

United States Agency for
International Development (USAID)
Quito, Ecuador



Agencia de los Estados Unidos para
el Desarrollo Internacional (USAID)
Quito, Ecuador

RHUDO-035-94
January 31, 1994

PN-AB 745
14130
25
88
8

A.I.D./Disc/Acquisition
1500 Wilson Blvd. Suite 1010
Arlington, VA 22209-2404
U.S.A.

Dear Sir:

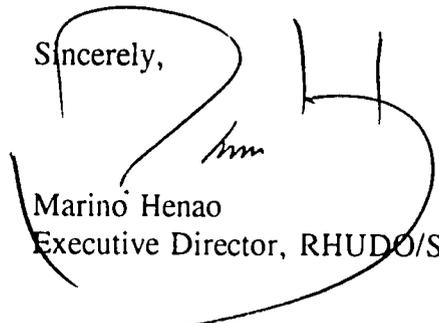
The USAID's Regional Housing and Urban Development Office for South America (RHUDO/SA), through the Latin American Center for Urban Management (LACUM), contracted the Inter-American Planning Society (SIAP) for the development of short studies in the Municipalities of Paraguay and Chile. The studies were lead to generate basic knowledge in areas such as: the Market Land Values, Urban Infrastructure, Formal and Informal Housing, Local Services Provision and Property taxes.

The studies were carried out at low cost rate by professionals who were taking Post Graduate courses in the University of Texas. The studies consist of basic analysis of information, data processing and comments on concrete situations.

Please find enclosed two copies of the following documents:

- "Assessed and Market Land Values in Concepción, Paraguay".
- Housing Market Tends in Paraguay: An analysis of Urban Housing in the Formal and Informal Sectors (the case of Encarnación)".
- "Urban Infrastructure and Citizen Participation in the Marginal Settlements of Asunción, Paraguay".
- "Municipal Solid Waste Service Provision in Chile: Possibilities for Greater Cost Recovery (the case of San Antonio)".
- "Property Tax Assessment and Municipal Strengthening in Chile (the case of Quillota)".

Sincerely,


Marino Henao
Executive Director, RHUDO/SA-LACUM

Enclosed: a/s
MH:pc



PN ABU - 745 #
94432

**SOCIEDAD INTERAMERICANA DE PLANIFICACION
INTERAMERICAN PLANNING SOCIETY**

**Urban Infrastructure and Citizen
Participation in the Marginal
Settlements of Asunción, Paraguay**

Erica Dahl-Bredius
August 15, 1993

**Urban Infrastructure and
Citizen Participation in the
Marginal Settlements of
Asunción, Paraguay**

Erica Dahl-Bredine
August 15, 1993

This report was prepared as a joint project between S.I.A.P. and the USAID/RHUDO (Regional Housing and Urban Development Office for South America) with the collaboration of The University of Texas at Austin. The author is a graduate student in Community and Regional Planning at The University of Texas. The field research for this report was supervised by Dr. Patricia Ann Wilson, Associate Professor of Planning at The University of Texas. Field work was conducted in June and July of 1993.

TABLE OF CONTENTS

Abstract.....	3
Executive Summary.....	4
I. Introduction.....	7
II. Issues in Infrastructure and Service Provision and Citizen Participation.....	7
A. Municipal Government and Citizen Participation.....	8
B. Types and Distribution of Services and Infrastructure.....	8
C. Modes of Participation.....	9
D. Decentralization in Infrastructure and Service Provision.....	10
III. Land Speculation and Infrastructure Expansion Have Forced Urban Poor to Periphery.....	11
IV. Urbanization Has Resulted in the Incorporation of Outlying Municipalities to the Metropolitan Area.....	12
V. The City Structure Has Been Extended to Irregular Lands Lacking Basic Infrastructure and Services.....	12
A. Spontaneous Settlements.....	14
B. Induced Settlements.....	14
C. Settlements by "Adhesion".....	15
D. Land Occupations.....	15
VI. Infrastructure and Service Provision is Hindered by Irregularity of Land in Marginal Areas.....	16
A. Potable Water.....	16
B. Sewage Systems.....	17
C. Electricity.....	19
D. Garbage Collection.....	21
VII. Marginal Settlements and Infrastructure in Each Municipality.....	21
A. Asunción.....	21
B. Fernando de la Mora.....	22
C. Lambaré.....	23
D. San Lorenzo.....	23
VIII. A New Potential for Citizen Participation Has Emerged Since 1989.....	24
A. Municipalities and Neighborhood Commissions.....	25
B. Grass Roots Organizations.....	25
C. Non-Governmental and Social Organizations.....	26

IX. Obstacles to Traditional Infrastructure and Service Provision Have Inspired Alternative Means of Acquiring Services.....	27
X. Decentralization and Inter-Municipal Cooperation Are Key Policy Issues for the Resolution of Land Settlement and Infrastructure Problems.....	28
A. Decentralization.....	28
B. Inter-municipal Coordination.....	29
XI. Conclusions and Recommendations.....	29
A. Land Settlement Issues are the Root of Infrastructure Deficiencies in Marginal Areas.....	29
B. Support for Citizen Participation Could Strengthen Legitimacy of Municipal Governments and Organizational Capacity of Marginal Settlements	30
C. Centralization of Services Leads to Poor Distribution and Control of Services.....	30
D. Inter-Institutional Collaboration Among Non-Governmental Organizations Could Improve Support for Marginal Settlements.....	30
E. Technically and Environmentally Appropriate Solutions Must be Found to the Problems of Land Settlement and Infrastructure.....	31
Appendix A - Map of Paraguay.....	32
Appendix B - Interviews.....	33
Bibliography.....	34

List of Tables

Table 1-"Levels of Coverage of Potable Water as of June 1991".....	17
Table 2-"Levels of Coverage of Sewage Infrastructure as of June 1991".....	19

List of Maps

Map 1 - Asunción and Metropolitan Area - Relative Growth by Municipality 1972-1982.....	13
Map 2 - Potable Water Supply-Phased Expansion, Asunción Metropolitan Area.....	18
Map 3 - Existing Sewage Infrastructure, Asunción Metropolitan Area.....	20

ABSTRACT

Urban growth in Asunción since the 1970s has incorporated a number of once rural municipalities into the metropolitan area. The settlement pattern in the Asunción Metropolitan Area has been characterized by the concentration of landless population along the flood plains of the Paraguay River and on public lands in outlying municipalities. The growth of the city has not been accompanied by sufficient expansion of public services and infrastructure, leaving many marginal settlements without necessary water, sewage and other services.

The extension of public infrastructure is impeded by both the legal and physical irregularities of the land in many marginal settlements which make it unsuitable for infrastructure. The increasing occupation of such land demonstrates the urgent need for the municipalities of the metropolitan area to begin coordinated efforts to address these common problems. An inter-municipal approach to infrastructure provision for the marginal populations must also address the pivotal issue of urban land tenure.

The political aperture since the 1989 military coup has allowed for increased dialogue between municipal governments and citizens and has created a climate of increased grass roots participation and mobilization. Several umbrella organizations of local community groups have been formed to represent the interests of urban settlers and non-governmental organizations have increased efforts to address the socioeconomic and infrastructure problems of the urban poor. All of this indicates an unprecedented opportunity for new levels of coordination between municipalities, community organizations and non-governmental organizations in addressing the marginalization of the urban poor.

Executive Summary

Introduction

During the 1970s spiraling land prices in Asunción forced much of the urban poor out of the city center and into outlying municipalities or to the flood plains of the Paraguay River. The expulsion of the urban poor out of the city has created a proliferation of spontaneous settlements and occupations characterized by irregular land tenure, precarious living conditions, and lack of public infrastructure and services. This study analyzes the problems of infrastructure provision in the marginal settlements of Asunción and three of the fastest growing contiguous municipalities; Fernando de la Mora, Lambaré and San Lorenzo.

Infrastructure in Marginal Settlements and Citizen Participation

The delivery of basic urban services in Paraguay is conducted primarily by public corporations. Potable water and sewage infrastructure are provided by the Corporation for Sanitary Works, CORPOSANA, and electricity by the National Administration of Electricity, ANDE. Garbage collection services are provided by the respective municipalities. The coverage of electricity is by far the best of the services in the metropolitan area. Potable water is provided to most of Asunción, however, the settlements along the flood plains are served by community spigots rather than private connections. The majority of the land occupations in the outlying municipalities are not supplied with water from CORPOSANA and must find alternative ways of acquiring water. Sewage infrastructure has the least coverage and is present in only three municipalities of the metropolitan area.

The lack of infrastructure in the marginal settlements is due in large part to the problem of land tenure and settlement. It is very difficult to obtain authorization for the installation of services on occupied public lands. Some municipalities are assisting marginal settlements to obtain temporary permits for the installation of services while others are seeking to relocate the occupied communities. In a few cases, the municipalities are legally transferring the land out of the public domain so it may be sold to the occupants.

Most of the services which do exist in these areas are either purchased from private companies by the communities or as in the case of electricity, are distributed through an informal market, often at exorbitant rates. In the case of garbage collection, the inaccessibility of the settlements by road is the principal factor limiting service provision.

The principal channel through which the urban poor have traditionally made requests for community improvements has been the ruling Colorado Party. During the Stroessner regime, local party headquarters often assumed the functions of the municipality and used the neighborhood commissions as the tool through which to co-opt the local population and build political bases. Since the 1989 military coup, there has been an increased mobilization and participation of the urban poor in the metropolitan area, particularly among the residents of the flood plains and the land occupations. A new independent administration in the Municipality of Asunción has demonstrated a commitment to developing a

relationship of accompaniment and support of the neighborhood commissions and is currently working with 260 commissions.

Several larger umbrella organizations have also been formed at the grassroots level to represent and coordinate the interests of community groups. The principal organizations include the Coordinator of Residents of Flood Zones (COPZI) and the Commission of Families Without Housing (COFASIVI). The two groups have enjoyed little recognition from the municipalities. COPZI has expressed particular disappointment at being excluded from the Municipality's planning efforts to redesign the flood plains. Both groups have suffered from a lack of internal organization and financial backing.

Several non-governmental institutions have been instrumental in supporting local initiatives for community improvement. These include the Social Pastoral department of the Catholic Church, the Committee of Churches, TAPE and BASE-ECTA. Recent efforts to form an inter-institutional coordination among these and other NGOs could prove very useful in the search for solutions to the settlement and infrastructure problems of marginal areas.

The key policy issues surrounding infrastructure deficiency and citizen participation in marginal areas are decentralization and inter-municipal cooperation. While municipal reforms have provided for greater revenues to be returned to the municipalities, this has not yet been implemented. In spite of the fact that municipal leaders are now elected directly rather than appointed by the Executive Branch, their potential for action on behalf of the urban population remains very limited by the control of the central government. The common problems of irregular land settlement and infrastructure in the municipalities of the metropolitan area would be addressed most effectively through inter-municipal coordination. The Association of Municipalities of the Metropolitan Area (AMUAM), which has limited itself to coordinating public works, could play an important role in this regard.

Conclusions and Recommendations

The issues behind the problems of marginality and infrastructure in the metropolitan area are those of access to urban land and irregular land settlement. Increasing pressures on land have led to the occupation of areas legally or ecologically unsuitable for infrastructure installation while migration to the metropolitan area continues. Solutions to these challenges must involve a cooperative effort between all of the municipalities.

Incorporating citizen participation into the planning process is essential both for the resolution of these problems as well as for the legitimacy of municipal governments. Municipalities should continue their work with neighborhood commissions and take advantage of the potential for cooperation with organizations such as COPZI and COFASIVI as well as with non-governmental organizations.

The expansion and improved distribution of infrastructure and services requires a degree of decentralization within the public utility corporations. This could improve regulation and control of infrastructure use as well as the extension of

infrastructure to those areas most in need. Finally, technically and environmentally appropriate solutions must be found to several problems common to all the municipalities of the metropolitan area. These include the occupation of lands designated as park and recreational spaces as well as sanitation problems involving sewage and garbage.

I. Introduction

In the 1950s rapid urbanization in most of Latin America caused an unprecedented wave of migration to the capital cities producing huge metropolitan areas composed of many separate jurisdictions. The cities grew up around a core of privileged high income population controlling the formal sector of the economy with a periphery of low income population dependent for survival on an ever growing informal sector. As cities grew, the expansion of housing and urban infrastructure was often insufficient to meet growing demand and was distributed according to the needs of the growing commercial and real estate sectors. The new urban agglomerations began to pose ever more difficult challenges for urban development as well as for the formation of effective, participatory local institutions capable of addressing these issues. Paraguay was not affected by the urbanization sweeping Latin America until the 1970s when outward migration from the rural areas began to swell Asunción and a wave of speculation of urban land pushed the poorer sectors out into the peripheral areas and to the banks of the Paraguay River.

The Asunción Metropolitan Area provides an example of rapid unregulated growth resulting in the expulsion of a significant portion of the population from the city. This has caused the subsequent creation of marginal areas lacking in basic infrastructure and services. Asunción is a particularly significant case in the current process of democratic transition as the first independent municipal government in Paraguay's history. Faced with the mounting problems of a marginal population, it now has the opportunity not only to find effective and appropriate responses to these challenges, but also to establish legitimacy for local government by incorporating genuine citizen participation into its efforts.

This study examines the spatial pattern of marginalization in Asunción and its metropolitan area and the provision of public infrastructure and services in the resulting precarious settlements. It also examines the experiences and potential for citizen participation in infrastructure and service provision in these areas.

II. Issues in Urban Infrastructure and Service Provision and Citizen Participation

Six major works explore themes relevant to this study including the relationship between municipal governments and citizen participation, the types and distribution of basic services and infrastructure, decentralization in service provision and modes of participation. These include *Managing Urban Development: Services for the Poor* edited by G. Shabbir Cheema, *Servicios Urbanos, Gestion Local and Medio Ambiente*, edited by Martha Scheingart and Luciano d'Andrea, *Managing and Financing Urban Services*, an OECD report, *Urban Planning for Latin America: The Challenge of Metropolitan Growth* by Francis Violich, *Urbanisation and Planning in the 3rd World: Spatial Perceptions and Public Participation* by Robert B. Potter and *Rethinking the Latin American City*, edited by Richard M. Morse and Jorge E. Hardoy.

A. Municipal Government and Citizen Participation

G. Shabbir Cheema notes in his introductory chapter that the role of urban local governments in service provision has been considerably weakened by a proliferation of development authorities and centrally controlled metropolitan entities. As a result, municipal governments have become a less effective mechanism for citizen participation in local decision making. Shabbir concludes that "the trend towards bureaucratization and centralization in the process of urban management could lead to further alienation of programme beneficiaries" (1984, 20).

At the same time non-governmental, voluntary organizations have remained weak, thus negatively affecting participation and giving professional administrators a greater degree of control over urban projects and services. He notes that voluntary organizations such as neighborhood improvement committees, mutual aid groups and civic associations serve as very important mechanisms for citizen participation, acting as "receiving mechanisms for government facilities, articulators of local needs and demands, and mobilizers of local resources" (1984, 20).

Francis Violich's work emphasizes the need for Latin American urban planning efforts to abandon their traditional clientelist relationships with communities and the governmental centralization which have so weakened the capacities of municipal governments. He stresses the need to take advantage of emerging urban grassroots initiatives and institutionalize the participation of communities and residents in problem solving and decision making. He points to the examples of Venezuela, Columbia, Peru and Chile which have established such programs of participation on a national level (1987, 127).

Violich advocates including "participatory planning and design as an integral part of development policy" (1987, 399) in which community groups are given a legitimate role to play in the design of their neighborhoods and their services and the opportunity to act in partnership with local government. Violich sees this as a step toward a new intermediate level of metropolitan planning between national-regional and local-municipal authorities. Within this new level, smaller geographic units can be established with legitimate responsibilities, thus providing opportunities for more local identity to develop.

B. Types and Distribution of Infrastructure and Services

Emilio Duhau's chapter in *Servicios Urbanos, Gestion Local y Medio Ambiente* outlines an analytical framework for viewing public services based on six criteria. Duhau argues that the provision of services takes the form of any of the following combinations: they are provided by either public or private entities, are distributed either through a competition of providers or through a monopoly, are administered in a centralized or decentralized fashion, can be of a self-financing or a deficit creating nature, can be oriented toward covering basic necessities with no concern for the users' ability to pay or can be distributed according to supply and demand, and finally the services can be heteronomous in nature or can incorporate several degrees of self-provision (1991, 85).

In the chapter of Shabbir Cheema's work entitled "Political Participation, Basic Services, and the Urban Poor in Developing Countries," Mohammad A. Nawawi notes that rapid urbanization has often not allowed local financial and management capacities to meet the growing demand for and to improve the quality of infrastructure and services. He argues that the distribution of urban services must be planned so as to ensure that the urban poor will be served. Mere expansion of services and infrastructure does not assure greater access as often improvements in quantity and quality of services are directed at richer areas (43). Nawawi notes as well that where urban infrastructure and services are controlled by different national ministries or authorities, coordination of their activities becomes crucial to avoid delays, waste of resources or duplication of efforts. He argues that an integrated approach to services is needed so as to more effectively plan for future demand and development of services (1984, 38).

René Coulomb argues that the discussion of citizen participation in urban services very rarely includes the participation of the users in the actual provision and design of services. His chapter "La Participación Popular en la Provisión de Los Servicios Urbanos: Estrategias de Sobrevivencia o Prácticas Autogestionarias?" in *Servicios Urbanos, Gestion Local y Medio Ambiente* notes that this overlooks many valuable experiences of urban communities who have provided alternatives to traditional forms of basic service provision. Coloumb points to the trend toward pacts between communities and service providers, either public or private, which place control over the terms of the service provision in the hands of the community. The services with the most possibilities for collective self-provision and control by communities, according to Coloumb, are potable water, drainage systems and public security. The provision of electricity, garbage collection and urban transportation tend to be more difficult to achieve through such strategies (d'Andrea and Schteingart, 1991, 270).

Coloumb highlights the increasing interest of urban communities in the search for technologically more appropriate as well as affordable alternatives to traditional services, particularly where precarious ecological conditions exist. To this end many communities are seeking training in such technologies for their own members. This represents a challenge for local governments to work with both communities and technical experts in seeking such alternatives.

Finally, Violich emphasizes the need for planners to apply continuous, systematic methods of programming, particularly with regard to infrastructure improvements. He points out that the provision of garbage collection and sewage systems in particular are not yet considered an integral part of urban plans for metropolitan growth in most Latin American cities and as a result are usually sorely lacking (1987, 125).

C. Modes of Participation

Mohammad A. Nawawi argues that before determining the kind and mode of participation called for by specific services or infrastructure, it is necessary to take into account the political characteristics and propensities of the urban poor. The modes of participation to be recommended must be appropriate to the necessary services, but also to the expectations and demands of the population (Shabbir Cheema, 1984, 188). Nawawi notes that the urban poor tend to become

politically assertive only in the face of serious threats to very basic and immediate needs and in the existence of effective community leadership. He concludes that the most appropriate mode of participation for the urban poor is that of "participation in leadership," which assumes that strong leaders are indispensable for the articulation of demands and mobilization. Where there is no strong tradition of horizontal community organization and solidarity, he argues, organization through local community leaders becomes the only viable option (Shabbir Cheema, 1984, 178).

Robert B. Potter defines public participation in his chapter in *Urbanisation and Planning in the 3rd World* by making the distinction between mere community involvement in public projects and actual participation within the decision making process. He sets out three possible modes of planner-client interaction, including that where the planner is leader, that in which the planner is follower and that of continual planner-client interaction, with flows of ideas and information occurring in both directions throughout the planning process (1985, 152).

He highlights the principal problems with participatory planning including apathy, the problem of representation, the ability of the public to articulate its needs and to understand the full range of alternatives available to them, and the time and paper work involved. Potter identifies three main categories of participatory planning techniques, including the dispersal of information to the public, the gathering of public opinion and attitudes, and the establishment of political structures through which the public is actually involved in the decision-making process. He then presents several detailed and very useful case studies of participatory methods of planning and planning-related perception research.

René Coloumb argues that the debate on urban service provision has largely neglected the role of the inhabitants of the neighborhoods in question. Much research has been devoted to the study of self-help housing, but very little has been said about the efforts of neighborhood residents specifically to obtain urban services. Coulomb outlines the most common forms of community participation with regard to services. One form is that of collaboration between local governments and communities usually in which the community provides the labor for a project and the government the materials. Another takes the form of presentation of demands before government officials, often resulting in political clientelism. Yet another common form of participation is a financial contribution from the users for the service provided (d'Andrea and Schteingart, 1991, 260).

D. Decentralization in Infrastructure and Service Provision

The OECD report entitled *Managing and Financing Urban Services* argues that the paradigm for urban service provision is shifting from one of standardization and universality "towards an enhanced awareness of the need for sensitivity and responsiveness to the large variation of urban service needs between citizens" (1987, 11). The report argues for the importance of developing innovative and well-coordinated decentralization strategies for urban service provision and discusses several attempts at decentralizing to the sub-municipal level. It particularly emphasizes the value of the non-profit sector's role in service provision and the importance of the unique relationship this sector builds between the providers and consumers of a service (1987, 39). The increasing

involvement of the non-profit sector can result in a wider range of services and offers the advantages of small-scale, locally responsive and participatory, as well as more economical service provision.

The chapter entitled "Past, Present and Future of Local Government in Latin America" in Morse and Hardoy's work makes a significant contribution to the debate. It makes an important distinction between municipal decentralization and citizen participation, noting that while a capability for administration and coordination at the central level must be maintained, real power must be transferred to levels below municipal administration. The carrying out of central decisions, it is argued, can be achieved much more effectively by neighborhood groups and other local bodies linked to specific communities (1992, 140). These bodies must remain organs of the state, according to this argument, and therefore should be democratically elected and administratively subordinate to the municipal authority as a whole. Thus, municipal decentralization and citizen participation become complementary mechanisms.

III. Land Speculation and Infrastructure Expansion Force Urban Poor to Periphery

The injection of foreign capital and the initiation of huge hydroelectric projects in Paraguay in the 1970s spurred a period of economic growth which began the country's transition from a predominantly peasant economy to a market economy. At the same time overuse and deterioration of agricultural lands produced a crisis in the peasant sector, leaving large portions of the labor force unemployed. The growth of the construction and services sectors led to an expansion of the urban labor market and hence a wave of migration from the countryside to the city.

A growing business and investment sector began to promote lucrative investments in real estate close to the center of Asunción, drastically altering the urban land and housing market. The increased demand for land as well as investment in the construction sector resulted in an unprecedented cycle of speculation and commercialization. Developers aided by government officials promoted the installation of paved streets and electricity, often in an arbitrary and unregulated manner. Residents who were unable to pay the costs associated with the services were forced out of the city and into the peripheral areas or the flood plains of the Paraguay River. José Morínigo argues that the construction of stone and asphalt paved streets in Asunción during this time was strategically implemented so as to achieve the appropriation of lands belonging to low income sectors as it was not integrated into any rational process of urban design (1991, 21).

This wave of speculation constitutes an important economic phenomenon typical of the 1970s. Between 1965 and 1984 the minimum wage in Asunción increased 4.4 times while the cost of urban lots in the least expensive urban sectors increased ten times. These areas were located in surrounding municipalities where basic services were non-existent. In the residential neighborhoods closest to the city center, the price of lots increased by an average of 30 times (Shoemaker, 1989, 46). "The urban space, as a market good of selective appropriation, can be converted into a means through which to fortify power groups which manage the State apparatuses. The resulting profit from the real

estate investments is used to reinforce the structure of domination..and was the predominant way of doing politics in the country for several decades" (Causarano, 1990,8).

Causarano notes that the urban policy implemented during this period effectively utilized real estate speculation as an instrument for the expulsion of urban settlers, generating poverty and marginalization. The urban poor could no longer acquire land through the formal market and began to develop an informal system of occupying parcels of land not available on the formal market because of their irregularity. These lands were located principally in the flood plains or the outlying areas of Asunción.

IV. Urbanization Results in The Incorporation of Outlying Municipalities to the Metropolitan Area

The resulting spatial settlement pattern has clearly been one of peripheral growth. The population of the municipalities closest to Asunción has increased notably in relation to the capital itself. Whereas fifteen years ago Asunción absorbed 80.9 percent of the population of the metropolitan area, in 1989 it absorbed 50 percent (Morínigo, 1991, 19). The wave of expansion had a particular impact on the municipalities of Fernando de la Mora, San Lorenzo, Lambaré, Luque and Mariano Roque Alonso. In the period between 1972 and 1982, the municipalities of San Lorenzo and Lambaré experienced population growths of 102 percent and 105.3 percent respectively and Fernando de la Mora, 80.5 percent (CONAVI, 1991, 51). At the same time, the municipality of Asunción grew at a rate of only 17.5 percent. (See Map 1). The same level of growth has occurred in the surrounding towns of the Central Province, constituting an area that is relatively integrated with the rest of greater Asunción.

The Asunción Metropolitan Area (AMA) was established in 1978, formalizing a process of integration between the capital and its neighboring municipalities which had been occurring for years. The AMA originally included eleven municipalities: Asunción, Fernando de la Mora, Lambaré, Luque, Limpio, Mariano Roque Alonso, Ñemby, San Antonio, San Lorenzo, Villa Elisa y Villa Hayes. After 1989 four more were incorporated: Areguá, Capiatá, J.R. Saldívar and Ypané. The incorporation was done with the idea of ordering the pattern of metropolitan growth, specifically with regard to road networks, the transportation system, and services of electricity and water.

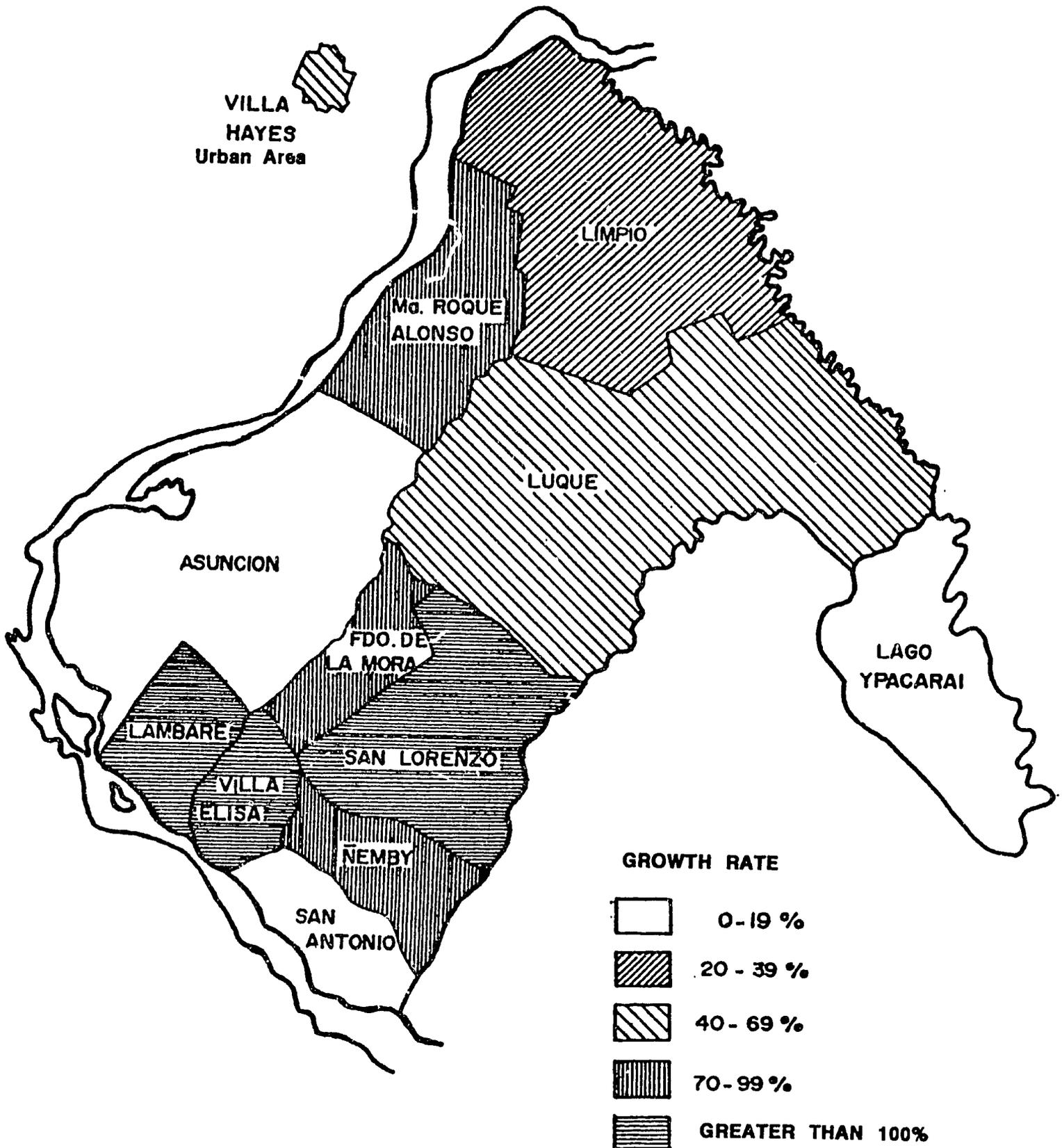
V. The City Structure Has Been Extended to Irregular Lands Lacking Basic Infrastructure and Services

The extension of the city structure has occurred without the accompanying support of basic infrastructure and services in many areas, resulting in a proliferation of marginal settlements in the metropolitan area. The increase in the marginal population is due primarily to the problem of land settlement, including the lack of titles to occupied land as well as the inappropriateness of much of the land for the installation of necessary infrastructure. Most marginal

ASUNCION AND METROPOLITAN AREA RELATIVE GROWTH BY MUNICIPALITY

MAP 1

1972-1982



settlements take the form of occupations of empty municipal or private lands in the outlying municipalities, a trend which has increased dramatically since the 1989 coup, or spontaneous settlements along the flood plains. These areas are characterized by precarious housing, lack of organized and efficient services, particularly sanitary services, and a very high level of crowding. The salient characteristic of these settlements, however, is the lack of titles to the land which makes the resolution of other problems impossible.

José Morínigo defines four distinct types of marginal settlements in Asunción and its metropolitan area (1991, 25). These include spontaneous settlements, induced settlements or relocations, settlements based on "adhesion," and land occupations.

A. Spontaneous Settlements

These settlements are located in the flood plains of the capital and to a lesser degree along creek beds in the peripheral areas of greater Asunción. Two mechanisms exist for occupying land in this spontaneous fashion, the first of which is direct occupation. Generally these are families who have migrated from the interior of the country or have been driven out from Asunción by the cost of expanding services. The second is through the purchase of usufruct rights, which have been assigned to the occupants of the flood plains by the new municipal administration of Asunción and are often transferred among inhabitants for a small sum of money. None of the settlements is listed in the General Property Register of the municipality.

Relatively simple access to land on the flood plains as well as the proximity of these areas to the city center and sources of informal employment have continued to attract migrants to the area. The residents of these areas work as day laborers, domestics, street vendors, fishermen, and in recycling the mounds of refuse which are deposited daily in the area. An estimated 118,225 inhabitants live in the flood zones, approximately 24 percent of Asunción's total population (Morínigo, 1991, 28). Prior to the new municipal administration, the inhabitants of these settlements were very vulnerable to repeated efforts by political officials to relocate them outside of the city.

B. Induced settlements

These are the products of resettlement projects organized and supported either by government institutions, primarily the municipality, or by groups connected to the Catholic Church. Because of increased flooding during the last decade, efforts to remove communities from the flood plains and relocate them have increased. Morínigo notes, however, that the two types of resettlement processes have had very distinct objectives. Whereas the Church supported efforts have emphasized active participation and leadership of the community in the decision making and implementation of the move, the government's principal objective in relocating communities has historically been simply to remove the settlers from the flood plains with very little input or participation from them (1991, 36). This has resulted in a very poor success rate of the resettlements.

The government resettlements have generally been located at significant distances from the city center and from public transportation forcing their inhabitants to dramatically alter their survival strategies. Between 1977 and 1987, the Municipality of Asunción resettled approximately 525 families from flood plains or from urban areas destined for other uses. Morínigo asserts that these resettlements were carried out with very inadequate planning. According to the Coordinator of Residents of Flood Zones (COPZI), between 60 and 70 percent of the families relocated by the Municipality during this time have abandoned the resettlements to return to their original settlements, citing the lack of employment, transportation and services in the areas as the explanation (Interview, President of Steering Committee, COPZI, 15 July 1993). The Department of Social Services of the Municipality estimates the abandonment rate between 30 and 40 percent (Morínigo, 1991, 40). Between 1979 and 1989, organizations linked to the Catholic Church relocated approximately 1300 families from flood plains to outlying municipalities. These communities appear to be much more consolidated and organized and the rate of abandonment far less. An estimated total of 1,850 families live in all the induced settlements.

C. Settlements By "Adhesion"

These are settlements in which groups of one or more families inhabit one or two rented rooms either on the flood plains or in the inner city. These situations are characterized by a high degree of overcrowding, particularly in the inner city neighborhoods, as more and more one and two room housing units are being occupied by two and three families. Settlements based on rental units appear to be growing; an estimated 21,000 families in the metropolitan area live in one to two room units. The total population living in internal areas of poverty in the city is estimated at 60, 758 (CONAVI, 1989, 84). Infrastructure deficiencies are not as significant a problem in these settlements.

D. Land Occupations

The fourth type of settlement is the land occupation, product of a community mobilization. The participants of these occupations are usually renters living nearby in housing which they can no longer afford or residents of the flood plains. The occupations of urban land in greater Asunción increased significantly in the months following the military coup in 1989 as many unoccupied municipal or private lots, usually those designated for use as public squares, became available as did land acquired by officials from the former regime but lacking clear titles. The change in political climate which gave communities increased freedom to mobilize collectively and present social demands also encouraged the urban occupations.

The land occupations usually involve an element of conflict with the local police as well as with the neighbors of the area. In a few cases, government institutions including the municipalities or the National Housing Council (CONAVI) have intervened on behalf of the occupants to assist them in obtaining the land and constructing housing. The National Parliament has also received requests for legal support from the occupants, however, has been unable to provide systematic and long term answers to the problem of access to urban land.

Morínigo estimates that between February 1989 and July 1990, more than 50 urban land occupations existed in the greater Asunción area, involving approximately 7,000 families (1991, 56). Morínigo's classification of the current land occupations indicates that 70 percent are located in the outlying municipalities of Lambaré, Fernando de la Mora and San Lorenzo which would appear to indicate that the presence of marginal settlements is quantitatively most significant in these areas. The municipalities also show signs of extremely high growth in recent years. Therefore the municipalities chosen as the focus of this study are Asunción, Lambaré, Fernando de la Mora and San Lorenzo.

VI. Infrastructure and Service Provision is Hindered By Irregularity of Land in Marginal Areas

This section discusses the principal actors and procedures involved in infrastructure and service provision in the metropolitan area as well as the problems for provision in the marginal settlements. The following services are included in the study: potable water, sewage infrastructure, electricity and garbage collection.

Until the end of 1988, neither Asunción nor any of the other cities in the metropolitan area had a plan to regulate or orient its growth or to establish appropriate standards and limitations for land use and the real estate market. The lack of such a plan has clearly contributed to the inability of public infrastructure and services to keep up with the process of urban expansion in the metropolitan area.

A. Potable Water

Infrastructure construction and service provision for both potable water and sewage systems in urban areas of over 4,000 inhabitants are administered by the Corporation for Sanitary Works (CORPOSANA), a public corporation under the jurisdiction of the Ministry of the Interior. CORPOSANA's actual coverage of potable water in the metropolitan area includes the municipalities of Asunción, Lambaré, Fernando de la Mora, San Lorenzo, Luque and Mariano Roque Alonso.

The coverage does not extend to many areas characterized as marginal zones, however, because of certain limitations. Lack of titles to occupied land in the flood plains and outlying areas prohibits CORPOSANA from providing settlements with individual water connections therefore they must usually be supplied through public spigots. Much of the land occupied by marginal settlements is municipal land designated for public squares which poses a significant problem for service provision to the land's occupants. According to municipal law, it is impossible to install water or electricity on public lands unless they are regularized. In addition, many of the occupations of the surrounding municipalities are not located within areas currently serviced by CORPOSANA and therefore cannot be connected to the existing water supply.

The following table indicates the absolute coverage of potable water for the municipalities included in the study.

Table 1

Levels of Coverage of Potable Water as of June 1991

Municipal.	Population	Population served	No. of connections	Percentage of coverage
Asunción (1)	742,060	509,817	92,694	68.7%
Fernando de la Mora	123,218	49,511	9,002	40.2%
San Lorenzo	138,871	25,757	4,683	18.6%

Notes: (1) The municipality of Lambaré is included with Asunción.
(Source: Division of Statistics, Communal and Regional Department, CORPOSANA.)

In 1986, CORPOSANA created a comprehensive master plan for the provision of water and sewage infrastructure in the metropolitan area, the implementation of which has yet to begin. The map of the proposed expansion of the water supply indicates how the municipalities will be affected by the phases of implementation (See Map 2).

The areas currently supplied with water are the commercial and most densely populated residential areas in the four municipalities. Asunción clearly has most of its permanent water supply in place; expansion to the flood plains is not contemplated in the master plan at this time. Lambaré appears to enjoy fairly complete coverage with the remaining area to be supplied in the first phase of expansion. Fernando de la Mora and San Lorenzo both have larger areas which are not to be supplied until the first and second phases of expansion. Many of these areas are public lands which are occupied by marginal settlements. Expansion to these areas is not currently a priority because of the legal nature of the land.

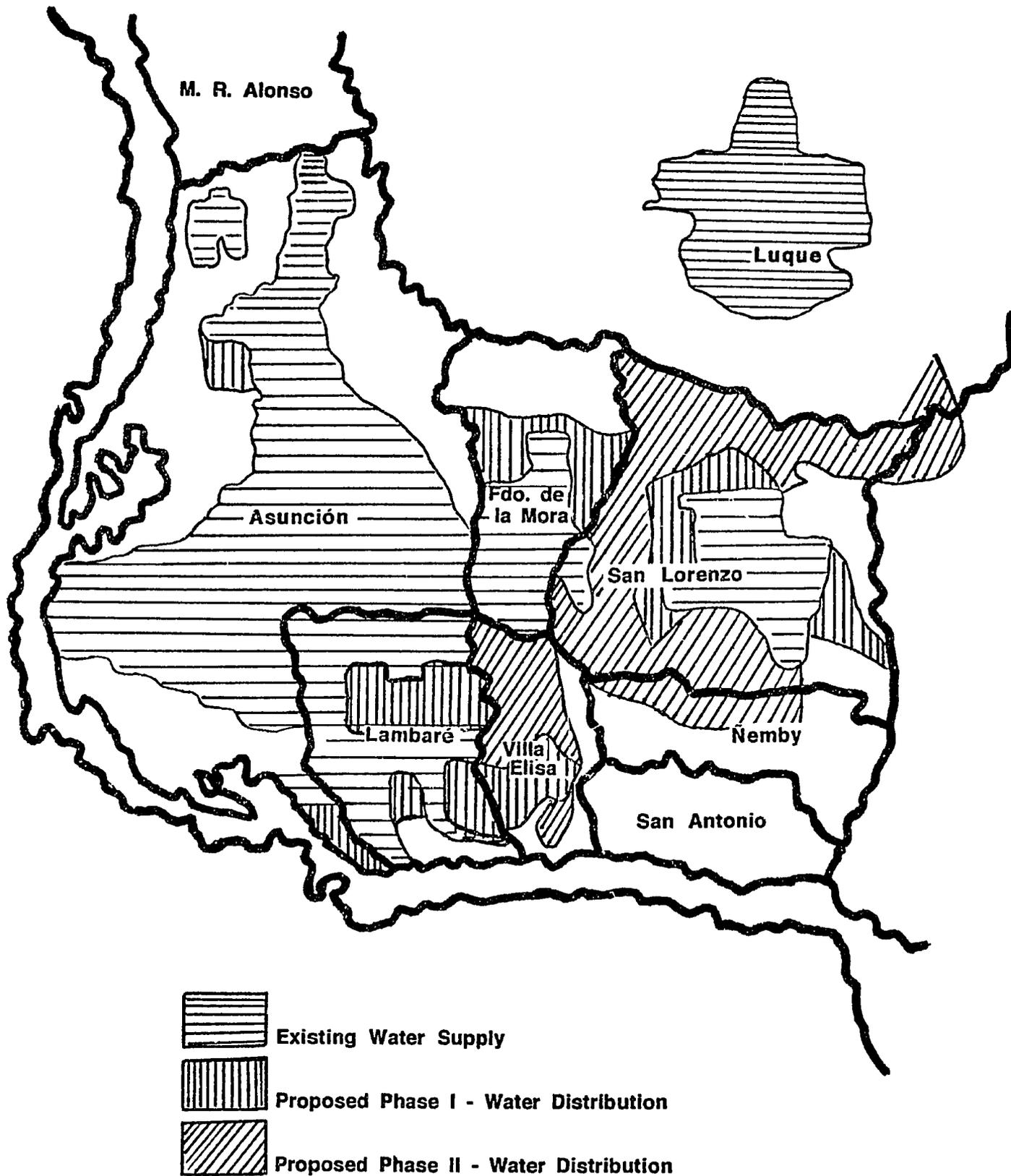
Interviews with officials of CORPOSANA indicate that the institution has received little fiscal support from the central government and that current plans are for its privatization (Duarte, Interview, 13 July 1993). Until these issues are resolved, it appears that the master plan will continue to remain unimplemented.

B. Sewage Systems

The installation of sewage infrastructure in urban places of 4,000 inhabitants or more also corresponds to CORPOSANA, although its coverage is far less than that of potable water. Sewage remains one of the most severe sanitation related problems in the urban areas and is exacerbated in the marginal settlements by precarious living conditions. Currently in the metropolitan area, sewage infrastructure exists only in the municipalities of Asunción and San Lorenzo. The

POTABLE WATER SUPPLY-PHASED EXPANSION ASUNCION METROPOLITAN AREA

MAP 2



21

following table shows the existence of sewage infrastructure in the municipalities of concern:

Table 2

Levels of Coverage of Sewage Infrastructure as of June 1991

Municipal.	Population	Population served	No. of connections	Percentage of coverage
Asunción (1)	742,060	410,845	74,699	55.4%
Fernando de la Mora	123,218	0	0	0
San Lorenzo	138,871	15,813	2,875	11.4%

Notes: (1) The municipality of Lambaré is included with Asunción.

(Source: Division of Statistics, Communal and Regional Department, CORPOSANA.)

The existing sewage infrastructure has been built by private contractors for CORPOSANA and no new sewage lines have been built in the country for the last five years. While 55.4 percent of Asunción is covered, no infrastructure exists at all in the municipalities of Lambaré and Fernando de la Mora and most of the rest of the metropolitan area. Interviews with officials from these municipalities indicate frustration with what they perceive to be the lack of interest of CORPOSANA in addressing the problem. One official noted that "CORPOSANA does nothing more than tear up the streets and then leave them that way." The Director of Urban Development for the Municipality of Lambaré believes that part of the problem is the complete centralization of the institution and the lack of local field offices of CORPOSANA outside of Asunción as ANDE has (Arguello, Interview, 17 July 1993).

The spatial distribution of sewage systems is indicated in Map 3. Clearly the few areas covered by sewage systems in the municipalities of Asunción, San Lorenzo and Luque correspond to those supplied with potable water. These are the principal commercial and residential zones of the metropolitan area.

C. Electricity

Electricity is provided by the National Administration of Electricity (ANDE), also a public corporation under the Ministry of Interior. Electricity has undoubtedly the best coverage of all the public services. According to provisional data from the National Census of Population and Homes and from ANDE, of a total of 251,518 individual residences in the Metropolitan Area in 1992, 197,684 residences, or 78.6 percent, were being provided electricity by ANDE (ANDE, 1993, 10).

**EXISTING SEWAGE INFRASTRUCTURE
ASUNCION METROPOLITAN AREA**

MAP 3



New communities or land occupations must normally solicit electricity from ANDE, however, if a community is not located sufficiently near an already established electrical transformer, it must finance the installation itself. Many of the occupations in the outlying areas, particularly of public lands, are not located within the necessary distance. The lack of land titles in marginal settlements creates the same problem for the installation of electricity as for water. Most of the settlements, both along the river and in the surrounding municipalities, do have electricity however, but it is often purchased through an informal and illegal market rather than through ANDE. This is usually done through a resident who agrees to connect his neighbors to his own electrical connection, often charging them exorbitant rates for the service.

Because of the proliferation of informal electrical connections about which there is no available data, it can be assumed that the actual percentage of population served by electricity in the metropolitan area is significantly higher than 78.6 percent. The concern with regard to electricity then is not one of coverage, but rather of regulation and control so as to provide electricity in a safer and more efficient manner and at the same time recover the costs of such provision by directly charging all users. Interviews with the municipalities indicate that many residents of informal settlements are paying twice and three times what they would pay ANDE for electricity under the current arrangements.

It was not possible to obtain a spatial representation of the provision of electricity because of data limitations.

D. Garbage Collection

The responsibility for garbage collection services lies with each municipality. While refuse disposal is certainly one of the most serious sanitary problems in the metropolitan area, collection services range from very good to extremely deficient. The biggest difficulty for collection is the inaccessibility of many communities by streets as well as the unwillingness of much of the population to pay for the service.

VII. Marginal Settlements and Infrastructure in Each Municipality

A. Asunción

The largest marginal population in the municipality of Asunción is found along the flood plains of the Paraguay River. It is here that the conditions of marginality are most acute; a majority of the population is without steady employment or income, does not have title to its land nor access to many basic services, and is the periodic victim of serious annual flooding. These settlements are often considered too precarious to warrant direct access to services and this is compounded by the uncertainty regarding the future of the river bank area. For the last several years the municipal and national governments have been discussing a range of possible solutions for the development of the area, many of which involve the relocation of

most of the current settlements. The current municipal administration's plans for the area are unclear.

Table 1 indicates that 31.3 percent of homes in Asunción and Lambaré lack potable water connections. Interviews with the municipality however, indicate that the majority of homes without connections in Asunción are being served with public spigots by CORPOSANA. Most of the settlements in the flood plains have been supplied with public spigots for potable water in recent years, although these are often highly insufficient for the number of families they must serve. According to CORPOSANA sources, 602 public spigots have been installed in marginal settlements in Asunción (Ayala, Interview, July 2, 1993).

CORPOSANA's phased expansion of water shown in Map 2 indicates that there is only a tiny area of Asunción which has yet to be covered. The areas along the river which are not supplied will continue to be supplied by public spigots at least until a definitive plan is agreed upon for the future of the settlements in the area.

The supply and regulation of electricity is not a significant problem in Asunción relative to the surrounding municipalities. Coverage of sewage infrastructure, as the table indicates, is little more than 50 percent, however, this is clearly far better than the rest of the metropolitan area. In sum, the expansion of basic infrastructure in the municipality of Asunción has been relatively complete.

The Department of Garbage Collection and Disposal of the Municipality of Asunción indicates that there are 21 sectors inaccessible to the garbage trucks, leaving approximately ten percent of the city without service (Deggeller, Interview, July 18, 1993). Approximately 70 percent of these areas are found in the flood plains and the rest are small settlements along creek beds in other areas of the city. The Municipality is currently implementing an alternative plan for garbage collection in which the Neighborhood Commissions assume responsibility for collecting the garbage from house to house in small carts and then depositing it in designated areas accessible to the garbage vehicles. Currently 20 percent of the inaccessible areas are being served in this manner. There is also great concern with recycling in the metropolitan area and the Municipality of Asunción is leading an effort at inter-municipal coordination for potential recycling projects.

B. Fernando de la Mora

The Municipality of Fernando de la Mora has undergone accelerated urbanization in recent years because of its location between the rapidly growing municipalities of Asunción and San Lorenzo and the presence of two main traffic arteries which pass through it. This urbanization has resulted in a proliferation of marginal settlements, most of which are land occupations. The Municipality's Department of Patrimony estimates that approximately 322 of a total of 1600 *manzanas* in the municipality are occupied in this way (Peralta, Interview, July 8, 1993). Much of the occupied land is designated as public space and municipal reforms stipulate that such land must be legally transferred out of the public domain before it can be given or sold to its occupants. This must be done through the Parliament and several such cases are already pending. In a few cases the Municipality is purchasing the land from its private owners and passing the payments on to the communities and in others is seeking to relocate the inhabitants.

The Municipality is currently acting as mediator between many settlements in Fernando de la Mora and CORPOSANA and ANDE to assist them in obtaining services. The Municipality has begun to issue the communities temporary authorizations to have water and electricity installed on the land. Other settlements currently purchase potable water from private water trucks or pay private companies to drill wells and finance it collectively.

CORPOSANA has installed very few community water spigots in the outlying municipalities. Unlike Asunción, where it can be assumed that the homes not receiving individual service from CORPOSANA are served by public water spigots, the data for Fernando de la Mora and the other outlying municipalities more accurately reflect the lack of service and the need for communities to supply their own water.

The Municipality of Fernando de la Mora has chosen to contract its garbage collection to a private company who claims its coverage in the areas accessible by streets is 100 percent. There is no information about the number of inaccessible settlements, although it appears that efforts to utilize community organizations to collect the garbage have proven somewhat successful in this municipality. The company does indicate that it is having difficulty collecting fees for the service, however (Lescano, Interview, 12 July 1993).

C. Lambaré

The municipality of Lambaré has not developed as much as Fernando de la Mora, but its proximity to the commercial center of Asunción is beginning to accelerate the settlement process. The municipality has approximately 16 land occupations, many of which are 20 and 30 years old, as well as some settlements on flood plains. Again many of the occupied spaces are designated for public use and the Municipality has begun the process of removing some of the land from the public domain so as to sell it to the occupants. It is also considering the construction and relocation of occupants into large housing projects.

The Municipality indicates that much of its potable water, particularly in the marginal settlements, is obtained through private sources (Arguello, Interview, 19 July 1993). Electricity covers the entire municipality and is deficient in only a few of the settlements where the legality of the land is an obstacle to its installation. The Municipality of Lambaré uses a mixed system of garbage collection in which private companies provide the vehicles and the municipality finances the necessary personnel. It is currently serving 8,000 users out of a total of 21,167 individual residences. While this data is not very conclusive, it appears that the coverage needs much improvement.

D. San Lorenzo

San Lorenzo has been developing very rapidly, its commercial and residential zones expanding significantly in recent years. Here the corresponding expansion of infrastructure, particularly for water and sewage, has been far better than rest of the metropolitan area. The process of land occupation in San Lorenzo is more

recent and does not appear to be as significant as in the other three municipalities. Most of the occupations have occurred on public lands and all are attempting to obtain temporary authorizations to install water and electricity.

The Municipality of San Lorenzo has recently begun to administer its own garbage collection and disposal after years of contracting the service to a private company. Currently it is serving between 4,000 and 5,000 users and hopes to eventually increase to 10,000 to 12,000 users. Unlike the municipality of Fernando de la Mora where the fees for garbage collection are mandatory, the municipalities of Lambaré and San Lorenzo do not require payment for the service and therefore have large percentages of the population who choose not to purchase the service.

VIII. A New Potential For Citizen Participation Has Emerged Since 1989

Luis Galeano divides the history of neighborhood organizations and movements in Asunción into three stages. The first, beginning in the 1950s, is characterized by the emergence of spontaneous organizations of neighbors and communities in the form of mutual aid societies made possible by the support of the Catholic Church and the existence of strong neighborhood leaders. The second stage, between 1976 and 1983, is characterized by increasing repression from the state and a resulting "readjustment" of social movements. In response to the emerging informal settlements and land invasions in the capital and the accompanying demand for basic services, the state initiated a regulation and control over the neighborhood associations. The Municipality of Asunción required the legal inscription of the associations as well as the periodic presentation of accounts and activities.

The ruling Colorado Party during this period developed strong clientelist relationships with many of the neighborhood commissions, thus eroding the potential of these organizations for autonomous mobilization. The Party became the principal channel through which the inhabitants of the marginal settlements could make requests for improvements such as roads and services in their communities, and the tool with which to co-opt community based organizations and build political bases. Local party headquarters often assumed the functions of the municipality and many inhabitants of the settlements continue to turn to these entities to resolve their needs.

The most recent phase beginning in 1983 has seen a new emergence of more autonomous neighborhood organizations patterned on the earlier mutual aid societies, but grounded in demands for basic public services. The catalysts for this phenomenon included the economic crisis in Paraguay in 1981 and the flooding of the Paraguay River between 1983 and 1985 which left homeless thousands of urban residents (1989, 150).

The military coup in 1989 resulted in a political opening which allowed for a significant increase in organization and mobilization of the urban poor, particularly among the inhabitants of Asunción's informal settlements. This increase has occurred on two levels, the first of which is that of local community organizations which generally take the form of Neighborhood Commissions and

the second that of broader grass roots coordinating organizations representing coalitions of residents.

This section will discuss the principle forms of citizen participation present in the Asunción metropolitan area and the implications of these for more efficient and participatory service provision.

A. Municipalities and Neighborhood Commissions

The Neighborhood Commission, which was the the principal channel of communication of the former regime with the marginal settlements, continues to play an important role in citizen participation but with modified objectives. The new municipal administration of Asunción elected in 1991, based much of its campaign platform on increased citizen participation and appears to have acted upon the idea by dedicating significant attention to the neighborhood commissions.

It is clear that neighborhood organizations have always played an important role in community improvement in Asunción, whether or not they were formally recognized by the municipality. Neighborhood commissions have usually organized residents to improve streets or to seek the installation of

water and electricity and to plan fundraising activities. The new municipal administration has devoted a department to the promotion and consolidation of neighborhood commissions which claims to promote more authentic and coherent organizations at the neighborhood level through a relationship of accompaniment rather than clientelism (Martinez, Interview, 2 July 1993). The Municipality is currently working with 260 neighborhood commissions, not all of which are active. The commissions are addressing neighborhood improvement issues and legalization of land as well as receiving leadership training.

B. Grass Roots Organizations

One of the most active and coherent of the coordinating organizations has been the Coordinator of Residents of Flood Zones (COPZI), which represents 35 communities located in the flood areas adjacent to the Paraguay River. COPZI has become active since 1989 and its objectives are to defend the right of the residents to occupy the area and to protect the most vulnerable areas from future flooding with the construction of a retaining wall. Among the greatest obstacles to their work are a proposed project for the construction of a river avenue promoted by strong business interests and recent attempts by private interests to acquire the land in order to convert it to an area of high urban value.

Interviews with the non-governmental organizations which have supported COPZI's work indicate that its internal organization has been waning in recent years as it has lost the participation of many of its bases. As Mabel Causarano notes in her study on citizen participation, information and communication are often the key elements to a grass roots organization's success. COPZI, she argues, has not obtained information about key issues necessary to prepare the organization for negotiations regarding the future of its communities. These include the stipulations of the Regulating Plan for Asunción for the use of the flood plains; the types of river defenses which would be most feasible (hydraulic

fills, elevated housing, etc.) as well as the ecological, social and economic impacts of each; and who the other key sectors involved in dispute over the coastal area are (1990, 24). The organization is also in dire need of financial and technical support, has no locale out of which to operate and often not enough resources to cover transportation costs to and from the offices of the municipality and other supporting organizations (Ayala, Interview, 21 July 1993).

An interview with the president of the steering committee of COPZI indicated that the organization feels very disengaged from the planning efforts of the Municipality of Asunción regarding the future of the flood zones (COPZI leader, Interview, 21 July 1993). The municipality has established an office with a team of technical experts to explore solutions to the problem of the flood plains and a very detailed plan has been drawn up for the redesign of the area, however, COPZI has had no involvement or input in the planning process. The steering committee has been trying for several months to obtain an audience with the mayor and has received no answer. The NGOs working with COPZI are critical of the municipality's professed interest in citizen participation in light of its exclusion of the communities in this important process (Ayala, Interview, 21 July 1993). COPZI is currently conducting its own survey of the communities it represents about the various proposals for the area and hopes the results will be taken into account by the municipality.

The second of the most stable coordinating organizations is the Commission of Families Without Housing (COFASIVI). COFASIVI was founded in 1990 and is an umbrella organization representing approximately 53 land occupations in the metropolitan area. COFASIVI's work consists of assisting the homeless population to organize and occupy urban land, presenting publicly the social demands of its bases and training the leaders of the occupations. The organization has succeeded in negotiating the relocation of several occupations and the purchase of land through the municipalities for others. Like COPZI, however, COFASIVI seems to have weakened considerably for lack of financial support.

The diversity within the groups has often proven an obstacle for the successful internal organization of the occupations. Former renters tend to assume a more individualist attitude and are less willing to participate in meetings and collective solutions than those settlers from spontaneous settlements. The inexperience and inefficiency of community leaders, the tendency of certain leaders to continue to seek out clientelist relationships with political parties to resolve problems, the lack of realistic plans, and the instability of the occupants all contribute to the weak internal organization which characterizes many of the occupations (Morínigo 52).

Many of the grass roots organizations have tended to channel their demands toward the central government, often the Parliament, a practice which Causarano believes is generally ineffective and in turn weakens the municipal organization. She notes that the lack of information by the organizations regarding the different institutions and agencies of the State and their respective functions significantly diminishes the impact of such mobilizations (Causarano, 1990, 28).

C. Non-Governmental and Social Organizations

The other main channel through which marginal settlements have sought to resolve problems has been non-governmental and other social organizations such

as trade union or syndicates. Many of these organizations have been criticized for operating through similar structures to those of the political parties and having serious internal divisions and authoritarian leadership. Mabel Causarano argues that some of the non-governmental organizations have traditionally been overly assistance oriented and have effectively absolved the State of its responsibilities for providing basic services and infrastructure to its population. Causarano notes that communities can often marginalize themselves further this way, by creating "enclaves of self-sufficiency which seek to remain outside of the formal circuit" (1990, 27).

Several non-governmental organizations appear to have played a genuinely supportive and useful role, however, with the organizations of urban settlers. Among these is the Social Pastoral department of the Catholic Church which has accompanied efforts of the residents of marginal areas to organize for decades. The Church has assisted several resettlement efforts and its strongest

work has been in the flood plain communities of Asunción, promoting health and educational work as well as some infrastructure projects.

The Committee of Churches (Comité de Iglesias) has also played an important role in the accompaniment of the residents of marginal areas. The Committee has been working to strengthen local community organization in the marginal areas within Asunción and in the surrounding municipalities as well as working with COFASIVI to provide legal defense for 16 land occupations who are facing removal.

Other NGOs include *TAPE* which produces educational materials and conducts leadership trainings for community organizations, and *BASE-ECTA*. *TAPE* has been assisting the leaders of COPZI to gain access to the municipality and provided them with limited financial support and a locale for their meetings. *BASE-ECTA*, in addition to conducting research on related themes, has supported several development projects in the flood plains.

IX. Obstacles to Traditional Infrastructure and Service Provision Have Inspired Alternative Means of Acquiring Services.

When the usual formal mechanisms for obtaining basic services fail, as they often do in marginal settlements, alternatives methods of collaboration and financing are often found. These can provide valuable insight into the potential for more creative and participatory ways of acquiring services.

One such example is the installation of potable water in two flood plain communities through the unique collaboration of the local neighborhood commissions, a Spanish Catholic assistance agency and CORPOSANA. The project began three years ago when CORPOSANA was in short supply of water and was unable to provide the communities with water. Through the initiatives of the local parish priest, \$300,000 in financing was obtained from a Spanish assistance agency for the construction of a well to establish a cooperative for the provision of water to homes in the communities. An agreement was made with CORPOSANA that the well would be built according to its specifications and upon completion, would be turned over to the institution so it could maintain and collect users fees from the service (Velasco, Interview, 13 July 1993).

Small cooperatives of at least 20 families were organized and the families were required to attend a series of workshops about community organization and the water project itself before they could become beneficiaries. Each family was required to pay 80,000 guaranies for the project, as compared with the 600,000 guaranies normally charged by CORPOSANA for the installation of water in a home. Half of this amount was paid through labor and half in cash over a 4-month period. The project has proven very successful and CORPOSANA has reportedly been very satisfied with the quality of the service as well as with its own success in collecting users fees.

The second example is a collaborative project recently initiated between the Municipality of Lambaré and a land occupation. The project is to build a badly needed drainage system for contaminated water in a community known as "December 8." Such infrastructure construction is ordinarily the responsibility of CORPOSANA, however, does not exist and is not being built in Lambaré. The municipality and the community have decided to address the problem together and have designed the project, the materials for which will be purchased by the municipality and the labor contributed by the community (Arguello, Interview, 19 July 1993). The municipality is interested in cooperating with communities on similar infrastructure projects in the future and appears to be assuming a responsibility which is not its own because it is not being addressed by the appropriate agency.

X. Decentralization and Inter-Municipal Cooperation Are Key Policy Issues for the Resolution of Land Settlement and Infrastructure Problems

Two key policy issues related to the themes of irregular land settlement and marginal areas and the provision of infrastructure and services are decentralization and inter-municipal cooperation.

A. Decentralization

Since 1989, Paraguayan social scientists, economists and politicians alike have begun to promote the idea of decentralization, based on the debureaucratization and reduction of the state apparatus and the privatization of public services and state enterprises. The idea of decentralization centers on the strengthening of local governments and is therefore a topic with important implications for the study of urban services and citizen participation. The history of administrative centralization in Paraguay has included the provision of public services such as water, sewage systems, electricity, and telephone service, which have always been supplied by autarchic entities dependent on the central government.

Causarano and Verón argue that the debate on decentralization has placed too much emphasis on mere administrative reforms. They note that structural changes in territorial organization and the political process are of equal importance to the success of the decentralization process. They argue for the simultaneous decentralization of certain social functions and responsibilities and the centralization of technical capacity (1991, 13). To avoid simply re-centralizing on a smaller level, the decentralization process must link together several levels of power including the central government, municipalities,

provinces and neighborhood associations. These must all interact continuously with one another.

Significant reforms to municipal laws now afford municipal governments in Paraguay with more revenues, establishing that 30 percent of real estate taxes collected by the Treasury Ministry must be returned to the municipalities, although in practice they have yet to receive the majority of these funds (Causarano and Verón, 1991, 8).

Many argue that the transition to democracy has not significantly changed politics in the country. Causarano and Verón claim that, while for the first time municipal leaders are elected directly rather than appointed by the Executive Branch, the municipality effectively remains a captive of the central government. The latter continues to retain much of the municipalities' revenues and make the ultimate decisions regarding economic policy and social spending (1991, 8). They suggest as well that the general population has very little faith in the municipality's capacity for autonomous action toward local development.

B. Inter-Municipal Coordination

The challenges posed by an ever growing marginal population and the extension of the urban structure without necessary infrastructure and services are among the most pressing issues facing the municipalities of the Asunción metropolitan area. There appears to be very little coordination or discussion between the 11 municipalities which make up the Metropolitan Area 1, however.

The Association of Municipalities of the Metropolitan Area (AMUAM), the organism established for the purpose of coordinating efforts between the municipalities of the area appears to be relatively inactive. The association appears to be primarily coordinating public works and the construction of streets as well as sharing equipment and machinery (Ozuna, Interview, 8 July 1993). The capacity of AMUAM to coordinate important policies and services is structurally limited by the fact that it is merely an association. The association therefore does not have the necessary support or legitimacy to play a more determinant role in the coordination of metropolitan issues.

XI. Conclusions and Recommendations

A. Land Settlement Issues are the Root of Infrastructure Deficiencies in Marginal Areas

The problem of marginality and infrastructure in the Asunción metropolitan area is rooted in the problem of access to urban land and irregular settlement. The difficulties in obtaining infrastructure on occupied or ecologically and legally irregular land stem from increasing pressures on urban land. The continued migration to the metropolitan area and the unavailability of suitable land is an issue which must be addressed jointly by all of the municipalities in the metropolitan area. The Association of Municipalities of the Metropolitan Area

could effectively coordinate common solutions to these problems by beginning to evaluate and implement the Regulating Plan for the Asunción Metropolitan Area.

B. Support for Citizen Participation Could Strengthen Legitimacy of Municipal Governments and Organizational Capacity of Marginal Settlements

Authentic citizen participation in municipal planning is essential for the resolution of irregular land settlements and infrastructure deficiencies. The municipalities' continued work with neighborhood commissions is necessary in order to restore faith in the capacity and willingness of the municipalities to act on behalf of the population. Support is needed for the municipalities with little experience in working with neighborhood commissions. If municipal governments begin to recognize the legitimacy of organizations such as COPZI and COFASIVI, they could take advantage of the potential for cooperative efforts and valuable input from them. Support for these groups could improve their organizational capacity as well.

C. Centralization of Services Leads to Poor Distribution and Control of Services

A third issue is that of the centralization of service providers, particularly CORPOSANA. Complaints among the municipalities about the lack of local field offices for the provision of water and sewage highlight the need for a decentralized administrative structure which can better assess and respond to the infrastructure needs of each municipality. Furthermore this would make the regulation of use and collection of user fees easier and more effective. A related issue is the impending privatization of the utility providers, primarily CORPOSANA and ANDE. If privatization is to occur, it must be studied with great care so as to ensure sufficient control by the government over the distribution and accessibility of essential services. In the case of both decentralization and privatization, giving the municipalities a role to play in the planning of infrastructure expansion could greatly improve efficiency and distribution.

D. Inter-Institutional Collaboration Among Non-Governmental Organizations Could Improve Support for Marginal Settlements

Efforts have recently begun to establish an inter-institutional collaboration among the non-governmental organizations working with marginal settlements. There could be an important role for such a coordination in the search for common solutions to the socioeconomic and infrastructure problems of these communities. A new intermediate level of metropolitan planning could benefit from these efforts by incorporating the coordination of non-governmental organizations.

E. Technically and Environmentally Appropriate Solutions Must be Found to the Problems of Land Settlement and Infrastructure

Finally the question of technologically and environmentally appropriate responses to the problem of land occupations and infrastructure needs must be addressed in a coordinated fashion among all of the municipalities. The conflict between the need for available land for urban settlers to occupy and the need for sufficient park and recreational space in the city must be resolved. Equally important are the pressing sanitation issues which pose severe health hazards to all the municipalities. These problems have resulted from the lack of appropriate infrastructure and the inaccessibility of marginal settlements and therefore require more ecologically and technically feasible solutions. Service providers, municipalities, and community leaders alike must begin to discuss adequate solutions to these problems.



INTERVIEWS

- Ayala, Ernesto. Chief of Production, CORPOSANA. 2 July 1993.
- Arguello Rivelli, Ricardo. Director of Urban Development, Municipality of Lambaré. 17 July 1993.
- Ayala, Ruben. TAPE. 15 July 1993.
- Bernal, Lucia. Social Pastoral Department, Archdiocese of Asunción. 5 July 1993.
- Cantero, Marcial . Committee of Churches. 13 July 1993.
- COPZI, President of Steering Committee. 15 July 1993.
- Deggeller, Armando. Director of Operations Division, Department of Collection and Final Disposal, Municipality of Asunción. 18 July 1993.
- Diaz, Valentine. Dept. of Public Works, Municipality of San Lorenzo. 15 July 1993.
- Duarte, Guido. Chief of Sanitary Infrastructure, COPOSANA. 13 July 1993.
- Esquivel, Bernardo. Direction of Economic and Social Policy, Technical Planning Secretariat. 8 July 1993.
- Garay, Gonzalo. Director of Urban Development, Municipality of Asunción. 13 July 1993.
- Lescano, Domingo. *La Sudamericana*. (Company Contracted for Garbage Collection in Fernando de la Mora). 12 July 1993.
- Martinez, Bruno, Director of Social Services, Municipality of Asunción. 2 July 1993.
- Ozuna, Gustavo. Secretary of Municipal Council , Municipality of Fernando de la Mora. 8 July 1993.
- Peralta, Nancy, Director of Patrimony, Municipality of Fernando de la Mora. 8 July 1993.
- Palumbo Salsa, Antonio R., Director of Statistics Division, ANDE. 12 July 1993.
- Rodriguez, Andrés, Departament of Garbage Collection, Municipality of San Lorenzo. 15 July 1993.
- Velasco Pedro, Parish Priest, Community El Tacumbú. 20 July 1993.
- Verapiris Cesar, Director of 16th Sanitary Region, SENASA. 7 July 1993.

BIBLIOGRAPHY

- Alexander, Ernest R. "Planificación Sin Planificadores: Asentamientos Informales en América Latina y Sus Implicaciones Políticas," Revista Interamericana de Planificación, 20: 77 (March 1986).
- Administración Nacional de Electricidad. Estudio de Mercado de Energía Eléctrica de la ANDE. Asunción: ANDE, 1993.
- Bahl, Roy W. and Johannes F. Linn. Urban Public Finance in Developing Countries. Washington, D.C.: Oxford University Press, 1992.
- Boh, Luis A., Ed. Ciudad y Vivienda en Paraguay. Asunción: SAEP, 1984.
- Bouin, O. and Ch.-A. Michalet. Rebalancing the Public and Private Sectors: Developing Country Experience. Paris: Development Centre Studies, 1991.
- Burke, Edmundo M. A Participatory Approach to Urban Planning. New York: Human Services Press, 1979.
- Causarano, Mabel. Apuntes Sobre Políticas de Desarrollo Urbano y Participación Ciudadana. Asunción: BASE Investigaciones Sociales, 1990.
- Causarano, Mabel and Carlos Veron. La Decentralización Desde el Estado Centralizado: Consideraciones Sobre el Caso Paraguayo. Asunción: BASE Investigaciones Sociales, 1991.
- Coloumb, René. "La Participación Popular en La Provisión de los Servicios Urbanos: Estrategias de Supervivencia o Prácticas Autogestionarias?" in Servicios Urbanos, Gestión Local y Medio Ambiente. Eds. d'Andrea, Luciano and Martha Schteingart. Mexico, D.F. : Centro de Estudios Demográficos y de Desarrollo Urbano, 1991.
- Cooperación Técnica Internacional. Estudio del Tránsito Urbano de Asunción y su Área Metropolitana: Informe de Avance III. Asunción: Agencia de Cooperación Internacional del Japon, October, 1985.
- d'Andrea, Luciano and Martha Schteingart. Servicios Urbanos, Gestión Local y Medio Ambiente. Mexico, D.F. : Centro de Estudios Demográficos y de Desarrollo Urbano, 1991.
- Galeano, Luis A. "Demandas Populares Urbanas y Propuestas Para La Transición Democrática." Revista Paraguaya de Sociología 26:74 (January-April 1989), 149-174.
- Guimaraes, Roberto P. "Participación Comunitaria, Estado y Desarrollo: El Difícil Arte de Conciliar Lo Conflictivo." Revista Interamericana de Planificación 21:83-84., Sept.-Dec. 1987.

- Heikel, Maria Victoria. Los Proyectos Populares de Ocupación del Suelo: Vivienda, Municipios y Participación. Presented at the seminar "Vivienda Popular y Los Programas de Reubicación de Damnificados."
- Morínigo, José Nicolas. Pobreza Urbana y Vivienda. Asunción: Comité de Iglesias, 1991.
- Morse, Richard M. and Jorge E. Hardoy, Eds. Rethinking the Latin American City. Washington D.C.: Woodrow Wilson International Center for Scholars, 1992.
- Nawawi, Mohammad A. "Political Participation, Basic Services and the Urban Poor in Developing Countries" in Managing Urban Development: Services for the Poor. Ed. G. Shabbir Cheema. Nagoya, Japan: United Nations Centre for Regional Development, 1984.
- Organisation for Economic Co-operation and Development. Managing and Financing Urban Services. Paris: OECD Publications Service, 1987.
- Ostrom, Vincent and Frances Pennell Bish. Urban Affairs Annual Reviews Vol. 12: Comparing Urban Service Delivery Systems. Beverly Hills: Sage Publications, 1977.
- Potter, Robert B. Urbanisation and Planning in the 3rd World: Spatial Perceptions and Public Participation. New York: St. Martin's Press, 1985.
- Shabbir Cheema, G., ed. Managing Urban Development: Services for the Poor. Nagoya, Japan: United Nations Centre for Regional Development, 1984.
- Shoemaker, Juan F. "Estrategias de Supervivencia y Procreación: Un Estudio de los Barrios Marginales de Asunción" in Fecundidad en América Latina. Eds. Carlos E. Aramburu, et. al. Bogotá: Corporación Centro Regional de Población, November, 1989.
- Violich, Francis. Urban Planning for Latin America: The Challenge of Metropolitan Growth. Boston: Lincoln Institute of Land Policy, 1987.