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CONSTRAINTS IN PROVIDING WATER AND SANITATION SERVICES TO THE URBAN POOR

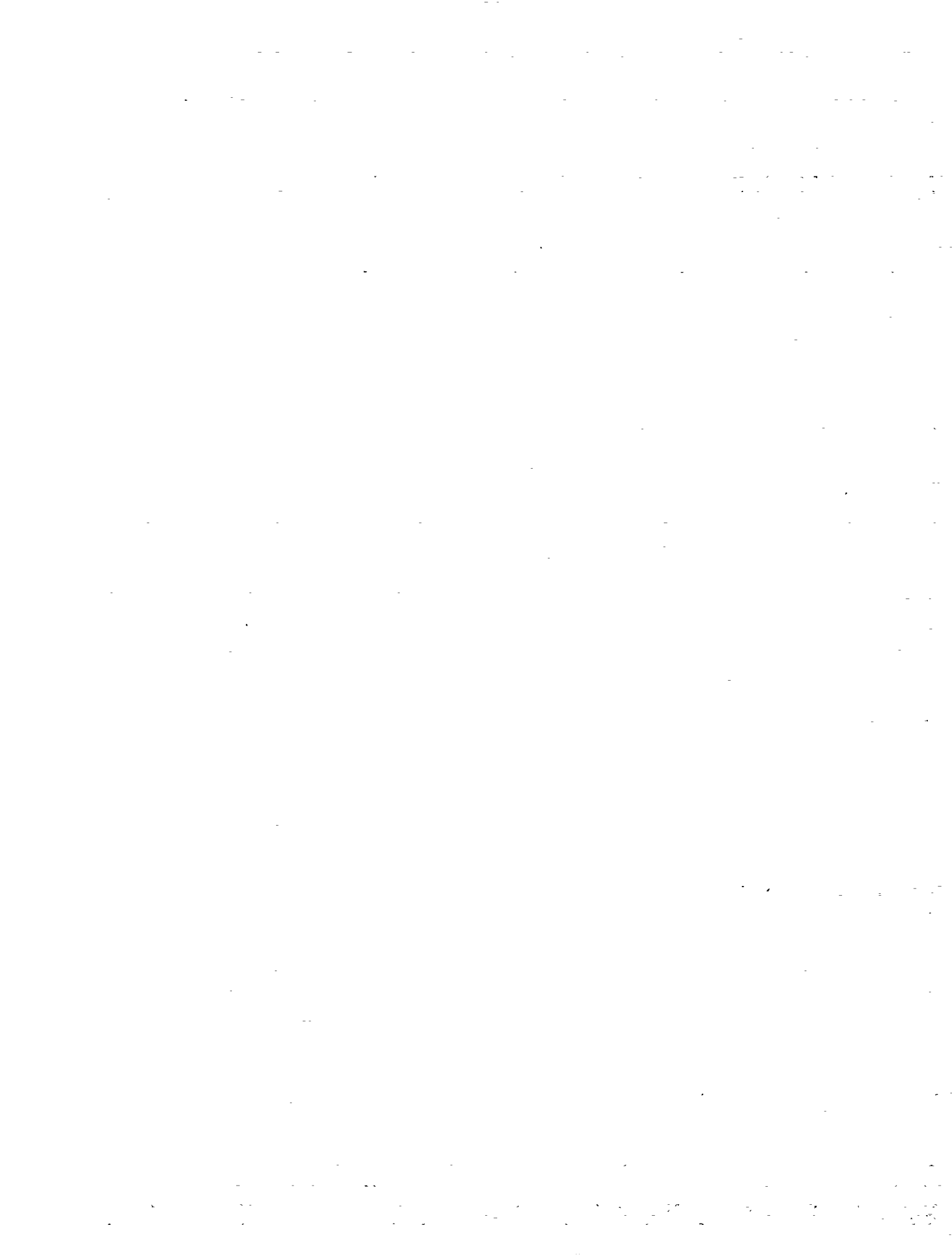
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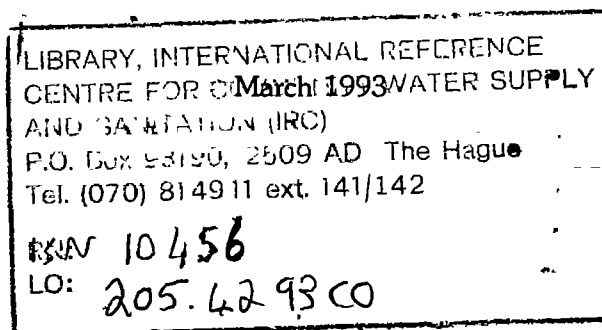
WASH Technical Report No. 85

CONSTRAINTS IN PROVIDING WATER AND SANITATION SERVICES TO THE URBAN POOR

Prepared for the Office of Health, Bureau for Research and Development,
U.S. Agency for International Development
under WASH Task No. 338

by

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Related WASH Reports

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Voices From the City. March 1993. Newsletter of the Peri-Urban Network on Water Supply and Environmental Sanitation. WASH Project.

Water Supply Issues in the Peri-Urban (Informal) Sector. Field Report 355, May 1992. Prepared by Richard McGowan, Jonathan Hodgkin, and Paul Kaplan.

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ACRONYMS

| | |
|-------------|--|
| A.I.D. | U.S. Agency for International Development |
| CHF | Cooperative Housing Foundation |
| EIRR | economic internal rate of return |
| FIRR | financial internal rate of return |
| IIED | International Institute for Environment and Development |
| NGO | nongovernmental organization |
| VIP latrine | ventilated improved pit latrine |
| RHUDO | Regional Housing and Urban Development Office, U.S. Agency for International Development |

EXECUTIVE SUMMARY

Meeting the water and sanitation needs of poor families living in Third World urban informal settlements will require profound structural reforms *that facilitate and even encourage working with the existing settlements*, where the greatest need for water and sanitation exists. It also implies improving our *knowledge about the urban poor*.

This report is intended to help program development officers and policy-makers understand the constraints that can make the provision of water and sanitation to such settlements extremely difficult. These constraints are considered under four subheadings: physical and technical, economic and financial, institutional, and structural.

Informal peri-urban settlements develop and improve over time, if allowed to. Unlike many U.S. poor urban areas, they are not in a process of deterioration. Shantytowns they may be, but they turn slowly, but resolutely, into respectable neighborhoods. They begin as scattered huts, without streets, house numbers, or connections to public services. They may pirate electricity from the nearest cables, bring water in drums from their neighbors who have standpipes, walk through fields to get to streets with public transportation, and rely on a stack of tires (a commonly improvised toilet) and an occasional bonfire to take care of excreta. Gradually, however, the shanties get rebuilt in cement, the community acquires a certain degree of presentability and some political clout (because the process of getting public services is as much political as technical and economic), and public services are extended to the neighborhood. Commerce follows and, finally, small industry. However, this process is regularly jeopardized by a wide range of constraints, some of which are outlined below.

Physical and Technical Constraints

The major physical and technical constraints include difficult sites and terrain, complicated site layouts, and an overreliance on conventional service-delivery systems.

The urban poor tend to settle on the most undesirable pieces of land for economic reasons. Ironically, where the land cost goes down, the cost of bringing in services goes up, precisely where residents are less likely to be able to meet such exorbitant costs. City planning practices tend to accentuate this tendency by limiting the amount of land available for development. Informal neighborhoods often develop haphazardly, without allowing adequate space for installing infrastructure lines.

Local engineers prefer to use service-delivery systems with which they are familiar—usually the most modern—even though these systems may turn out to be inappropriate for the difficult topography, soils, and other conditions of slum neighborhoods.

Economic and Financial Constraints

Key economic and financial constraints include the high cost of water and sanitation to families of low income, and the shortage of capital for investment.

While even the lowest-income families can usually afford potable water as it is delivered, the provision of indoor connections or connections close to the house can become unaffordable because of attendant costs that are not taken into account in project feasibility studies. These include

- external delivery costs;
- land legalization and regularization costs; and
- the initial connection fee and additional such costs to the family.

A recent U.S. Agency for International Development (A.I.D.) report identifies the basic constraints in providing infrastructure to the urban informal sector as a lack of capital and the lack of a revenue collecting system. In other words, even if a completely affordable system for providing water and sanitation could be found, and even if the financing were available for its installation, an infrastructure project would still be stalled until an appropriate credit agency could be identified or established to contract loans to the beneficiaries and to collect payments. Attempts to get independent banks to finance slum upgrades have been largely unsuccessful.

Institutional Constraints

Major institutional constraints to the provision of water and sanitation are primarily the result of ineffective public works systems. Public works systems have long been recognized as complicated and disorganized, two conditions that make the provision of satisfactory service and expanded coverage difficult.

The focus on getting public works companies to apply financial discipline by increasing their charges and collection of payments makes investment in poor neighborhoods increasingly unattractive. This approach has tended to emphasize eliminating deficits and providing autonomy at the expense of addressing consumer needs.

Public works companies in less developed countries follow the model of public works companies from developed countries: They are set up to receive and operate water and sanitation systems but they are not equipped to get new systems built on their own.

Public works in any country can be highly susceptible to corruption and politicization. Public works companies are often synonymous with large contracts and lucrative payoffs, and they offer ample opportunities for patronage employment.

Free-market theories of development suggest that a privately owned and operated water and sanitation company would find ways to increase efficiency and expand services to all possible markets, including the poor. But in reality, the formal sector private service companies have not shown any eagerness to extend infrastructure to poor neighborhoods.

Structural Constraints

Structural constraints are at the heart of urban sector definitions and development objectives. They are the constraints that are the most difficult to address, let alone resolve, because they involve conflicting values and policy viewpoints.

The structural constraints that impede the provision of water and sanitation services to the informal sector include the following.

- Cities are often defined according to fully serviced areas, which do not always include the poor.
- Planning is by prohibitive zoning.
- Population growth rate is not always taken into account.
- Prohibitive land-use planning distorts the urban land market.
- City planning and building codes define housing without services as unacceptable.
- Legalization and property rights must first be approved before ownership of land is recognized.

The present policy of many international agencies to emphasize private sector growth or “structural adjustment” over social development may represent a new barrier in getting services to the poor.

The greatest bottleneck to getting services to the poor is indifference, and even hostility, at local, national, and international levels. It is to be hoped that more decentralization and democratization will give informal settlements greater leverage to get attention, but it is not so simple, and it appears to take time and technical sophistication.

To reinforce an earlier point, meeting the needs of informal peri-urban settlements will require significant structural reforms that facilitate and even encourage working with the existing settlements, where the greatest need for water and sanitation exists. It also implies improving our knowledge about the urban poor. Turning around people and institutions takes time, and it takes a few good leaders.

Chapter 1

INTRODUCTION

This introductory chapter defines the purpose of the report and its intended users, and describes the document's organization. It also provides some background and a framework for considering the constraints in delivering water and sanitation services to the urban poor.

1.1 The Purpose of this Report

The purpose of this report is to specify the key constraints that must be addressed for significant reform in the urban sector to occur. It is meant to be an informational tool, one that helps development planners understand and confront the problems that beset projects striving to bring water and sanitation to the urban poor.

This report does not attempt to offer recipes for overcoming the constraints affecting informal urban settlements, in which the greatest number of poor families reside, nor does it offer a general approach for raising awareness and problem solving. It is hoped instead that this document will help further clarify urban sector constraints in addressing the needs of the urban poor, and that it will lead to the development of additional activities to deal with these constraints, either in the context of individual projects, or in other sectorwide initiatives.

1.2 Organization of the Report

Although the constraints discussed are all interrelated, they will be considered here under four chapter headings:

- Chapter 2: Physical and Technical Constraints
- Chapter 3: Economic and Financial Constraints
- Chapter 4: Institutional Constraints
- Chapter 5: Structural Constraints

These chapters, in going from physical to structural constraints, in reality move from the easiest to the most difficult problems. They include several case examples, highlighted in boxes, which illustrate how various constraints can isolate the urban poor and prevent them from getting urban services. These case examples also include specific projects that have managed to overcome the obstacles and succeed in bringing water and sanitation services to informal sector communities.

1.3 Intended Users

This document is intended to help U.S. Agency for International Development (A.I.D.) program development officers and policy-makers understand the constraints that make it especially difficult to bring water and sanitation to the urban poor. The document should be particularly useful for those A.I.D. officers who come to the urban sector with previous experience grounded in either providing water and sanitation in developed countries, or in doing the same in rural areas of less developed countries. It is also hoped that urban planners and municipal administrators in developing countries, as well as officials in other donor organizations, will find this document useful.

1.4 Background

Third World cities can be viewed as divided into two distinct sectors: formal and informal, legal and illegal, or regular and irregular. As mentioned previously, the latter sector houses the greatest number of poor families and, almost by definition, those families without access to ordinary public services such as water and sanitation. Unfortunately, the same factors that have made some groups legal and others illegal make it nearly impossible to solve this lack of access to water and sanitation services by legalizing the illegal or by formalizing the informal. It is a paradox that complicates the delivery of water and sanitation services to the urban poor and can only be dealt with through profound reform to the urban sector. With this last premise, this document departs from the theory that sectoral constraints have led to the creation of the aforementioned situation. Instead, the authors propose that basic reform of a different nature is needed to resolve problems of delivering water and sanitation services to the urban poor.

1.5 Defining the Peri-Urban Settlement

The urban poor in Third World cities can be identified by where and how they live:

- Families that have fallen on hard times in the inner cities, but that are able to maintain their presence in the formal community;
- Young families that rent or live with relatives while saving up to enter a public subsidized housing program; and
- Families whose needs are too great and too pressing to put off, and that have formed the communities generally referred to as informal urban settlements.

When families find that there is no way to live in the formal, or "legitimate," part of the city, they in essence go underground to the informal/peri-urban communities. These peri-urban settlements make up the majority of urban neighborhoods in developing countries, and will for at least another generation to come.

Despite regional differences, the people who live in these settlements of the Third World share several factors in common. First, they are not standing in line waiting for the government or the formal private construction sector to provide completed and fully serviced housing. Instead, they find land, somewhere, sometimes to occupy but more frequently to buy, and to begin build a shelter. Second, they are apparently willing to go without certain levels of comfort, and without full or even any public services, in order to secure a family shelter (Hermanson and Owens, 1990).

Families that live in peri-urban settlements build on the cheaper land outside city limits (which means they pay a premium in travel to work and schools), on land that is not zoned for housing, or on land considered dangerous or environmentally protected. They usually have paid the former owner or occupant the full purchase price, but receive no registered title to the land. They generally do not participate in local government, and they are not connected to the municipal service network. Finally, they tend to be ignored by official planning authorities, who find themselves overwhelmed by the informal sector's sheer numbers and needs, which far outstrip the capacity of the local planners and government (Hardoy and Satterthwaite, 1989).

These are the poor who need water and sanitation and other services, and who should be a focus of concern.

1.6 Why Governments Have Been Reluctant to Help

Most governments—in developed and less developed countries—are oriented exclusively to maintaining a certain standard of community, and simply do not contemplate the existence of substandard communities that lack basic urban services. Since only fully serviced neighborhoods are permitted under law, any community that lacks services must be illegal and the very process of community improvement “extra-legal.” The rationale behind this definition holds that any improvement of urban slums will merely invite the creation of more urban slums. This logic explains in part why governments, including those of developed countries, often prefer slum clearance projects to slum improvement projects.

1.7 A Need for Profound Reform

Initially, urban development projects focused on technical interventions—laying pipes, treating water, and so on. Next, they dealt with the question of how to pay for the infrastructure. Once these two areas were addressed, they faced a new problem: Existing institutions—that is, city administrations and public works companies—have for the most part proved incapable of managing the projects, incapable of maintaining and administering them once completed, and incapable of initiating similar projects on their own.

Historically, cities in developing countries have less experience in self-management, or governance, than cities in developed countries. Many Third World cities, in fact, are plagued

with inefficient and corrupt administrations and inefficient, corrupt, and ineffective water and public works companies. These problematic municipalities and public works systems—which led to the development of institutional strengthening and technical assistance projects—form the first hurdle in the path to bringing water and sanitation to the urban poor.

Yet, even if they were efficient, honest, and energetic, municipalities and the water companies in developing countries would still face an additional set of constraints limiting their capacity to help low-income families. These constraints are referred to as structural, for they include conflicts in underlying policies and values, and, as a result, in the definitions and development objectives of the urban sector.

Meeting the needs of informal settlements will require *significant structural reforms that facilitate and even encourage working with existing settlements, where the greatest need for water and sanitation exists*. It also implies improving our knowledge about the urban poor.

Because the factors that characterize the urban poor in the Third World go unregistered, it becomes extremely difficult to gather and analyze overall data about them. Without bank mortgages or building permits, who can say how many homes in informal settlements are built each year? When the urban poor do not show up on employers' payrolls, who can say how many are employed or what incomes they earn? Without health records, who can detect their mortality or morbidity rates? When they pirate water and electricity, or buy them secondhand from other vendors, legitimate or not, who can say what quality of service they have and how much they pay? When they pirate water from public aqueducts, or buy it from vendors, when they use homemade septic tanks or pits, how can their water consumption and level of sanitation be assessed? Finally, when their neighborhoods are not included in city maps, their streets have no official names or addresses, and their houses are given no numbers, how can they even be found? Developing countries, for the most part, do not collect or manage data describing factors that affect the urban poor.

This lack of real data makes it nearly impossible to answer two key questions: How many urban homes are without services, and what kind of services do they need? Clearly, the needs will vary from country to country, and, within countries, from older to newer settlements.

Although the majority of constraints occur at the levels of local and national government and with water companies, the actions and requirements of international donor agencies have added to the hurdles. Often the constraints originate in the definitions and policies set by the same international donor agencies wishing to help the urban poor. Finally, the actions of the urban poor themselves often jeopardize their own interests by creating additional constraints.

Chapter 2

PHYSICAL AND TECHNICAL CONSTRAINTS

This chapter identifies the physical and technical constraints generally encountered in urban-upgrading endeavors. They include difficult sites and terrain; complicated site layouts; and overreliance on conventional service-delivery systems.

2.1 Difficult Sites and Terrain

The urban poor tend to settle on the most undesirable pieces of land. They do it for clear and rational reasons: the more unbuildable the lot, the less its market value, and therefore the more affordable it is.

Sites may be located where no road, water main, or sewer line could ever reach, resulting in a market value of zero. Examples include the mountainsides in Rio de Janeiro and Caracas, the river gulches of San Salvador, the black cotton soil of Mombasa, or the floodplains in Indonesia and Cameroon. Ironically, where the land cost goes down, the cost of bringing in services goes up, and these areas are precisely where residents are less likely to be able to meet such exorbitant costs. City planning practices tend to exacerbate this tendency by limiting the amount of land available for development (see Section 5.1.4).

2.2 Complicated Site Layouts

Since informal urban settlers lack technical know-how and assistance, they often develop their areas haphazardly, without allowing adequate space for installing infrastructure lines. Latin American communities, for the most part, have mastered the art of neighborhood site planning, at least when they find a flat site. Their problems arise on hillsides.

By contrast, urban settlers in parts of Africa and Asia plunk down their houses according to village traditions—that is, patterned according to family formation, with houses directly abutting their neighbors on all sides, with no room left for service right-of-ways. Laying pipes under such circumstances conventionally calls for the creation of streets and the consequent removal and relocation of houses (rather than bending pipes around them). In these situations, the cost of service delivery is higher, both in financial and social terms. Sometimes, an entirely new neighborhood must be built to accommodate relocated families. These development costs must be considered part of the costs in providing water and sanitation to the original settlement.

The Tijuana case example below (Goethert, 1991) illustrates how progressive urban planners can find ways to make more land available to poor urban families, assist these families in laying out their communities, and respond creatively to development costs.

2.3 Overreliance on Conventional Service-Delivery Systems

Local engineers, and often their expatriate advisors, prefer to use service-delivery systems with which they are familiar—usually the most modern—even though these systems may turn out to be inappropriate for the difficult topography, soils, and other conditions of informal neighborhoods. In particular, these conditions can make the installation of conventional infrastructure extremely costly—much more expensive than less-familiar technologies that have been developed as appropriate responses to these conditions (Bakalian and Jagannathan, 1991).

Two factors that contribute to engineers' overreliance on conventional service-delivery systems are the adoption of foreign engineering standards and the traditional curricula of engineering schools. Another important constraint is that affordable technology usually requires much higher levels of user involvement than conventional technology to function properly. Engineers, who formulate most sector projects, often have little regard for the social mechanics of projects, such as mobilizing communities and involving future users, and have little patience for the sheer time it takes to address them.

There exist examples of simple and ingenious solutions in providing water and sanitation under adverse conditions (such as the simplified sewerage system of Northeastern Brazil) that have turned out to be cheaper than conventional systems. But for the most part, the distrust and ignorance that many engineers and others have about alternative systems translates into higher costs or lack of services for poor families living on difficult terrain.

There also exists a finite set of terrible conditions facing families residing on troublesome terrain—swamps, slopes, and bedrock, to name three. Engineers have important contributions to make in finding optimal systems for introducing water, sanitation, and garbage disposal under each of these conditions.

The case examples below portray some typical responses to unconventional technology. They illustrate that local planners and engineers—and their expatriate advisors—in their eagerness to apply the most modern solutions in the least appropriate places can end up increasing both investment and maintenance costs.

A Progressive Approach to Managing Urban Growth: The Tijuana Example

The term “explosive urban growth” hardly begins to describe what has been occurring in Mexico’s border towns in recent years. In Tijuana, poor families have settled on the banks of the river, which runs through the center of town, building ingenious retaining walls with old truck and car tires filled with sand and cement. In the early 1980s, aware of the dangers of both floods and landslides, the city tried in vain to remove the squatters. Eventually, the rain-swelled river accomplished the major eradication job that the city could not, with tragic consequences.

No sooner were the first communities washed away when new residents came to settle on the site of the disaster. At that point, the Secretariat for Human Settlements and Public Works (SAHOP) realized that unless viable alternatives were made available, the throng of new families-immigrants without fixed jobs or savings, who were simply too poor to qualify for the traditional state-provided low-income housing—would repeat the mistakes of the past.

By instituting a new policy, SAHOP was able to sell lots of unserviced, unoccupied *ejidos*, or farmland held in public domain. In doing so, it went against local tradition and law. SAHOP marked off streets, sidewalks, house lots, and public areas with white lime, and sold off the house lots with the assurance that they would receive services someday. Families were given one month to pay the full cost—which represented the government cost of expropriation, including indemnification and legal fees—and two months to occupy the site. Buyers not living on-site within the required time lost the right to the lot. Since the land was technically still in the process of expropriation by the national government, SAHOP sold “options to buy with permission to occupy” rather than outright titles. And the state governor personally guaranteed the outcome of the purchase and sale agreements.

The system worked remarkably well. SAHOP sold off 100 lots per week and houses went up at a similar rate. No one moved back to the old site of the river banks. Families pitched in to pave roads, plant trees, and do as much of the public works as possible. Water came from trucks. People relied on latrines. But the site plan allowed for wide and accessible streets, making future service installation more feasible. The city was able to begin construction of an aqueduct and sewer system about a year after each site was occupied. The families were then more financially stable and had a greater ability to pay for the services.

The Tijuana experience suggests several lessons:

- People can pay for the full cost of the land. The cost of unserviced land is not a major barrier if land is legally available.
- Both the city and its residents stand to gain from programs that accommodate new growth, and the savings in avoiding disasters on mountainsides and along river banks is probably incalculable.
- With government support and encouragement, families are willing to assist with the vital work of urban development.
- Incremental infrastructure improvements based on demand and affordability can be a feasible mechanism for reaching the urban poor.

The Tijuana model, which takes after the U.S. Homesteading Act, is certainly more productive than one that attempts to control or ignore urban growth.

Conventional versus Unconventional Technologies

Cartagena, Colombia

In this low-lying swamp community of 100,000, a study was conducted to determine an "intermediate technology" to improve sanitation, a goal that presupposed that no other system could replace a conventional sewer in the long term. But the study resulted in the development of a special technology that has proved even more effective than a conventional sewer system, at about one-third the cost—not only for swamp areas, but indeed, for any low-density urban area. The new system replaced the large-diameter pipes of the conventional system, which sink or warp in swamp areas, with an unconventional system that filters out sewage solids into septic tanks and moves off the liquids in small-diameter pipes. The septic tanks require cleaning every six years.

While local residents were easy to convince as to the feasibility of the new system, planners and engineers from the local government agency were not so enthusiastic. Despite a water table 25 inches below ground, highly impermeable soils, and land levels well below the city sewer mains, the officials kept insisting that a conventional sewer system be installed, despite its tendency to sink and the necessity of pumping the sewage uphill to the city sewer mains. One of the chief arguments the planners and engineers made was that existing construction codes did not allow for the lower standards of the new technology (i.e., it was illegal). Fundamentally, though, it was the lack of familiarity with the proposed new technology (a technique not discussed in most engineering schools) that created the most resistance. In the end, the new system was applied as a pilot and has functioned well for more than 10 years.

Concepción, Chile

In the areas surrounding the city of Concepción, Chile, planners ruled out the hillsides as permissible construction areas on the grounds that the city water pressure was insufficient to reach above a certain level. As a result, they eradicated poor communities huddled above the city.

The irony is that Concepción averages 300 rainy days per year—enough pure potable water to supply New York City. Yet planners and engineers completely discarded the catchment of rainwater as "backward," even though such a solution can service any area at low cost.

Barranquilla, Colombia

In Barranquilla's latest mayoral campaign, water for the urban poor was the main issue. An independent candidate who ran on the platform that Barranquilla could be served better and cheaper by a series of artesian wells was scoffed at by his key opponent, a sanitary engineer.

Although the independent candidate lost the election, he appears to have won the intellectual argument. Wells drilled at his own expense within the city limits are producing water in unimagined quantity and quality. Yet the city is still contracting to build pipelines to bring water in from a neighboring state at approximately five times the cost of the well water.

Chapter 3

ECONOMIC AND FINANCIAL CONSTRAINTS

This chapter presents the key economic and financial constraints to providing water and sanitation services to informal settlements. These constraints include

- the costs of water and sanitation, and low family income;
- the shortage of capital for investment; and
- the limits of formal sector housing.

3.1 The High Costs of Water and Sanitation, and Low Family Incomes

When the cost of piped water is compared with what low-income families actually spend for water, it generally turns out that water from vendor trucks and buckets costs far more than water from a domestic hook-up. It is also generally true that—whatever the cost—families will sacrifice food, heat, and shelter to pay for minimum water consumption. For these reasons, the provision of a close, safe source of drinking water can usually be demonstrated to be amply affordable to beneficiary families. But there is a danger that this point, which generally is part of project feasibility studies, overlooks the extraneous but significant costs associated with water consumption.

3.1.1 External Delivery Costs

Delivery costs are oftentimes overlooked in economic analyses. These can include the cost of off-site trunk lines that bring water to a neighborhood and take wastewater away, or of a sewage treatment plant, which is increasingly becoming a requirement for any new sanitation system.

Economists recommend that those who benefit from public services pay the marginal costs that their new service represents. But when the cost of additional infrastructure includes a new trunk line, reservoir, or additional treatment plants, as they can when peri-urban or suburban sites are linked up to a municipal aqueduct, the marginal costs tend to increase, and with them the burden on poor families, which are the last to get services. In these cases, the poor families living in the informal settlements end up paying more than the higher-income families living in the formal sector, because the costs of extending a water line today is considerably higher than the cost of installing a system of pipes was 20 years earlier (Hermanson and Owens, 1990).

3.1.2 The High Costs of Land Legalization and Regularization

The process of land legalization and rezoning, an almost universal requirement for the provision of urban water and sanitation, can give rise to additional costs—often the most burdensome (see Section 5.1.6). These requirements often make the cost of infrastructure unaffordable to low-income families. Moreover, these families will not always appreciate the net benefits of a title deed and a zoning variance (De Soto, 1989; Hermanson and Owens, 1990).

3.1.3 Additional Costs to the Family

While families usually save on water charges when they hook up to a municipal aqueduct and stop buying by the gallon from water vendors, they also find themselves subject to additional charges, which may mount up. The cost of the initial connection fee (usually the cost of the water meter and house connection) plus the amortization of the capital investment costs can loom very high for families with low incomes, as can the charges for additional services that invariably emerge from the municipal water company's billing department. These might include costs for sewage collection, sewage treatment, trees and parks, garbage collection, fire brigades, and a municipal zoo. Few billing departments differentiate between who gets trees, parks, garbage collection, and protection from fire when they send out their bills, however.

3.2 The Shortage of Capital for Investment

Low-income families have neither the money to invest in infrastructure nor the support of others who could lend to them, so they turn to the city for financing. Yet Third World cities are notoriously short of funds and sources of financing, so they traditionally turn to the national government, which is usually more or less in the same straits. National governments can borrow both externally and internally and usually do, but they prefer to do so for projects that are more likely to pay off the loans, such as ports, roads, or power plants, than those that are not.

3.2.1 The Nonexistence of Credit Institutions to Provide Financing

An additional constraint in providing infrastructure to the urban informal sector is the lack of a local financial institution willing to make loans and collect revenues. In other words, even if a completely affordable system for providing water and sanitation could be found, and even if the capital were available for its installation, an infrastructure project would still be stalled until an appropriate credit agency could be identified or established to contract loans to the beneficiaries and to collect payments.

It is rare to find municipal public works companies or municipalities with in-house credit agencies or financing departments. Attempts to get local private banks to finance informal settlement upgrades have been largely unsuccessful. Even credit unions, which make loans to lower-income individual members, are reluctant to get involved in financing infrastructure. Their logic is understandable: Even a shanty can be offered as a guarantee, but no one can claim a stretch of pipe to back up a loan for water supply.

When banks have made loans available for home improvement in lower-income settlements, they insist on financing housing that is already fully serviced and that has a legal private domain land title. Thus far, the private banking system has rarely come up with programs to finance the installation of infrastructure in poor illegal and/or irregular urban settlements.

In Mexico, Colombia, and Chile, however, programs have been developed for private banks to make loans available to municipal governments. Municipal governments then, if willing, can use these funds to upgrade informal settlements. At present, these funds come from national governments or external lending sources; they do not represent the commercial banks' own assets.

3.2.2 The Lack of Conditions for Financing

Even when credit institutions do agree to finance infrastructure projects for poor neighborhoods, they often stumble in the process. The right conditions for financing just do not exist in these areas. For example, loans for infrastructure must be made to an association that has no legal existence and no equity. The alternative—making loans to individuals for “shares” in a water delivery and sanitation system—runs into a new set of problems, since the urban poor, without steady jobs and with no collateral to offer, no savings, and low incomes, are hardly deemed credit worthy.

3.2.3 Cost Recovery: Getting People to Pay

Urban upgrading has traditionally been highly subsidized and, as a result, cost recovery has not been a major issue in such projects (Serageldin, 1989). Today, as subsidies become more scarce, local governments and international donors are attempting to recover capital costs for public works. These attempts, however, have been met with significant resistance by the urban poor, which has resulted in a poor track record for recovering the capital investment costs of peri-urban water and sanitation projects (Serageldin, 1989). Consequently, international and national lending agencies are reluctant to invest in infrastructure for the urban poor. The costs of infrastructure installation include charges—for regularization, legalization, and sometimes the expropriation of land—that appear exorbitant to beneficiary communities. Many of these communities balk at paying “development levies” or charges for amortization of infrastructure investments.

3.2.4 Poor Economic Rates of Return

Any investment—public or private—must, theoretically, undergo cost-benefit analyses that compare its benefits with other, alternative investments. The financial internal rate of return (FIRR) compares cost with revenue streams based on the expected sales of water, which in turn are based on existing or expected tariffs (service charges). The economic internal rate of return (EIRR), which looks at infrastructure projects comprehensively, uses the increase in land values as an approximation of benefits.

These analyses are really looking at the payoffs a project will bring and measuring the virtues of one project compared with others. Thus, the better project is the one that brings in greater net revenues to the public works company and/or causes land prices to rise more than the original cost of the land plus the cost of the investment.

Either of these methods of measuring return tend to make investments in services for the poor less attractive than the same investments in services for the upper and middle classes. Not only are earnings greater in middle-class neighborhoods, where the same pipes will produce a greater consumption of water (probably at higher prices), but land values are likely to rise more quickly there too. Meanwhile, it is difficult to discover sales and rental prices of real estate in poor neighborhoods. The situation becomes more complicated in the majority of cases where families do not hold clear title to property. Finally, whatever amenities a property may have, its value in the real estate market is generally dictated by its location and jeopardized by poor neighbors.

In short, economic analyses based on land revaluation or on service company revenues tend to lead to the rejection of social investment in favor of that considered to be more profitable investment. The upper and middle classes are apt to consume more water, and their property values are likely to increase more quickly. They represent a far better economic and financial investment than the poor.

An EIRR analysis often confirms that putting water into informal settlements bears far fewer benefits than putting new sidewalks and parks into middle-class neighborhoods. By the same deduction, putting water into all the neighborhoods that need it will not come close in EIRR terms to putting *all* services, including telephones and full paving, into a single neighborhood.

The Kenya case example below is not at all atypical of slum-upgrading projects. It illustrates how the EIRR analysis has worked against the interests of the poor. The lesson—in developing an urban project and in analyzing the EIRR—is to make sure that it is indeed the poor and not the land who get the services (Solo, 1990).

Gentrification and EIRR: A Case in Kenya

In Kenya, one urban project targeted low-income populations with new housing and urban-upgrading components. Although the project ran into many problems—site conditions, land tenure, and cost recovery to name a few—the sum of the costs came to far less than the sum of the benefits, because the sale and rental price of the land soared after its improvement.

Thanks to the project, however, the former slum became a home for the elite, not low-income families. The upgraded areas included three-story, ultra-modern villas with gardens in tiers. The original targets of the project, the poor, were run out of their neighborhoods and into gulches outside the city. They felt safer there, they said, because nobody would try to take the gulches from them. They failed to realize, of course, that the gulches with their difficult terrain would probably never get water and sewers.

In terms of EIRR, the project was an all-out success. In terms of bringing water to the poor, it failed miserably.

3.3 The Limits of Formal Sector Housing

A significant percentage of the population cannot afford the formal sector's housing, even when costs are cut to a bare minimum.

Mexico offers a fairly typical illustration of this problem. There, some 45 regulatory costs applied to low-income housing can increase the price by some 40 percent. Just registering a deed can cost 12 percent of the construction cost. When a private contractor buys a lot and then resells the subdivisions, that implies two deeds to be registered—24 percent of the cost of the house. The cost of an electrical and water connection can represent another 15 percent. Then, there are the indirect costs, like the amount of land the builder must donate to the municipality, which can add another 30 percent to the cost of land, not to mention the cost of building inspectors, construction loans and, finally, the builder's profit, all of which get passed on to the home buyer.

In short, there are housing costs that the formal sector simply cannot eliminate by cutting building standards, particularly when the international development agencies are urging municipalities to increase their revenues and taxes related to construction and infrastructure.

Given this economic reality, informal solutions can be cheap. Illegally tapping into established water mains and electrical systems costs nothing, gives excellent service in the best of cases, and is seen by some maverick development planners as the most efficient way to distribute such service. Of course, it is not so easy to tap into a public sewer main, but heaving bags of waste, even human waste, into the street or into vacant yards is far cheaper than a porcelain toilet.

Chapter 4

INSTITUTIONAL CONSTRAINTS

This chapter focuses primarily on public works systems. The institutional constraints surrounding such systems include their

- weak and disorganized operation;
- new emphasis on financial discipline, revenue collection, and pricing policies, sometimes thereby undermining broader public needs;
- inability to service low-income communities; and
- susceptibility to corruption and politicization.

4.1 Complicated and Disorganized Public Works Systems

Public works systems in the Third World have long been recognized as complicated and disorganized. Most urban utilities in Third World cities are not strong organizations and do not provide good services in general. Efficient public works companies do exist, but far too many are plagued by government interference, poor leadership and management, lack of autonomy, and a policy environment that hinders their development. While these issues merit more discussion on their own, the focus here is on their effect on satisfactory service and expanded coverage in existing but unserved neighborhoods, i.e., the informal sectors.

Municipal services in less developed countries are frequently managed either by several companies or by one company usually with multiple functions. The first instance is exemplified in Mexico City, with a population of some 15 million. A general company supplies water, other district companies install the piping, another citywide company reads the meters and charges the customer, and still another company collects and reinvests the payments.

The other extreme can be seen in the typical municipal public works company in Colombia. There, one company usually manages water distribution, the sewers, garbage collection, municipal markets, slaughterhouses, the city zoo, and public transportation. With such a broad range of activities to oversee, management responsibility within the company often gets diluted. It becomes difficult for the technician, and indeed for the company itself, to know *where* to initiate a project to bring services to a poor neighborhood.

4.2 Emphasis on Financial Discipline and Resulting Decrease in Subsidies for the Poor

The focus in recent years on encouraging public works companies to apply financial discipline and to become more efficient so that the poor hopefully can be reached is certainly a step forward. However, the basic formula applied—increasing charges and collection of payments to cover operating costs and to leave a small margin—has tended to focus exclusively on eliminating deficits and providing autonomy, while eclipsing any discussion of needs and of the public nature of a utility.

In theory, the introduction of a systematic pricing and collection system may raise revenues significantly and thereby increase the possibilities of cross subsidy. For most, readjusting the pricing schedules has not been easy. Not only has accounting never been a forte of many public works companies in less developed countries, but pricing schedules are also further complicated by confusing or combined institutional roles, as illustrated in the Colombian example above.

However, even with adequate pricing policies, when utility companies operate as monopolies, they create no incentive to trim operating costs or to improve efficiency or coverage. Indeed, the utility company that introduces an effective profit motive into its operations tends to view investment in poor neighborhoods as increasingly unattractive (Peterson, 1987).

Free-market theories of development suggest that a privately owned and operated water and sanitation company will find ways to increase efficiency and expand services to all possible markets, including the poor. Experience to date, though, suggests that the private service companies have not shown eagerness to extend infrastructure to poor informal neighborhoods. While there may be successful examples, the majority of privatized water and sanitation companies tend to avoid the poor neighborhoods, limit investment in new infrastructure, and demonstrate the more nefarious features of monopoly operations.

4.3 Inability of Public Works Systems to Service Low-Income Communities

Public works companies in less developed countries follow the model of public works companies from developed countries: they are set up to receive and to operate aqueduct systems, but they are not equipped to build new systems on their own. This characteristic is especially apparent in low-income communities, where installing infrastructure requires public relations, social work, and more on-site engineering than most companies are able to offer.

In the past, attempts have been made by international donors and nongovernmental organizations (NGOs) to meet these infrastructure and other needs through urban-upgrading projects. Although the results from donors have generally been poor, NGOs have served in a useful bridging role between communities and municipal utilities.

The following example illustrates how an NGO and UNICEF are working together to establish a loan program in Honduras that will provide low-income families with more opportunities to make their own sanitation improvements.

CHF and UNICEF Provide Options for Urban Sanitation

In Honduras, the Cooperative Housing Foundation (CHF) and UNICEF hope to improve unhealthy sanitary conditions through a sanitation-loan program for low-income families living in urban informal settlements. The program aims to increase interest in using credit to make sanitation improvements, and to raise awareness about the need for better environmental sanitation. Loans are available to participating families to build shower stalls, construct water storage tanks and washstands, implement rooftop rainwater collection systems, or make other improvements such as devising an appropriate way to dispose of human excreta. For example, people have the option to build alternatives to simple pit latrines, including ventilated improved pit (VIP) latrines, and pour-flush toilets. Loans can also be used to make a legal connection to a city's waterborne sewage system when possible. By offering a wide variety of options in a broader price range and linking them to well-managed credit programs, CHF and UNICEF hope to increase the demand for urban sanitation.

This case shows that NGOs, in working with a community, can usually help find economic solutions that are acceptable to all residents and that involve their contribution—in materials or in labor—in building their own infrastructure. Although communities may be limited as far as resolving their own infrastructure problems, there are cases of locally built and managed aqueducts. With NGO assistance, and between community labor and community pressure, the cost and red tape involved in infrastructure can generally be reduced.

4.4 Susceptibility to Corruption and Politicization

Public works in any country can be highly susceptible to corruption and politicization. On the one hand, public works companies are synonymous with large contracts and lucrative payoffs. On the other hand, they offer ample opportunities for patronage employment. When the corrupted interests begin to dominate the company, its objectives can change from offering good service, improving coverage, and performing efficiently to concentrating on maximizing employment and the possibility for payoffs. Interest in bringing services to poor neighborhoods then plummets.

Chapter 5

STRUCTURAL CONSTRAINTS

This chapter features the most difficult constraints involved in providing water and sanitation services to the urban poor—structural constraints. These are the constraints that are at the heart of urban sector definitions and development objectives. They are the constraints that are the most difficult to address, let alone resolve, because they involve conflicting values and policy viewpoints.

Development planners may well find that once they have figured out how to solve the physical problems with an excellent design, once they have secured funding and identified all the financing angles, once they have the support of a capable public works company, then the truly serious barriers to bringing infrastructure to the poor begin to appear. Not the least of them are structural constraints.

The structural constraints that impede the provision of water and sanitation services to the informal sector include the following.

- Cities are often defined according to fully serviced areas, which do not always include the poor.
- Planning is by prohibitive zoning.
- Population growth rate is not always taken into account.
- Prohibitive land-use planning distorts the urban land market.
- City planning and building codes define housing without services as unacceptable.
- Legalization and property rights must first be approved before ownership of land is recognized.

5.1 The Definition of the City: It Does Not Always Include the Poor

Structural constraints in this chapter focus on definitions—defining who is entitled to urban services: first, according to the definitions of urban area, of urban standards, and of property rights; and second, according to the objectives and policies of urban development.

5.1.1 Defining Cities According to Fully Serviced Areas

In most cases, land-use planning defines a city according to fully serviced areas. Those areas where low-income families live without access to water and sanitation, by this definition, are not considered urban land. Similarly, often no cadastral database exists for families living in informal peri-urban settlements. Hence, they are not included in municipal development plans. But definition alone is not totally responsible for the exclusion of these neighborhoods from municipal development plans. Compounding this constraint in definition are two disturbing characteristics of land-use planning in less developed countries: planners try to control this process of land transfer and development, and they allow their land-use plans to fall out of date very quickly.

Traditional land-use planning applied in Latin America and Africa regulates the transfer of agricultural land to urban land. In any city, the demand for new land for housing and urban uses will eventually win out over the price of corn. Farmers will move farther away and send their crops into town. Neighborhoods, fully serviced or not, will spring into existence.

5.1.2 Planning by Zoning

Informal peri-urban settlements do develop and improve over time, if allowed to. Unlike U.S. slums, they are not in any process of deterioration. Shantytowns they may be, but they turn slowly, but resolutely, into respectable neighborhoods. They begin as scattered huts, without streets, house numbers, or connections to public services. They may pirate electricity from the nearest cables, bring water in drums from their neighbors who have standpipes, walk through fields to get to streets with public transportation, and rely on a stack of tires (a commonly improvised toilet) and an occasional bonfire to take care of excreta. Gradually, however, the shanties get rebuilt in cement, the community acquires a certain degree of presentability and some political clout (because the process of getting public services is as much political as technical and economic), and public services are extended to the neighborhood. Commerce follows and, finally, small industry.

This entire process is, however, regularly jeopardized by the controls set on a city's growth, as well as problems with acquiring permits (see Section 5.1.5). Planners control the process of land transfer and development by "zoning," which essentially defines what is *not allowed* in an area. This model of planning was introduced by planners from developed countries, and is a model that many see as inappropriate because it is prohibitive: it prevents development from occurring. As Hernando De Soto points out, a more appropriate model for urban development in the Third World might have been the U.S. Homesteading Act, which encouraged people to develop vacant land (De Soto, 1989).

To be sure, it is important for planners to tell people where it is dangerous or inappropriate to build, but it is equally important that they be ready and willing to encourage people to settle on legitimate and ultimately serviceable land. A new approach to urban planning should focus on the actual city, that is, on what is already there, instead of on a conventional, imported

vision of what a city should be and look like. The example below offers such an approach. In this case, the city recognized, and even encouraged, incremental urban upgrading.

A Successful Urban-Upgrading Approach in San Salvador

During the mid-1980s, the mayor of San Salvador instituted a model slum-upgrading program that operated in *all* of his city's slums. It presumed a certain continuity in urban upgrading, viewing improvement as an ongoing process, and not one to be resolved within the framework and schedule of a project.

The program defined "upgrading" in terms of stages of improvements. As a first stage of improvement, the program made all slum dwellers members of a major sports facility in the city and by establishing local neighborhood councils in each slum. Thereafter, a system of step-by-step rewards for progress was established whereby the city donated materials and technical assistance for a series of amenities, from a community center to a piped water and septic tank system. If the community complied in construction and maintenance, it was rewarded with materials and assistance for the next stage of improvement.

5.1.3 The Failure to Consider Population Growth Rates

Few municipal development plans in less developed countries take the actual rate of population growth into account. It is very difficult to get planners to think ahead to define the city limits according to the needs of a growing population, rather than the limits of infrastructure, land, and investment.

In Bogotá in the 1960s, for example, A.I.D. financed the city's first municipal development plan. The plan, developed by a U.S. firm, is notable for stating flatly that no population change had been considered for the future of Bogotá because London, England, had a minimal growth rate at that time (Hamer, 1985).

5.1.4 Distorted Urban Land Markets

When zoning practices and land-use planning effectively turn legal land into a scarce and therefore expensive commodity, they combine to distort the urban land market, causing illegal land to fall in price and become more attractive to low-income families.

In Latin America, where urban land prices have been documented, land prices adjust upward in permissible areas and fall in prohibited areas, with the result that low-income families move precisely where they should not. Indeed, urban development plans are the primary reason for the famous peripheral settlements surrounding Latin American cities. The Mexican urban land market, one of the most distorted in the region, is a case in point. It is described below.

Distorted Urban Land Markets in Mexico

In Mexico, the definition of urban land is land with full services. This definition makes less land available for urban use, which distorts the urban land market and results in reduced options for the urban poor. Additionally, the transfer of agricultural land to urban use continues to be a slow, encumbered process.

Under Mexico's system of *ejidos*—commonly held agricultural land—the transfer of agricultural lands to urban use requires not just the consent of the local planners (at state or regional levels, and often in the Agricultural Ministry), but also the consent of the National Secretariat for Urban Lands and the president of the republic.

Such controls purport to ensure that urbanized land is available to meet the needs of new households, while also specifying and separating out land unsuitable for housing—for example, land subject to natural hazards or conservation areas. But, in fact, these strict controls slow up the process of transferring land to urban use, which in effect makes urbanized land *less* available.

Recently, farmers have been given the right to sell off their *ejidos*. While one's first reaction is to rejoice that the lands around cities can now be sold, occupied, and developed according to effective demand, a law is currently under consideration to regulate the sale of the agricultural lands by requiring that all developments be approved first by local planning bodies and then by several national planning agencies.

Along with this lengthy process, there will be an elaborate system of financing infrastructure and developing the lands through the formal sector, meaning that settlement with less than full services will not be permitted. The president of the republic will no longer be called upon for consent, but this new system will differ little from the previous system, and will continue to ignore the families that cannot pay for full services.

5.1.5 Complications with Planning Codes

As a result of the land-use definition of urban land, most urban poor are living on nonurban land: by this definition, their residences are illegal. Before they can get urban services, their land must be reclassified as urban, and rezoned for residential use. These two changes may take from two to 20 years because of another roadblock often encountered with municipal or governmental offices: administrative procedures that prolong and complicate the granting of permits.

For the most part, the municipal planning departments of Third World cities simply do not grant permits for anything less than fully serviced neighborhoods and dignified housing—even though some 75 percent of the population cannot afford such settlements, and 70 percent of the communities never began as fully serviced. Since planners, by definition, approve communities *before* they are inhabited, the planning codes simply refuse to admit the sale, subdivision, and occupation of land that has not won planners' previous approval. As a result, there are no comfortable mechanisms for transforming unapproved, pirate developments into approved subdivisions.

Who is to blame for this municipal planning concept? Northern concepts of planning—developed in countries that had largely managed to deal with the problems of urban poverty—were pushed hard in developing countries during the 1960s and 1970s. U.S. foreign aid financed city plans for most Latin American national capitals, while the French financed city plans throughout Africa and Asia, as did the international development banks. The unfortunate application of U.S. planning standards in Latin America continues to inhibit the development of low-cost communities and the recognition of existing ones. Rather than calling for a reliance on public transportation, for example, municipal plans regularly require a minimum of one parking space per family, in addition to house setbacks for the installation of garages.

The setback requirements exemplify concessions to the U.S. tradition of a garden in front of the house and owning an automobile. They have very little to do with the reality of less developed countries, and much less to do with poor urban settlers. Even so, when an informal community wishes to get services, it must demonstrate compliance with the building codes, which means rebuilding the home at significant cost to conform to irrelevant standards, in addition to battling city hall to get a building code approval.

5.1.6 Approving Legalization and Property Rights First

In Third World communities, legalization and property rights must first be approved before ownership is recognized and public services are extended. Until a neighborhood is legalized—recognized formally with street names, house numbers, and registered deeds—it cannot, in most cases, get water and sanitation infrastructure.

Usually, the first requirement for legalization is that the neighborhood have adequate services—that is, water and sanitation already installed. When the legalization of a previously occupied lot is at issue, an inordinate amount of time is usually required. This involves several layers of government, including both the central and local levels, and several ministries—for example, public works, lands and urban development, health (water and sanitation), finance, and so on.

The requirements for legalization of purchased land in Lima, Peru, for example, involve 112 steps, and can take a minimum of four years in the very best of worlds. The steps include four presidential signatures on different occasions. The legal issues are such that most projects have had to skip over legalization if they are ever to get on with the physical upgrading. Most finish without ever processing a single title (De Soto, 1989).

Required procedures can include title searches, which are complicated in countries where most of the population was illiterate two generations back, and where titles often describe properties in terms of a tree no longer present or a brook that dried up a century ago. Brazil offers an example of at least one Latin American country that has made attempts to allow infrastructure to be put in place before land tenure has been regularized, though with mixed results (see box below).

Next, all previous uses—not simply present ones—have to be registered for their conformity to current zoning regulations. In most Latin American countries, the land must then be expropriated, which involves tracking down and paying the former owners, even though they have already been paid, because the earlier sale is not considered a legal one. The expropriation itself generally requires the blessing of the national government as well as the local city council.

In most Third World countries, the history of titles and landholdings has little day-to-day importance for the urban poor, and so little effort has been made to streamline it. (Indonesians, accustomed to a weak judiciary and a virtually nonexistent registry of lands, refer to the situation as “stability through confusion.”) Problems arise, however, when low-income families want to improve their property by bringing in water and other public services. Then the legal condition of the land becomes of paramount importance.

In Africa, many urban-upgrading projects have been clouded by the fact that the urban poor are mostly renters. After the families there go through the dreadful gymnastics required to legalize and upgrade slum properties, the benefits of improvements can all accrue to landlords, without enhancing the tenant’s standard of living at all (World Bank, 1986).

In Abidjan, for example, a slum-upgrading project introduced water and sewer connections to inner-city tenements free of charge. Because of the improved facilities, the landlords raised the rents, and the tenants responded by dividing rooms and subletting to relatives to meet the higher rent. This densification of Abidjan’s courtyard housing has had negative implications for public health.

De Facto Recognition In Brazil

There is an increasing number of cases in which water and sanitation infrastructure has been installed before the regularization of land tenure. This has happened in many *favelas* of Sao Paulo, Brazil, for example. Such a situation demands political will and a de facto recognition on the government’s part of the settlers’ right to stay where they are.

In Brazil, the trend is toward defining a new zoning category for informal settlements that encompasses existing settlements and allows upgrading work to proceed independently of the regularization of individual property titles. Such zones are normally called ZEIS (Zonas Especiais de Interesse Social).

The definition of ZEIS in a Brazilian city usually entails the establishment of a simplified procedure for the regularization of individual property titles. Even so, the property legalization process tends to involve more red tape and take more time than does building infrastructure works.

5.2 Urban Development Policy and Its Imperilment of the Poor

One current policy of some international agencies is particularly jeopardizing the poor: the development of the private sector. Private sector growth is of doubtless importance, but social interest policies should not be swept under the rug as a result.

5.2.1 The Emphasis on Private Sector Growth over Social Policy

The current policy of some international agencies is to emphasize private sector growth over social interest policies. This tendency may represent a new barrier in getting services to the urban poor—a barrier more difficult to remove than any local obstacles. When the international agencies put social interests on the back burner, the client governments are likely to forget them altogether.

Perhaps the greatest danger implicit in this new policy approach is that it can play into the hands of traditional enemies of urban poverty alleviation programs: indifference, or even hostility. Peppered throughout the evaluations of urban-upgrading projects are stories of how local governments would really prefer to remove the poor from the urban scene, and how landed and political elites find it very useful to maintain marginal populations on “irregular settlements.” Such indifference at the local level is magnified at the national and international levels.

In many instances, it is apparent that governments have viewed upgrading as a means to slum eradication, not as a means to preserving and improving existing neighborhoods (Solo, 1990). Ministers, mayors, and planners will often ask why they should invest in poor neighborhoods, when they would prefer to create wide, well-lighted highways and grand airports. When international planners answer by saying that development involves infrastructure for productivity—along with reduction of fiscal deficits, freeing up of exchange rates, elimination of any preferential interest rates, and massive privatization programs—they may be giving the green light to a rational argument for ignoring the poor.

A key lesson in addressing policy constraints—and indeed all constraints that block projects designed to benefit the urban poor—is to work with agencies and countries or cities that have a sincere interest in alleviating poverty. In Mexico City, for example, recently the hurdles, stumbling blocks, barriers, and constraints that kept infrastructure out of poor neighborhoods suddenly melted away, after the government party lost the elections for the first time in 40 years.

The programs carried out in Mexico City during the present administration provide, in fact, an extremely telling example. After some 30 years of ignoring the informal settlements within the city—a time when the municipal planners protested that it was impossible to know how many “illegal” properties existed and how many families had no access to water—a new program called Solidaridad has been instituted. In three years’ time, some 500,000 property titles have been legalized, and water, sanitation, and other neighborhood improvements have been installed, a strict austerity program and fiscal discipline notwithstanding.

5.2.2 The Limitations on the International Donor

When international development agencies attempt to promote policy changes to favor the poor, their attempts sometimes prove ineffective because of the time restraints that working within the framework of a project-implementation or loan-disbursement schedule can cause. Naturally enough, the international donors look for projects that fall within their own parameters. Still, trying to bring services to poor neighborhoods is fraught with complications, such as working with illegal neighborhoods or substandard communities. Consequently, such projects generally turn into time-consuming enterprises and cannot always be completed or even adequately begun in the time a given schedule allows.

5.3 The Greatest Bottleneck: An Underlying Bias against the Urban Poor

The greatest bottleneck to getting services to the poor is bias, as demonstrated by indifference, and even hostility, to low-income families at local, national, and international levels. Wittingly or not, decision-makers, in their attempts to do away with urban poverty, have managed to create a structure that instead preserves and virtually institutionalizes it.

The story of the constraints encountered in trying to get services to the poor is a story of consciously made poor decisions: decisions to emphasize the wrong type of technical solutions; to withhold information about land use; to control a city's new development to the point where it becomes unaffordable to most citizens; and to create laws, plans, and policies, with the very best intentions in the world, that soundly defeat their own purposes.

Of course, there are projects that have managed to rewrite the rules and overcome urban sector constraints. However, it would be very naive to assume that urban sector constraints will disappear if people are shown solutions that help urban poor. As long as the bias against the urban poor continues to exist, new constraints will appear every time the old ones are done away with.

Less developed countries certainly cannot claim the monopoly on discriminating against low-income families. However, the bias of city authorities in the Third World may be more easily explained than that of First World governments. The problems of the urban poor are so overwhelming and their sprawling presence so frightening, that there are practical reasons, in addition to emotional ones, for trying to blot their existence out of the municipal and national consciousness.

Decentralization and democratization, new themes in international development, may well give informal settlements greater leverage and visibility, but it is not so simple, and it appears to take time and technical sophistication. In theory, once the poor have voting rights and representation, they will keep in office those politicians who manage resources wisely and respond to their needs. Reaching this stage, however, appears to require a certain amount of experience and security (for voters and candidates), and the emergence of genuine leaders.

Politicians have found that it is easier to command the loyalty of a population in need of services and security than one that already has full services.

Meeting the needs of informal peri-urban settlements will require significant structural reforms that facilitate and even encourage working with existing settlements, where the greatest need for water and sanitation exists. It also implies improving our knowledge about the urban poor. Turning around people and institutions takes time, and it takes a few good leaders.

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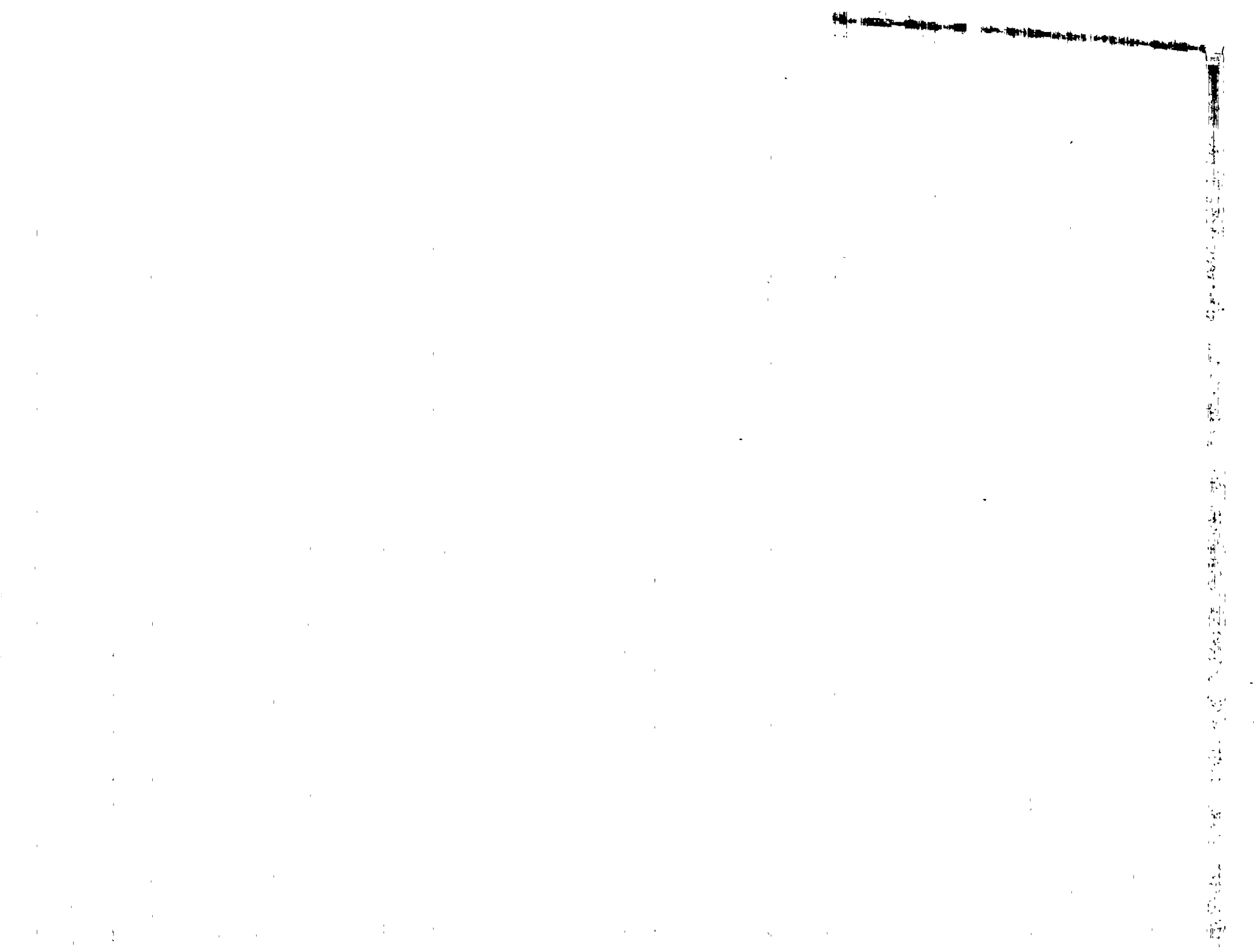
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THE WASH PROJECT

With the launching of the United Nations International Drinking Water Supply and Sanitation Decade in 1979, the United States Agency for International Development (A.I.D.) decided to augment and streamline its technical assistance capability in water and sanitation and, in 1980, funded the Water and Sanitation for Health Project (WASH). The funding mechanism was a multi-year, multi-million dollar contract, secured through competitive bidding. The first WASH contract was awarded to a consortium of organizations headed by Camp Dresser & McKee International Inc. (CDM), an international consulting firm specializing in environmental engineering services. Through two other bid proceedings since then, CDM has continued as the prime contractor

Working under the close direction of A.I.D.'s Bureau for Science and Technology, Office of Health, the WASH Project provides technical assistance to A.I.D. missions or bureaus, other U.S. agencies (such as the Peace Corps), host governments, and non-governmental organizations to provide a wide range of technical assistance that includes the design, implementation, and evaluation of water and sanitation projects, to troubleshoot on-going projects, and to assist in disaster relief operations. WASH technical assistance is multi-disciplinary, drawing on experts in public health, training, financing, epidemiology, anthropology, management, engineering, community organization, environmental protection, and other subspecialties.

The WASH Information Center serves as a clearinghouse in water and sanitation, providing networking on guinea worm disease, rainwater harvesting, and peri-urban issues as well as technical information backstopping for most WASH assignments.

The WASH Project issues about thirty or forty reports a year. *WASH Field Reports* relate to specific assignments in specific countries, they articulate the findings of the consultancy. The more widely applicable *Technical Reports* consist of guidelines or "how-to" manuals on topics such as pump selection, detailed training workshop designs, and state-of-the-art information on finance, community organization, and many other topics of vital interest to the water and sanitation sector. In addition, WASH occasionally publishes special reports to synthesize the lessons it has learned from its wide field experience.

For more information about the WASH Project or to request a WASH report, contact the WASH Operations Center at the above address