value (Threshold)	Procurement Method	Contracts Subject to Prior Review / Estimated Total Value Subject to Prior Review
	US \$ thousands		US \$ millions
1. <u>Works</u>	>4,000	ICB	All/40.1
	350-4,000	NCB	First 6/11.7
	<350	Quotations (at least 3)	None
2. <u>Services</u>			
Firms	>200	(adv.+short list)	All/12.4
	100-200	(short list)	Review TORs Only <sup>2</sup>
	<100	(short list)	Review TORs Only
Individuals	>=50	(short List)	All/.600
	<50	(short list)	Review TORs Only
4. <u>Miscellaneous</u>			

Total value of contracts subject to prior review:

65.3

<sup>1</sup> Thresholds generally differ by country and project. Consult OD 11.04 "Review of Procurement Documentation" and contact the Regional Procurement Adviser for guidance.

<sup>2</sup> Except in the case of the PMU, for which prior review of all contracts will be required.

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**Annex 12, Table C: Allocation of Loan Proceeds**

Expenditure Category	Amount in US\$million	Financing Percentage
1. Civil Works/1	40.1	40%
2. Services		
a. Studies/Technical Asst./Designs & Eng.	14.6	100%
b. PMU	5.4	50%
3. Fees	0.6	
	<b>Total</b>	
	60.7	

**Annex 13****Caracas Slum-Upgrading Project  
Project Processing Budget and Schedule**

A. Project Budget	<u>Planned</u> (At final PCD stage) US\$700,000	<u>Actual</u>
B. Project Schedule	<u>Planned</u> (At final PCD stage)	<u>Actual</u>
Time taken to prepare the project (months)	14 months	21 months
First Bank mission (identification)	8/18/1996	_8/18/1996
Appraisal mission departure	6/7/1998	<u>6/17/1998</u>
Negotiations	7/20/1998	<u>8/5-7/1998</u>
Planned Date of Effectiveness	1/1/1999	_/_/19

Prepared by: FUNDACOMUN

Preparation assistance: PHRD Trust Fund

Bank staff who worked on the project included:

<u>Name</u>	<u>Specialty</u>
M V Serra	Urban Specialist
Dean A. Cira	Urban Consultant
Valeria Junho Pena	Sociologist
Juan David Quintero	Environmental Specialist
Teresa Serra	Environmental/Resettlement Specialist
Jeff Ruster	Financial Specialist
Alexandra Ortiz	Urban Land Specialist
Maria Victoria Lister	Operations Officer
Jose Augusto Carvalho	Lawyer
Roberto Cucullu	Lawyer
Efraim Jimenez	Procurement
Issam Abousleiman	Disbursement
Pedro Belli	Economist
Keisgner Alfaro	Procurement
Ariel Fiszbein	Peer Reviewer
Robert Buckley	Peer Reviewer
Alberto Harth	Peer Reviewer
Frank van Houten	Operational Support
Jeremy Coon	
Livio Pino	Financial Analyst

**Annex 14**

**Caracas Slum-Upgrading Project  
Documents in the Project File**

**A. Project Implementation Plan**

- FUNDACOMUN. Marzo, 1998. "Informe de Evaluación para la Aprobación del Proyecto de Mejoramiento Urbano en Barrios del Area Metropolitana de Caracas: PROMUEBA-Caracas."
- Transplan, S.A. Ingenieros Consultores. Enero y Febrero, 1998. "Obras en Redes Viales y Su Incidencia en el Transporte en las Zonas de Desarrollo no Controlado."
- Transplan, S.A., Ingenieros Consultores. Febrero, 1998. "Instrumentos para la Recolección de Información."
- FGH Ingenieros. Abril, 1998. "Estudio de Aguas Drenajes y Cloacas."
- FUNDACOMUN. Febrero, 1998. "Propuesta de la Estructura Organizativa – Unidad del Manejo del Proyecto: PROMUEBA-Caracas." Proyecto numero 22-8-934. Documento numero 934-00-00-2180-IF-001.
- Juan Jacobo Escalona, Abogados. "Informe sobre la Definición Institucional."
- Small Nuñez, Arquitectos Asociados. Abril, 1998. "Informe Preliminar Visión General de Los Esquemas de Tipologías de Vivienda de Sustitución Existentes y Factibles."
- G. McQuhae Consultores, C.A. Abril, 1998. "Estudio de Estimación del Numero de Viviendas Afectadas por las Obras de Viabilidad."
- Ingeotec, Ingenieros Geotécnicos Consultores. "Estudio de Determinación del Numero de Viviendas en Zonas de Alto Riesgo." Ref: 97 10-07.
- Menendez & Asociados. "Estudio de Facitibilidad de Vivienda de Sustitución (Petare Norte y La Vega)."
- Gecoplan & Asociados. "Aproximación a la Estrategia Operacional de Reubicación de Familias en la UPF No. 4 – Petare Norte."
- FUNDACOMUN, con la Consultora Marilia Scombatti. "Plan de Acción de Sustitución de Viviendas."

**B. Bank Staff Assessments**

- ESA Consultores. Marzo, 1998. "Evaluación Social del Proyecto PROMUEBA."
- Soluciones Integrales, S.A. Mayo, 1998. "Evaluación Económica Proyecto Mejoramiento de Barrios II."
- IESA, Rafael de la Cruz. Noviembre, 1997. "Venezuela Municipio Libertador del Distrito Federal y Municipio Sucre del Estado Miranda Evaluación Institucional y Análisis Financiero."
- Ing. Marianella Tenorio de Uzcátegui. Mayo, 1996. "Evaluación de la experiencia en Mejoramiento Urbano de Barrios de Bajos Ingresos en el Area Metropolitana de Caracas."
- Montes Ingeniería. Grupo ASISTECL. Mayo, 1996. "Servicios Públicos en Zonas de Crecimiento No Controlado del Area Metropolitana de Caracas."
- Soluciones Integrales. "Evaluación Economica – Proyecto Mejoramiento de Barrios II, Caracas, Venezuela."

**C. Other**

- Hidro Impacto C.A. "Impacto Ambiental."
- FUNDACOMUN. "Estudio de Selección de las Areas de Intervención."

**Annex 15**  
**Caracas Slum-Upgrading Project**  
**Status of Bank Group Operations in Venezuela**  
**Statement of Loans and Credits in the Operations Portfolio**

Project ID	Loan or Credit No.	Fiscal Year	Borrower	Purpose	Original Amount in US\$ Millions				Difference Between expected and actual disbursements a/		
					IBRD	IDA	Cancellations	Undisbursed	Orig	Frm	Rev'd
Number of Closed Loans/credits: 30											
<u>Active Loans</u>											
VE-PE-35743	IBRD42530	1998	GOVT OF VENEZUELA	ENV MGT	28.00	0.00	0.00	28.00	0.00	0.00	
VE-PE-41807	IBRD43170	1998	REPUBLIC OF VENEZUELA	PUB SEC MOD & DECEN	8.00	0.00	0.00	8.00	0.00	0.00	
VE-PE-44325	IBRD42700	1998	GOVERNMENT	SUPREME COURT STRGTH	4.70	0.00	0.00	4.70	0.00	0.00	
VE-PE-8224	IBRD40310	1996	GOVERNMENT	MONAGAS WATER	39.00	0.00	0.00	32.86	15.40	0.00	
VE-PE-8215	IBRD3823A	1995	REPUBLIC OF VEN.	HEALTH SERVICE REFOR	48.01	0.00	0.00	48.01	25.98	12.28	
VE-PE-8222	IBRD3862A	1995	GOVERNMENT	AG EXT	37.12	0.00	0.00	37.12	8.15	3.66	
VE-PE-8237	IBRD3902A	1995	GOVERNMENT	INPARQUES	51.37	0.00	0.00	51.37	25.05	7.12	
VE-PE-8210	IBRD3657A	1994	GOVT OF VENEZUELA	ELA URBAN TRANSP.	63.10	0.00	0.00	63.10	76.09	4.76	
VE-PE-8218	IBRD3656A	1994		BASIC EDUC	61.80	0.00	0.00	61.80	74.35	10.60	
VE-PE-8218	IBRD36560	1994		BASIC EDUC	27.60	0.00	20.00	.18	74.35	10.60	
VE-PE-8223	IBRD3553A	1993	GOVERNMENT	HWY MGMT	99.87	0.00	0.00	96.54	135.53	3.87	
VE-PE-8227	IBRD3538A	1993	MIN OF HEALTH	ENDEMIC DISEASE CONT	35.20	0.00	0.00	35.14	52.97	4.65	
VE-PE-8233	IBRD3514A	1993	GOV	JUD. INFRA DEV	24.49	0.00	0.00	24.49	24.51	1.68	
VE-PE-8212	IBRD34950	1992	GOVERNMENT	LOW-INCOME BARRIOS I	40.00	0.00	0.00	17.22	17.23	8.68	
VE-PE-8214	IBRD34200	1992	REPUB OF VENEZUELA	A AG SCTR INV	300.00	0.00	181.95	62.67	244.64	10.34	
VE-PE-8226	IBRD3494A	1992	GOVERNMENT	STUDENT LOAN REFORM	19.03	0.00	0.00	16.06	16.05	-7.31	
VE-PE-8204	IBRD3270A	1991	GOVERNMENT OF VENEZUELA	SOCIAL DEVT	36.21	0.00	0.00	35.28	50.29	13.96	
VE-PE-8216	IBRD3225A	1990	GOVERNMENT OF VENEZUELA	PRE-INV & INSTIT DEV	13.43	0.00	0.00	13.28	13.28	7.60	
<b>Total</b>					<b>936.93</b>	<b>0.00</b>	<b>201.95</b>	<b>635.82</b>	<b>853.87</b>	<b>92.49</b>	
					<u>Active Loans</u>	<u>Closed Loans</u>	<u>Total</u>				
Total Disbursed (IBRD and IDA):					104.26	1,970.12	2,074.38				
of which has been repaid:					23.47	826.57	850.04				
Total now held by IBRD and IDA:					717.23	1,143.64	1,860.87				
Amount sold :					0.00	27.54	27.54				
Of which repaid :					0.00	27.54	27.54				
Total Undisbursed :					635.82	0.00	635.82				

- a. Intended disbursements to date minus actual disbursements to date as projected at appraisal.  
b. Rating of 1-4: see OD 13.05. Annex D2. Preparation of Implementation Summary (Form 590). Following the FY94 Annual Review of Portfolio performance (ARPP), a letter based system will be used (HS = highly Satisfactory, S = satisfactory, U = unsatisfactory, HU = highly unsatisfactory): see proposed Improvements in Project and Portfolio Performance Rating Methodology (SecM94-901), August 23, 1994.

Note:  
Disbursement data is updated at the end of the first week of the month.



**Annex 15**  
**Venezuela**  
**Caracas Slum-Upgrading Project**  
**STATEMENT OF IFC's**  
**Committed and Disbursed Portfolio**  
**As of 31-Aug-98**  
**(In US Dollar Millions)**

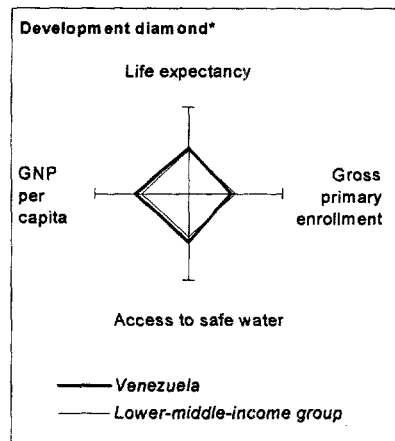
FY Approval	Company	Committed				Disbursed			
		IFC				IFC			
		Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
1989	Propilven	12.10	0.00	0.00	0.00	12.10	0.00	0.00	0.00
1990	Pralca	13.90	7.51	0.00	0.00	13.90	7.51	0.00	0.00
1991	ECV	6.00	0.00	3.23	0.00	6.00	0.00	3.23	0.00
1991/92	Corimon	0.00	10.98	0.00	0.00	0.00	10.98	0.00	0.00
1991/94	Zuliano	0.00	14.07	0.00	0.00	0.00	14.07	0.00	0.00
1992	Jose Methanol	20.73	6.80	0.00	40.72	20.73	6.80	0.00	40.72
1992	MAVESA	0.00	9.00	0.00	0.00	0.00	9.00	0.00	0.00
1993	BVC-FPM	1.50	0.00	0.00	0.00	1.50	0.00	0.00	0.00
1994	BVC-Sidetur	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00
1995	SET	0.00	0.00	.50	0.00	0.00	0.00	.50	0.00
1995/98	COMSIGUA	35.00	0.00	10.00	121.00	35.00	0.00	10.00	121.00
1996	CANTV	25.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00
1997	Minera Loma	65.00	8.56	.94	50.00	23.85	4.41	.94	18.35
1997	Movilnet	35.00	0.00	0.00	60.00	35.00	0.00	0.00	60.00
<b>Total Portfolio:</b>		<b>216.23</b>	<b>56.92</b>	<b>14.67</b>	<b>271.72</b>	<b>175.08</b>	<b>52.77</b>	<b>14.67</b>	<b>240.07</b>
		<b>Approvals Pending Commitment</b>							
		<b>Loan</b>	<b>Equity</b>	<b>Quasi</b>	<b>Partic</b>				
1996	TECVEN	15.00	1.10	15.00	30.00				
<b>Total Pending Commitment:</b>		<b>15.00</b>	<b>1.10</b>	<b>15.00</b>	<b>30.00</b>				

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Annex 16  
Caracas Slum-Upgrading Project  
Country at a Glance

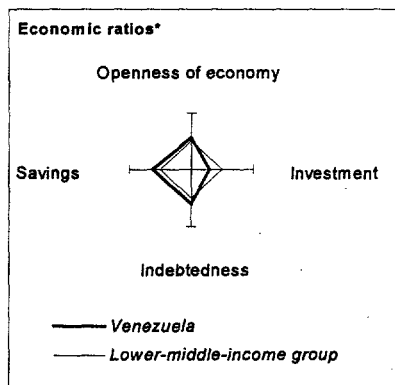
# Venezuela at a glance

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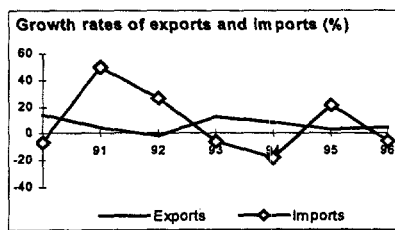
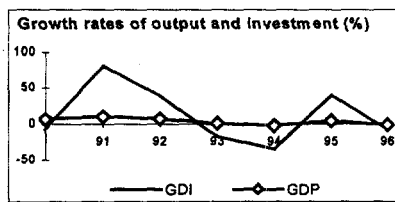
POVERTY and SOCIAL	Venezuela	Latin America & Carib.	Lower-middle-income
Population mid-1996 (millions)	22.1	485	1,125
GNP per capita 1996 (US\$)	1,990	3,710	1,750
GNP 1996 (billions US\$)	44.0	1,799	1,987
<b>Average annual growth, 1990-96</b>			
Population (%)	2.2	1.7	1.4
Labor force (%)	3.0	2.3	1.8
<b>Most recent estimate (latest year available since 1989)</b>			
Poverty: headcount index (% of population)	31	..	..
Urban population (% of total population)	93	74	56
Life expectancy at birth (years)	71	69	67
Infant mortality (per 1,000 live births)	23	37	41
Child malnutrition (% of children under 5)	6	..	..
Access to safe water (% of population)	88	80	78
Illiteracy (% of population age 15+)	9	13	..
Gross primary enrollment (% of school-age population)	94	110	104
Male	93	..	105
Female	96	..	101



KEY ECONOMIC RATIOS and LONG-TERM TRENDS	1975	1985	1995	1996	
GDP (billions US\$)	32.5	62.0	76.4	67.6	
Gross domestic investment/GDP	32.8	18.5	16.5	16.7	
Exports of goods and services/GDP	28.8	25.0	26.7	37.1	
Gross domestic savings/GDP	39.7	27.7	21.7	30.9	
Gross national savings/GDP	39.4	24.1	19.8	28.9	
Current account balance/GDP	6.7	5.9	3.0	12.2	
Interest payments/GDP	0.4	2.9	2.8	3.9	
Total debt/GDP	6.9	57.0	47.4	52.7	
Total debt service/exports	5.9	24.2	21.5	17.1	
Present value of debt/GDP	..	..	45.6	..	
Present value of debt/exports	..	..	155.7	..	
<b>(average annual growth)</b>					
GDP	0.0	2.6	3.4	-1.6	2.9
GNP per capita	-3.4	0.6	1.8	-3.8	1.2
Exports of goods and services	-3.9	5.9	3.0	4.3	4.1



STRUCTURE of the ECONOMY	1975	1985	1995	1996
<b>(% of GDP)</b>				
Agriculture	5.0	5.8	5.3	4.1
Industry	46.5	43.0	38.9	42.3
Manufacturing	15.7	21.9	17.3	18.1
Services	48.5	51.2	55.8	53.6
Private consumption	48.9	61.8	68.6	65.2
General government consumption	11.5	10.4	9.7	3.9
Imports of goods and services	21.9	15.8	21.5	23.0
<b>(average annual growth)</b>				
Agriculture	2.1	1.6	0.3	0.3
Industry	-0.3	3.7	5.2	0.1
Manufacturing	3.8	2.0	7.7	-4.3
Services	0.0	1.9	1.8	-3.6
Private consumption	4.5	1.8	1.5	-4.0
General government consumption	2.1	2.1	2.5	-6.0
Gross domestic investment	-6.7	6.1	39.0	-8.6
Imports of goods and services	-1.8	5.2	21.1	-5.9
Gross national product	-0.4	2.5	4.2	-1.6



Note: 1996 data are preliminary estimates. Figures in italics are for years other than those specified.

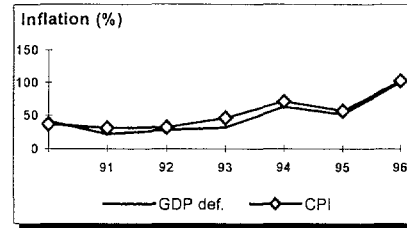
\* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

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Annex 16  
Caracas Slum-Upgrading Project  
Country at a Glance

Venezuela

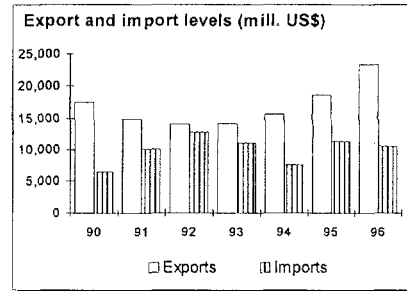
**PRICES and GOVERNMENT FINANCE**

	1975	1985	1995	1996
<b>Domestic prices</b>				
<i>(% change)</i>				
Consumer prices	10.2	9.1	56.6	103.2
Implicit GDP deflator	5.1	10.4	51.3	99.9
<b>Government finance</b>				
<i>(% of GDP)</i>				
Current revenue	30.5	32.6	24.6	35.8
Current budget balance	..	12.1	6.0	18.5
Overall surplus/deficit	1.4	..	-8.2	7.6



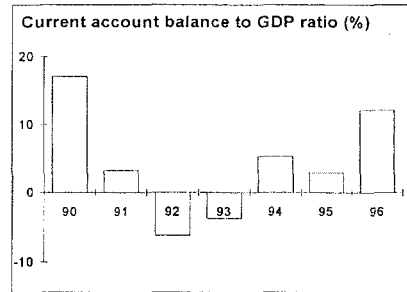
**TRADE**

	1975	1985	1995	1996
<i>(millions US\$)</i>				
Total exports (fob)	..	14,660	18,632	23,417
Petroleum	..	13,144	13,549	18,226
Aluminum	..	400	681	805
Manufactures	..	..	1,995	2,074
Total imports (cif)	..	7,304	11,447	10,598
Food	..	..	823	1,595
Fuel and energy	..	..	..	..
Capital goods	..	2,464	2,415	4,025
Export price index (1987=100)	..	..	107	129
Import price index (1987=100)	..	..	121	129
Terms of trade (1987=100)	..	..	88	101



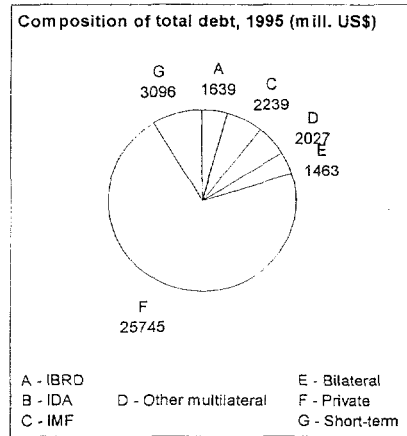
**BALANCE of PAYMENTS**

	1975	1985	1995	1996
<i>(millions US\$)</i>				
Exports of goods and services	9,352	15,863	20,362	25,089
Imports of goods and services	7,108	9,930	16,563	15,535
Resource balance	2,244	5,933	3,799	9,554
Net income	100	-2,137	-1,737	-1,542
Net current transfers	-173	-128	194	233
Current account balance, before official capital transfers	2,171	3,668	2,256	8,245
Financing items (net)	544	-1,941	-3,643	-2,402
Changes in net reserves	-2,715	-1,727	1,387	-5,843
<b>Memo:</b>				
Reserves including gold (mill. US\$)	9,968	13,998	10,244	16,087
Conversion rate (local/US\$)	4.3	7.5	176.8	415.5



**EXTERNAL DEBT and RESOURCE FLOWS**

	1975	1985	1995	1996
<i>(millions US\$)</i>				
Total debt outstanding and disbursed	2,224	35,334	36,209	35,654
IBRD	221	42	1,639	1,408
IDA	0	0	0	0
Total debt service	591	4,304	4,867	4,627
IBRD	34	26	235	277
IDA	0	0	0	0
<b>Composition of net resource flows</b>				
Official grants	0	2	..	..
Official creditors	149	-87	510	-421
Private creditors	-391	-581	-423	-597
Foreign direct investment	418	68	597	1,576
Portfolio equity	0	0	0	0
<b>World Bank program</b>				
Commitments	0	0	148	39
Disbursements	14	0	47	48
Principal repayments	18	22	116	169
Net flows	-4	-22	-69	-121
Interest payments	16	3	120	108
Net transfers	-20	-26	-189	-229



Relative Location Map of Petare Norte and La Vega

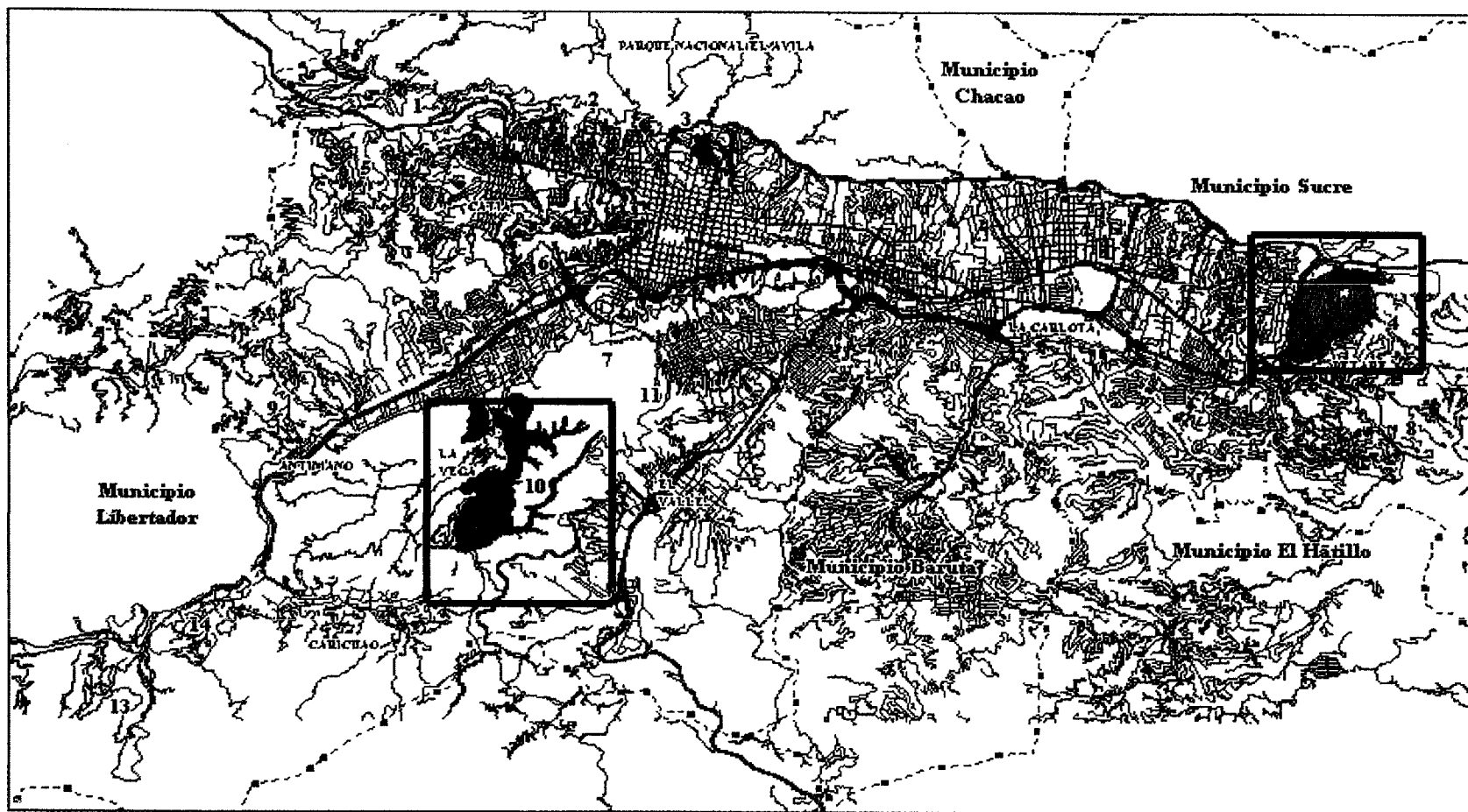


Photo Image of Petare Norte



Photo Image of La Vega

