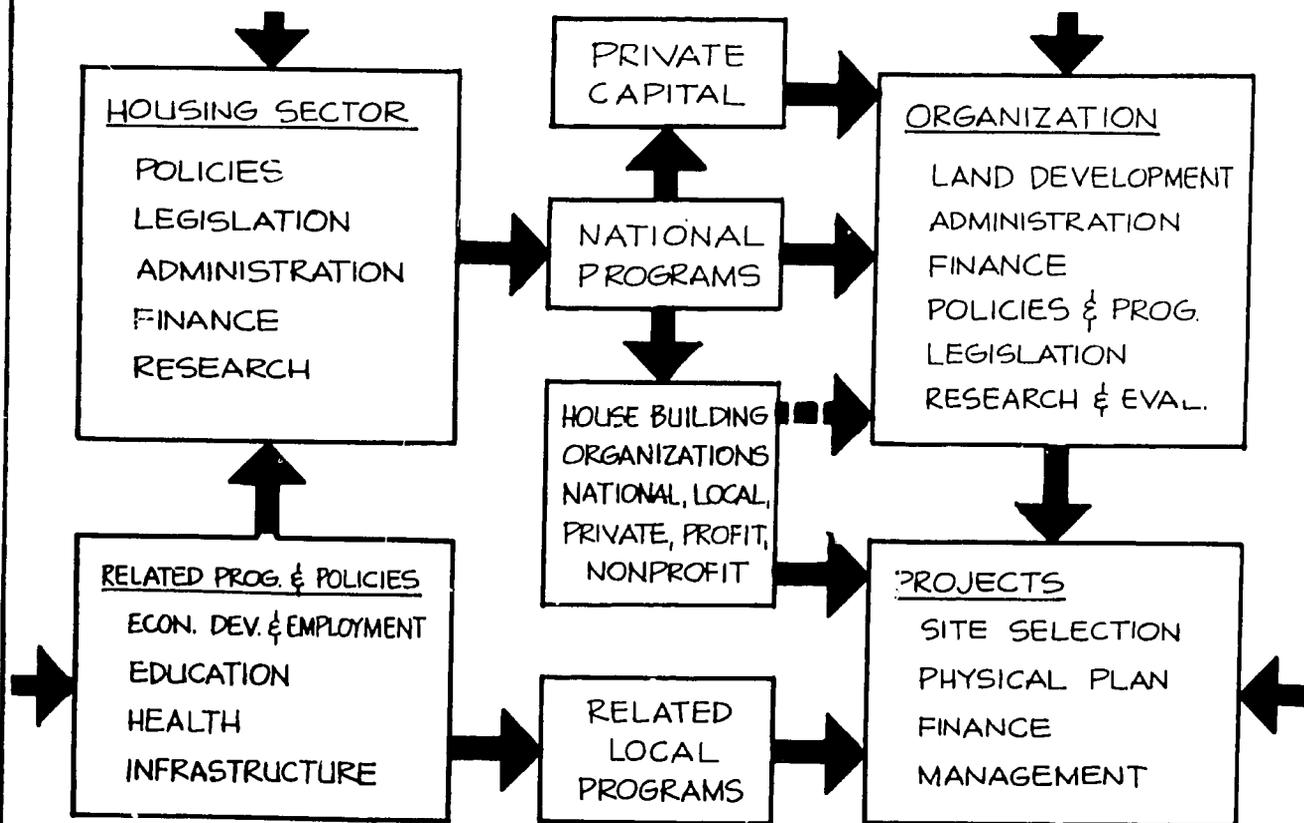


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planning sites and services programs

IDEAS AND METHODS EXCHANGE NO. 68
PREPARED FOR THE AGENCY FOR INTERNATIONAL DEVELOPMENT
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
OFFICE OF INTERNATIONAL AFFAIRS
WASHINGTON, D.C. 20410



planning for sites and services programs

IDEAS AND METHODS EXCHANGE NO. 68

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FOREWORD

The Ideas and Methods Exchange Series has placed emphasis on the shelter requirements of the lowest-income people. In 1966 two important publications were issued: *Squatter Settlements: The Problem and the Opportunity* by the late Charles Abrams, and *Proposed Minimum Standards for Permanent Low-Cost Housing and for the Improvement of Existing Substandard Areas* by the Office of International Affairs, HUD. In this publication the theme of these studies is enlarged to cover the planning of sites and services programs.

The author, Mr. Alfred P. Van Huyck, President of PADCO, Inc., draws upon his observations and the experience of others to analyze reasons that sites and services projects should be a major part of the urbanization program of the developing countries as well as to discuss the lessons to be learned from previous worldwide experience with the sites and services concept. He proposes a method for planning the sites and services project and suggests how the individual project should be thought of in the context of a national program.

The Agency for International Development and the Office of International Affairs, HUD believe that this publication is particularly relevant at this time. Sites and services projects are not a new idea, but the adoption of the concept on a massive scale is only just now gaining credibility as the most feasible method for dealing with the vast numbers of low-income people seeking land and shelter in the developing world. It is expected that the sites and services solution will become a useful program of governments which have discovered that it is simply not possible to meet the needs of their people through traditional methods of subsidized public housing.

There is still much work to be done by planners and administrators to improve the implementation of the sites and services concept. The financial and administrative aspects are particularly in need of fresh, imaginative ideas. In this report, Mr. Van Huyck makes several suggestions for organizing and financing sites and services projects. These ideas put forward are for the consideration of those concerned with implementing sites and services projects and need to be tested in operating conditions.

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INTRODUCTION AND SUMMARY

As part of the Tokyo Conference of the International Federation of Housing and Planning in May 1966, a presentation was made on slum improvement proposals being prepared by the Calcutta Metropolitan Planning Organization in India. During the question period several urban planners in the audience stated emphatically that government should have no part in planning new slums, that urban renewal was the technique to deal with existing slum areas, and that public housing programs were the answer for the shelter needs of the lowest-income groups. This view was stated ten years earlier in a resolution by the Indian Institute of Planners:

The basic standards in housing and planning are arrived at not only from consideration of cost but also from considerations of creating the desirable sociological and physical environment necessary for the healthy growth of the individuals and the community. Such standards have been established by various committees and technical missions. The Environmental Hygiene Committee recommended a two-room house as the minimum for a family. The UN Technical Mission on Housing, the later Seminar and Conference on Housing and Town Planning, and other reports published by national and international agencies concerned with housing and town planning all recommend the two-room house with adequate sanitary and other facilities as the barest minimum if the normal aspirations of healthy living are to be achieved...

These standards cannot be lowered, whatever be the community, whatever be its location, and whatever be the economic situation in the country. Substandard housing is but a step toward slums. Deliberate substandard housing will defeat the very purpose of housing as it will lead to the creation of future slums; the basic standards must be adhered to at all costs.¹

¹Journal of the Institute of Town Planners (India), No. 3, (July 1955), p. 1 -- as quoted in Alfred P. Van Huyck, "The Housing Threshold for Lowest-Income Groups: The Case of India," Urban Planning in Developing Countries, J.D. Herbert and A.P. Van Huyck, eds. (New York: Praeger Publishers, Inc. 1968), p. 67.

These views are not expressed currently in professional meetings. Today in India as elsewhere there is a realization that slum clearance and public housing are not solutions to the complex problems of the lowest-income people in the cities of the developing country world.

The decade of the 1960s has seen a major change in professional thinking regarding how best to meet the shelter needs of lowest-income people. Charles Abrams' 1964 book, Man's Struggle for Shelter in an Urbanizing World, profoundly influenced the thinking of professional planners and housing experts all over the world. He wrote:

It is manifest therefore that all prevailing ideas of wholesale slum clearance and building of costly housing must be abandoned, and that some fresh thinking must be brought to bear on the shelter problem. The provision of the bare essentials may have to be the world's sad but only reasonable alternative. Once we understand the enormity of the problem, however, there may be ways of dealing with it. It is only when hope is given up and eyes are closed to reality that crisis becomes inevitable.¹

John Turner's pioneering work in the barrios of Lima, Peru in the early 1960s provided insight into the nature of the barrios problem and the basic contributions the barrios areas make to meet needs of low-income people.² The work undertaken at the Calcutta Metropolitan Planning Organization in India during the mid-1960s represented an early effort to prepare a slum improvement program on a massive scale.³ These events along with other professional contributions throughout the world have led to a basic change of thinking about feasible solutions for meeting the shelter requirements of lowest-income people.

Among professionals concerned with these problems today is a growing consensus about the basic realities which must be faced

¹Charles Abrams, Man's Struggle for Shelter in an Urbanizing World (Cambridge, Massachusetts: M.I.T. Press, 1964), p. 54 -- as quoted by Van Huyck, ibid, p. 66.

²John C. Turner, "Barriers and Channels for Housing Development in Modernizing Countries," Journal of the American Institute of Planners (May 1967), pp. 167-181.

³Calcutta Metropolitan Planning Organization, Basic Development Plan: Calcutta Metropolitan District, 1966-1986 (Sibpur, Howrah, India: Ganges Printing Company, Ltd., 1966).

and about broad outline solutions which must be sought. These points can be summarized as follows:

1. Shantytown areas, whether legally built or illegal squatter areas, serve an important need of lowest-income people. They provide shelter at prices lowest-income people can afford. They offer employment opportunities in commerce and marginal industrial activities which tend to develop in such areas. They provide a sense of community as indicated by the large number of voluntary organizations usually found in such areas. In this sense they are an important part of the urbanizing process for lowest-income people and do make a contribution to the urban economy.

2. The highest priority among lowest-income people is not housing at all, but rather the need for employment opportunities, minimum urban services such as water supply and sanitation, schools and health facilities, and secure land tenure.

3. All efforts at massive slum clearance and subsidized public housing programs have proved inordinately expensive to government, much too time consuming for massive application, and extremely disruptive to the lowest-income people who have been affected. Slum clearance has a definite role in guiding urban development, but not as a panacea for correcting bad housing conditions.

4. Migration and natural increase of the population will generally insure that urban populations will continue to grow at rates near double that of the total population. This growth will mainly occur among the lowest-income people.

Therefore, the following broad principles provide a frame of reference for seeking solutions:

New housing should make the largest possible net gain in housing stock and not be used as one-to-one replacement of squatter housing or slum housing.

The total community living environment is the crucial variable and not the housing unit itself.

Private capital and initiative must be utilized to the fullest extent possible.

Proposed solutions must be capable of massive application in the urban areas.

The sites and services concept is one promising approach to meeting the broad principles listed above. It is not a new concept and there are many examples of sites and services projects which have been undertaken in Asia, Africa, and Latin America. Some of these projects have been reasonably successful and others have failed. This report will review sites and services project experiences of several countries in an effort to set forth some of the basic advantages and disadvantages of the concept, the lessons to be learned from past experience, and to make recommendations for undertaking the planning of a sites and services program.

There is a large body of literature regarding sites and services projects from which much of this report is drawn. There are several important gaps, however, which are the critical areas for future research and investigation. There is very little information on comprehensive planning for sites and services programs on a metropolitan and national scale. There is a lack of imaginative proposals for administration and financing of sites and services programs. This report will attempt to present some ideas for consideration along these lines. For the most part, unfortunately, those program concepts which are available are theoretical. There is a need for research and experimentation on an operating basis with sites and services projects.

The experience with sites and services projects has proceeded far enough that the promise of making a major contribution to the shelter needs of lowest-income people can be clearly perceived. There is now an increasing need for international assistance agencies to provide increasing amounts of technical assistance and capital assistance to support the developing countries in mounting meaningful sites and services programs. The United Nations' Centre for Housing, Building and Planning is developing a program of technical assistance support for sites and services projects. Several of the individual missions of the United States Agency for International Development are considering ways by which the Housing Guarantee Program can be used to support capital assistance for sites and services with core housing. The World Bank has expressed its interest in this subject through a presentation in their Annual Report and have started to give preliminary consideration to specific project ideas. All of these signs of response from the international assistance agencies suggest that major progress will be possible over the coming decade.

In addition, there is growing recognition among professionals concerned that sites and services concepts, as important as they are, should not be pursued in isolation. There is a need to develop a broad strategy within the urban area which is concerned about the entire process through which lowest-income people adapt to the city and become productive members of the urban society. A concern for sites and services projects, judged only by the number of plots developed, will not be sufficient. The main problem for the

lowest-income person in a city is employment opportunity. This in turn leads to a concern with education, vocational training, nutrition, and health. The need is for a coordinated program concerned with the physical, social, and economic factors which will determine the future of the lowest-income household in the urban area.

Chapter I

THE BASIC PROBLEM FACTORS

Shantytowns and squatter areas are worldwide phenomena. Names such as barrios, favellas, bidonvilles, and other more colorful appellations have been used to describe a basically similar kind of urban development. The shantytown, whether legal or illegal, is distinguished by its physical condition -- it is a predomination of shacks composed of cast-off industrial waste materials or of the cheapest possible natural materials with scattered buildings of a higher standard. Usually the shacks are crowded on the ground at high density and lack basic utilities and amenities commonly considered essential.

Governments around the world have been concerned with this proliferating problem, but few if any have been able to move successfully to control it or to mitigate its most deleterious effects. The reason that governments have failed to erase shantytowns from their cities is that the physical characteristics are but symptoms of much more complicated socioeconomic phenomena. Taken collectively these become the basic problem factors to which a comprehensive development program must be directed.

The Rate of Urbanization

The high rate of worldwide urbanization has been well documented in publications and can be confirmed by the most casual observer of the city. Rates of natural population increase are commonly between two and three percent per annum in most developing countries and even higher rates occur in many developing areas. The overall urban growth rate is generally double the natural growth rate and typically exceeds six percent per annum. Most of the population increase is to be found among low-income people for the obvious reason that they currently make up two-thirds or more of the urban population in developing countries. Therefore, the growth of population in slum areas or squatter settlements is much more rapid than in the city overall. Growth rates in such areas of 12 percent per annum are common, and in some cases rates over 20 percent have been reported. These growth rates suggest a potential for doubling the low-income population of urban areas every decade. The United Nations estimates that the less developed areas of the world are going to continue their rapid population increase. They estimate that there will be an increase of some 1,360 million persons living in urban areas in the 30-year period between 1970 and the year 2000. Of this total, a 325 million urban population

increase will occur between 1970 and 1980.¹ This suggests a world-wide urban population increase of 89,000 persons per day, or 1.2 million per fortnight.

Urban areas of the developing country world are growing and will continue to grow at a rapid rate much in excess of the historical growth rates for cities in the developed countries at similar points in their economic development. The sheer numbers of people to be absorbed into the cities is an unprecedented challenge to the national and local governments of developing countries.

Historically the cities of the developing country world have been the dwelling places of the elite; power centers from which the rest of the country was controlled either by its own indigenous leadership or by its colonial masters. Today this is no longer true and the rapid population increase has brought the poor, the uneducated, and the unemployed into the cities in ever increasing numbers. The result has been in many cases the establishment of two contiguous, but separate, areas -- the central urban core and high-income residential area which is developing at high standards of public infrastructure and amenity as a continuation of historical trends; and the urban fringe of unplanned, uncontrolled, unserviced and frequently illegal development. These areas have become of increasing concern to governments over the last decade, but all too often the response of government has been negative or inconclusive.

The Limitations of Current Government Policies

It is very difficult, and somewhat unfair, to generalize about the response of developing country governments to the problems of urban settlement of lowest-income people. There is, of course, tremendous variation among governments, but certain policies which are frequently put forward can be identified and discussed. The common thread among many of these policies is a feeling that the solution to the problem of lowest-income people in the city rests in stopping their living in cities by controlling migration, reducing the natural increase, isolating them through use of police power, and then clearing the areas and rehousing the poor in low-income public houses. These policies deserve a brief review in detail because they cannot cope with the magnitude of the problem. So long as they are accepted policy, however, they preclude a rational strategy for dealing with the problem.

¹Centre for Housing, Building and Planning of the United Nations, External Assistance to Developing Countries for Problems of Rural-Urban Migration and Urban Settlement Under Economic and Social Council Resolution 1224 (XLII, March 1969).

The Myth of Rural Development
Reducing Migration

Quite correctly, rural development is the cornerstone of the development strategy of many developing countries. The success of rural development efforts is important for many reasons, including the buildup of export earnings and the establishment of a rural hinterland market for the goods and services produced by the cities. In development planning the balanced interaction between the rural and urban sectors is very important. All too frequently, however, one of the reasons given for emphasis on rural development is reduction of migration to urban areas. It is widely believed that rural people will be content to remain in the countryside if the quality of rural life can be improved through higher incomes, better education, health, and housing and if better communication, transportation, and power are available. Experience has shown that this will not be the case for a number of reasons.

1. The gap between rural and urban incomes is too great to be closed by a strategy of rural development alone. The reason for these great differences is partly because many cities have minimum wage laws and labor unions, and because the greater productivity of the urban worker tends to support higher wages. A much greater impact could be made on reducing rural-to-urban migration by lowering urban wages than by attempting to increase rural wages. Such a policy, however, would be politically unacceptable in most cases. Since one main reason for migration is the migrant's perception of a potentially higher income, there is little likelihood that possible small increases in rural incomes will materially affect his decision.

2. The availability of land is a crucial variable in stabilizing rural development. Yet even in countries with a low overall population density, acceptable land for agriculture can be a problem. In Tanzania less than 25 percent of the rural land is prime for agriculture. The result is that the best agricultural areas such as those around Kilimanjaro are overcrowded and give rise to pressures for migration. In Kenya studies have shown that if all the suitable agricultural land is divided into an optimum pattern to support subsistence agriculture, by the year 2000 millions of persons will still have to migrate if the current rate of natural increase is maintained.

3. Land tenure policies add to the problems of many countries because land is unevenly divided. In Morocco 40 percent of the agricultural heads of households have no land holdings, 50 to 55 percent own 60 percent of the land.¹ When a substantial part of

¹Taken from The Moroccan Five-Year Plan, 1968-1972, Volume II -- as quoted in Alfred P. Van Huyck, The Moroccan Bidonville Problem (Washington, D.C.: PADCO, Inc., 1969), p. 16.

the rural population is landless or the family parcel is too small to support all the family members, there is little incentive to remain in rural areas.

4. Modernization of agriculture, which is so necessary for increasing production and improving the economy, tends to reduce the labor required per unit of production. The introduction of mechanization therefore is bound to work at cross purposes with a desire to retain the rural population in the countryside.

5. The introduction of better education, communication, and transportation, as important as these things are to overall national development, also tend to increase migration potentials. Various studies on migration have shown that migrants tend to be the younger, better educated individuals.¹

6. There is considerable evidence that at least in Africa and the subcontinent of Asia there is a circulation of rural-urban labor. This results from a deliberate policy on the part of rural families to have at least some members of the family in the city seeking urban work opportunities while other members maintain close rural village roots. These urban people tend to be single men or married men without their families, many of whom will work for years in the city -- but always with the intention of eventually returning to their rural areas. A pattern frequently evolves in which a rural area develops a base within a given city so that future migrants can stay with friends or relatives until they obtain an urban job. This juxtaposition takes a substantial part of the risk out of migration and facilitates the flow of people between the rural area and the city.

The point here is to emphasize that though rural development is a vital part of a nation's development strategy and should be encouraged, it will not stop migration and in all probability the more successful rural development becomes, the more migration will be encouraged.

Decentralization of Work Opportunities to Rural Areas

When it is recognized that agriculture will not be able to occupy the rural labor force, it is frequently suggested that there should be a decentralization of nonagricultural jobs out of the main cities into the small rural centers in order to provide employment and hold back migration. As far as such policies have been carefully studied in relation to the economic costs of decentralization and found acceptable, such a policy has many advantages.

¹Henry Rempel, Labor Migration into Urban Centers and Urban Unemployment in Kenya, Ph.D. Thesis (University of Wisconsin, 1970).

Frequently, however, the additional costs of transportation, supporting infrastructure, and lack of external economies make decentralization a poor economic development choice.

Lack of adequate local government administration adds to the difficulties. Regardless of the outcome, decentralization of economic development can only play a marginal role in diverting migration at the present time. First, there are usually only a limited number of jobs that can be created in this manner because of the overall constraints operating against the rapid development of an industrial base in most developing countries. Second, the labor force required must be trained and skilled and these persons are in short supply in the rural areas, which frequently means that the jobs will not be occupied by the persons who would otherwise migrate. Decentralization of employment opportunities is an important policy idea which should be pursued and in the long-term is vital in establishing a meaningful hierarchy of cities, but such a policy is an approach to a long-term solution.

Family Planning and Population Control

Family planning should be an important part of a nation's development strategy. Unfortunately, all too little emphasis has been placed on this most crucial variable in determining the long-range success of a development program. The dangers of over population and the retarding effect of uncontrolled population growth on the economic development program are well recognized but are not yet the basis of substantial action programs by governments in developing countries. Family planning cannot, however, affect urban growth rates substantially over the next ten to 20 years, and therefore does not offer any short-range solutions to problems of lowest-income people in the city.

Rural development, family planning and decentralization of nonagricultural jobs into the provincial cities are all important components for the economic development strategy of developing countries. They are vital and important long-range programs which should be fully supported -- however, these programs will have little if any effect on the immediate problems of migration and urban growth during the next decade. The solution to these problems must be found within the city itself. Here the record of many developing countries is not good.

The Use of Police Power To Control Squatter Housing

Shantytown development in cities of the developing countries has been, unfortunately, a source of acute embarrassment. The newly emerging leaderships of these countries are justly proud of their independence and economic growth. The squatter area, urban slum, and shantytown are grim reminders of the distance yet to be

traveled. As a result, national pride often has moved governments to act with police power to destroy or contain the growth of shantytowns. These actions preclude full recognition that standards sought but not achieved in the industrialized countries of Europe and North America are not relevant to the realities in Latin America, Africa and Asia today.

It has been traditional for governments throughout the world to try to suppress the shantytown. Until recently they have viewed the physical characteristics of the shantytown as the problem. They have tried to eradicate the shantytown through slum clearance only to have new and larger shantytowns spring up elsewhere. They have tried to prohibit their expansion. They have, in some cases, gathered up the people and shipped them back to the country. All of these methods have failed to stop the formation of shantytowns, and all of these methods have dealt a great hardship to poor people who are residents of the shantytowns. No government has successfully wiped out the shantytown problem through the use of police power, regardless of their level of effort.

In Morocco, the government has tried to eliminate the bidonville (local name for shantytown). Most of the existing bidonvilles have been staked out with iron posts painted orange. Any shack or barrack that extends over this line is immediately taken down by the police. The use of permanent materials by the residents of bidonvilles has been prohibited. Community facilities and services have been kept to a minimum. All of these steps have been taken because bidonvilles are viewed as temporary and awaiting demolition. Therefore, it is reasoned, any steps which restrict investment in the bidonville will make the eventual eradication that much easier. Furthermore, there was a feeling in government that any steps to improve the bidonvilles or allow them to grow will entice more people to migrate from the country, thereby adding to the problem. This view is now changing and new ideas along sites and services lines are gaining favor.

There frequently is a commonly held, but false, belief that amenities within the city are a primary attraction to the potential migrant. Various studies, however, have shown that amenities have very little influence on the decision to migrate or on the destination of migration. Employment opportunities and kinship patterns are by far the most dominant "pull" factors in migration. Yet so long as the amenity theory is given any validity by government, it will serve to block the development of reasonable strategies to assist the lowest-income people in the city.

In Nairobi, Kenya in November of 1970 the local government took an even more aggressive position. The decision was made to remove the illegal settlements in the Eastleigh area of the city. Reasons given publicly for this action by the police were the need to eradicate a health hazard, prevention of exploitation of poor people by landlords, and a desire to cause squatters to return to

their villages in the rural areas. Only a brief warning was given the residents and no alternative accommodation of any sort was offered. Huts were either torn down or burned. Men who went to work in the morning found their homes burned to the ground when they returned at night.

A survey¹ was taken on a daily basis just ahead of the demolition teams to record basic information about the families affected. Results of the survey as of January 6, 1971 (with demolition still continuing) showed that a total of 6,733 dwellings, mostly one-room units, had been demolished. A total of 38,951 persons were made homeless and a total capital loss of \$285,000 had been incurred by the owners of the shacks. The survey also exposed the faulty reasoning behind the stated purpose of the demolition. The homeless people reported that 98.9 percent intended to stay in Nairobi. This is not surprising because 67.9 percent of the households had been residents of Nairobi for over five years and only 24.2 percent stated that they owned any land in the rural areas to which they could return. The survey also showed that the families were making an economic contribution to the city. Of the heads of households, 42.9 percent held wage jobs with an average income of \$30 per month, 40.2 percent had access to self-employment (usually providing services to the squatter community) with an average income of \$10.50 per month. Only 16.9 percent reported no income. Among the shack owners 75.6 percent actually lived on site.

Results desired by the government were not achieved. In fact, the entire exercise must be considered counter productive. The families will not return to the countryside because they have been residents of the city for a long time, have no land upcountry, and hold urban jobs; but because they are homeless they must now move into other shantytowns. This will increase the health hazard by overcrowding, will increase rents because of greater demand and a reduced supply, and will encourage the development of additional squatter areas.

John Turner reported a different type of encounter between the urban poor seeking land for settlement and the police.² His case study of Pampa de Cuevas in Lima, Peru has become widely quoted as an example of the process of *barriada* formation and development. In this case the *barriada* was formed overnight by an invasion on November 17, 1960. There followed immediately a lengthy battle with police to retain occupancy of the land. In the end the squatters eventually won the right to settle, but only after physical violence.

¹Donna Haldane, "Survey of Temporary Structures," in Nairobi City Council and the National Christian Council of Kenya, Nairobi Urban Study (Nairobi, Kenya, 1971).

²Turner, pp. 167-181.

Other examples can be quoted concerning the futile effort of using police power to control development of squatter areas and of attempts to destroy them. But it is clear from the history of these efforts that they will not work and can only inflict immense hardship on the poor people concerned. There is no future in negative action. The solution must be found in positive programs. For the most part, positive response on the part of governments has been confined to attempts at providing low-income housing. This effort, too, no matter how well intended or vigorously pursued, has not been able to make an impact on the problem.

The Use of Subsidized Public Housing

The pursuit of low-cost public housing as a solution to the shelter requirements of lowest-income people has been the typical government program approach. The principle is to subsidize the rents charged to the low-income family to the point that the family can occupy a house which it could not otherwise afford. The programs of this type cannot succeed to solve the overall problem because the developing country governments simply do not have the money required to provide the subsidies on a large enough scale to have any significant impact on the housing problem. For instance, it was estimated in 1965 that it would cost \$700 million to rehouse the existing slum dwellers in Calcutta¹ at the then current levels of government subsidy.

It is argued that the impossibility of providing subsidized housing for all the millions of urban poor in the developing countries should not be allowed to stop government efforts to do what it can with the resources available. Subsidized public housing policies should be reviewed, however, for several reasons:

1. The poorest people of the country usually make a substantial contribution to the overall tax revenues through various forms of indirect taxation such as the sales tax. If part of this money is used to provide housing subsidies for a small portion of the urban households, it means that the poorest people are being taxed to allow others, many of whom will be better off in any case, to live better. For example, in a study in Calcutta, India, it was found that over one-half the subsidy for public housing was being paid for by taxes on families making less than \$20 per month.

2. Low-income housing is frequently the name given to programs which in fact are designed to serve middle-income families.

¹Stanislaw H. Wellisz, India's Slum Clearance Policy: An Economic Evaluation, (unpublished paper of the Calcutta Metropolitan Planning Organization, January 1967) -- as quoted in Alfred P. Van Huyck, "The Housing Threshold for Lowest-Income Groups," ibid, p. 71.

As soon as a requirement for participation in the housing program includes evidence on the part of the applicant that he holds a permanent job, as is often the case, then almost by definition it is no longer "low-income" in relation to the overall income curve of the typical urban population. Often the lowest-income urban households find themselves excluded from consideration for a subsidized public house. In Kenya it was shown that a much higher proportion of families in the lower-income range were forced to find housing in the private sector and that the actual subsidy in the public housing units that were available increased as the incomes of the occupants increased.¹

3. Subsidized housing projects are all too often used as an unconscious excuse by government in order not to come to grips with the very real housing crisis. To the extent that pronouncements by government of major construction plans are actually believed by the people, they tend to dissuade investment in their own housing privately. If a family really believes that there is a chance they can obtain a subsidized government house of much better quality than it can afford without subsidy, that family has little incentive to invest in housing on a private basis.

The Myth of Housing Technology

Improved housing technology is often regarded as the key to solving the housing problem. Pursuit of the ever cheaper building material has led to a variety of new ideas -- plastics, foams, panels of every size and description, stabilized earth, and imaginative uses of concrete and wood are all now widely recognized as important building techniques. Often these new methods result in definite savings over the older conventional building methods in developing standard housing out of permanent materials. However, the vast majority of the lowest-income people cannot afford housing of permanent materials even of a very small size. Therefore, the ten to 20 percent savings possible through new technology does not have any significant impact on the housing problem of these people.

Obviously, the pursuit of improvements in housing technology is an important and worthwhile activity. The various research programs should be encouraged and the results disseminated as widely as possible. The point to be made here is simply that the solution to the housing problem for lowest-income people will not be found on the drawing board. The gap between standard housing

¹John R. Harris, Some Thoughts on a Housing Policy for Nairobi (Cambridge, Massachusetts: M.I.T. Press, 1970) -- as quoted in Alfred P. Van Huyck, Urban Development and Housing in Kenya (Washington, D.C.: The World Bank, 1971), pp. 27-28.

and what lowest-income people can afford is simply too great. The real benefits in improved technology will flow to people further up the income curve.

Chapter II

THE BASIC POLICY ASSUMPTIONS

The discussion in Chapter I painted a bleak picture regarding housing for lowest-income people. It pointed out that urbanization will continue at an ever increasing rate during the decades to come. There is little or no hope that rural development or family planning can stem this tide in time to have an impact on urban development within the next two decades. Most of the population increase will be among lowest-income people who cannot qualify for skilled employment and for whom it is unlikely that sufficient employment can be found whether or not it is located in primate cities or in provincial cities. The use of policy power to control this lowest-income population by restricting or destroying squatter areas has not and cannot succeed. Yet the governments are powerless to provide standard housing in sufficient quantity to meet the demand because of the enormous subsidies that would be involved. It must be concluded, therefore, that there is a housing threshold below which neither government nor the private sector can provide standard housing. The challenge is to design a program which can respond to the needs of the lowest-income people within these problem constraints. Such a program will have to be based on the following policy assumptions.

Preservation of the Existing Housing Stock

The lowest-income people are not homeless in the cities of the developing country world. They live in shantytowns at the edge of the city, often in illegal settlements. They live in the central city slum areas in overcrowded conditions and without proper sanitation. These settlements, no matter how bad they may be when compared to standard housing areas, are nonetheless a living space for the urban poor. These areas are seriously lacking in urban amenities, and the quality of the housing is frequently very bad. However, it should be understood that these areas do in fact serve a vital and important function in the urbanization process. Dr. Colin Rosser has succinctly listed six key functions that these kinds of settlement serve:

1. *They, of course, provide housing at rents that can be afforded, and importantly through variation in hut and room size, they provide a narrow but important range of housing choices in relation both to varying income levels (and, therefore, rent-paying capacity) and to varying household compositions. Within limits they are a flexible response to housing need.*

2. They act as "reception centers" in the urban area for predominantly unskilled and illiterate villagers migrating from the rural hinterland to the metropolitan district in search of employment; the social demographic and economic composition of individual bustees broadly reflects this migrational pattern.

3. They provide, within the bustee, a wide variety of employment in family and cottage industries, particularly in the vast numbers of marginal small-scale engineering enterprises which provide both the means of livelihood for large numbers of bustee dwellers but also the opportunities of acquiring productive and entrepreneurial skills -- i.e., the bustee has an important function in the economic adjustment of the migrant villagers -- to the changed economic environment of urban areas.

4. They provide the means to the bustee dwellers of a very considerable physical mobility within the urban area in search of employment, and through their ubiquitous location, the opportunity of finding accommodation in close proximity to the work place; the high residential turnover in most bustees reflects the high mobility of workers in search of work.

5. Through a wide variety of strong social and communal organizations within the bustee, they provide the bustee-dwellers with essential social support in unemployment and other occasions of difficulty and stress.

6. Finally, and of particular importance to the problem of urban housing provision, they encourage and reward small-scale private entrepreneurship in the field of housing, in that their organization is based fundamentally on the investment of the hutowner in the construction of his hut in such a way that rooms can be let for profit to individual tenants -- in Calcutta city alone, the 30,000 huts in the bustees are owned by 20,000 hutowners (the entrepreneur) and rooms in them are let to a tenant population of over 700,000.¹

John Turner has reached similar conclusions in his studies of Peru. He writes:

¹Colin Rosser, "Housing for the Lowest-Income Groups: The Calcutta Experience," Ekistics Magazine (Vol. 31, No. 183, February 1971), p. 129.

Squatter and other forms of uncontrolled urban settlement are not "social aberrations" but a perfectly natural and very often a surprisingly adequate response to the situation. The tragedy is not that settlement exists -- which is inevitable -- but that many are so much worse than they need have been.¹

Many experts now recognize that shantytown settlements are inevitable and in fact a sensible solution to the particular settlement problem of lowest-income people. At the same time, it is recognized that not all such settlements are desirable or should be encouraged. Careful analysis will show that beneath surface similarities of shantytown settlements, there are very large social and economic differences which over time will result in major changes in physical appearance. Turner has studied this process in Peru and has prepared what he calls a typification of settlements.

Turner's concept recognizes that barrios areas are in the process of change. Some are constantly improving and will eventually become acceptable urban neighborhoods. Others are stagnating and drifting, and others are deteriorating. This concept is valuable in deciding what government action is appropriate in order to assist the barrios area to continue the process of improvement.

From this discussion a basic conclusion can be drawn which should become a cornerstone in an overall housing program. Housing stock, even in the shantytown areas, must be preserved. Slum clearance as a policy based solely on the removal and replacement of housing to a higher standard should be abandoned. This course is self-defeating because it takes immense administrative energy, ties up large sums of capital, and extends the time required to build a given housing unit, resulting in no net gain in housing stock (unless the density is increased on site). In addition, the slum clearance project disrupts the lives of the original residents and results in costs to them in lost time, building materials, etc. It should be noted that slum clearance may well be appropriate when the purpose is other than rehousing the residents. For example, clearance is appropriate when shantytowns or slum areas occupy land essential for a city's orderly growth or when occupying lands such as flood plains that present a significant hazard to the residents.

If shantytown formation is occurring at a rate in excess of the capacity of government to conduct slum clearance activities, it should be obvious that the effort would be better spent in controlling the formation of these new shantytowns.

The Total Neighborhood is
The Unit of Concern

"Housing" is not the critical issue among lowest-income people. In most of the developing countries the climate is such that housing

does not have to be of a high construction standard in order to shelter the inhabitants. Yet "housing" is the focus of most government plans and programs. Progress is measured in the number of housing units built. Such a focus is a misunderstanding of the problem. The typical low-income house constructed with government subsidy is a small (usually under 600 square foot) box made out of permanent materials. Almost invariably the individual family can build a structure which will meet their minimum requirements for security and protection against weather at a lower cost without government funds or participation. Furthermore, the desire is not for permanent materials in the walls but for more enclosed living space which gives a room to rent or can lower the density within the house. Over and over again, surveys have shown that housing structure is not a critical element in needs of the lowest-income family.

Instead, the priority is placed on the other elements which make up the total living environment. Foremost among desires of the people is adequate water supply and sanitation, followed by such things as good streets, street lighting, schools, medical facilities, and municipal services. The chart¹ on the following page illustrates this point. It diagrams 26 urban services with respect to the extent of dissatisfaction about each and the intensity of that dissatisfaction. Services shown in the upper left portion are those about which dissatisfaction was both widespread and intense.

Andrews and Phillips commented on housing priorities in the following manner:

Opinions on housing were especially interesting. It is obvious from the chart that the availability of credit for house construction was rarely seen as a problem. This was primarily because most home owners (87 percent) neither expected nor requested it. Of those who did seek credit, roughly half received some; but even among those who had sought it and failed, the failure rarely caused much difficulty. There seemed a reluctance to assume a continuing financial burden. Most families preferred to keep their commitments down and to add to their houses later as money and time became available, even though this frequently meant the construction period might last ten to 15 years. People also showed little interest in technical assistance in house construction, although better and cheaper construction materials and house design were of interest to some.¹

¹ Frank M. Andrews and George W. Phillips, "The Squatters of Lima: Who They Are and What They Want," Ekistics Magazine (Vol. 31, No. 183, February 1971), pp. 134-135.

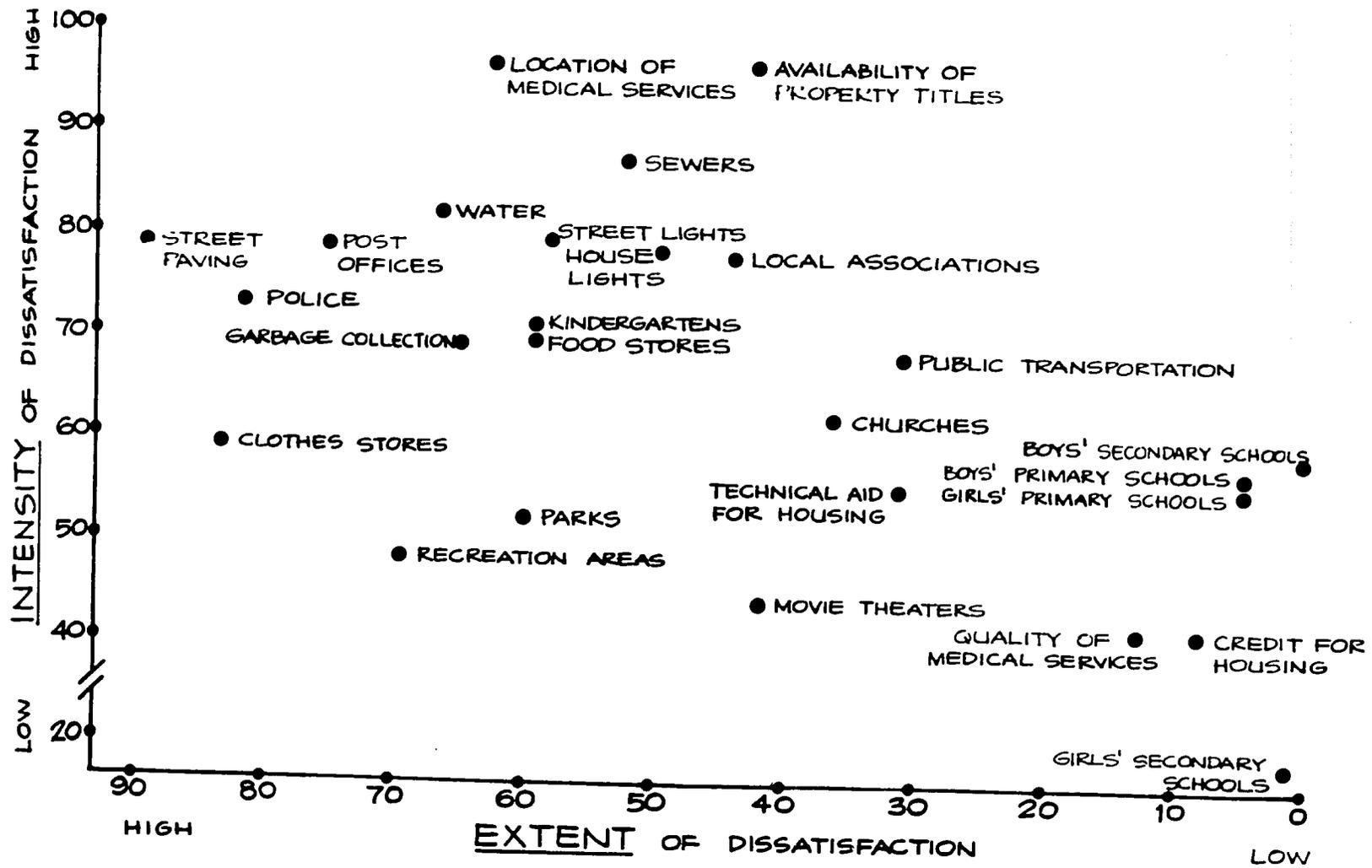


DIAGRAM 1
BARRIADA RESIDENTS' ATTITUDES ABOUT
THE ADEQUACY OF URBAN SERVICES

In short, lowest-income people are saying that what they want from government is not housing, which they feel they can provide for themselves, but those facilities and services which are beyond their own capabilities because they are either too expensive in initial capital cost or are regulated or controlled by government. They are asking for the establishment of a total neighborhood unit and not a housing project. It can be concluded that government can be more responsive to the felt needs of lowest-income people by diverting funds from low-cost housing schemes into the provision of improved neighborhood facilities and services.

The Importance of Land Tenure and Supply

One of the intriguing features of most national five-year plans is that they contain projections for the number of housing units to be built but hardly ever contain a section on urban land policy. Yet the land question is at the crux of orderly urban expansion. Only a few cities such as Karachi, Pakistan enjoy the favorable position of having large amounts of public land available for development. In most cities the acquisition of urban land for development by either private or public parties is a very difficult process in terms of administrative delay and usually involves a high compensation cost.

Urban land has long been a prime area for investment among the wealthy in developing countries; and as a result of speculation land prices are often at unrealistically high prices. The rationalization of land policy should therefore be a matter of urgency in order to guarantee a constant supply of land ready for development at reasonable prices.

For the lowest-income household, security of land tenure is a critical issue. The availability of proper land titles was rated as the item about which the Peruvian *barriada* population felt most intense. The fact that the extent of the dissatisfaction was only between 40 and 50 on the scale was explained by the fact that the remaining households thought they had land title even though the probability was that many of these so-called titles were illegal. In one sense the entire process of squatter invasion is a recognition that gaining access to land is the prime problem of the lowest-income family. If the government provides no opportunity for these people to obtain a secure land tenure, it is almost certain that there will continue to be squatter invasions. Furthermore, until land tenure is secured either *de facto* or *de jure*, the lowest-income family is understandably reluctant to invest in its housing unit. As a result, the area will stagnate waiting for a resolution of the land tenure problems.

The importance of land tenure should be recognized in government policy objectives. It would be much more realistic than the sweeping and often impractical objectives stated for housing

standards. For example, the Five-Year Development Plan in one African country states the housing objective as follows: "The prime objective of government policy in housing is to move toward a situation where every family will live in a decent home, whether privately built or state sponsored, which provides at least the basic standards of health, privacy, and security."

Such an objective is totally unrealistic in that country today, or even 20 years from now. There is no way that sufficient resources can be diverted from other vitally essential development projects to build the amount of housing required to achieve the objective. It is, therefore, not a realistic goal, but a statement of good intentions, a hope, which is of no practical value in development planning.

The prime objective of government policy might better be to provide every household the opportunity to purchase, rent or lease sufficient land at reasonable rates to meet their minimum requirements for living space at locations which are convenient to their needs and upon which they can build or rent a house with their own resources.

Such an objective is infinitely more modest than a commitment to housing and it offers a prospect of achievement. It clearly places the government on the side of land reform, which though difficult politically is a crucial issue in both urban and rural areas. It makes no commitment to finance or subsidize either the land or the housing which would follow. It implies the need for the individual citizen to take the responsibility of providing his own resources. Yet it holds out the goal that each individual can obtain adequate living space which is the first priority.

The Vital Role of the Private Sector¹

The unorganized private sector dominates the housing construction industry even in those countries with proportionally large allocations of public housing programs. Conventional thinking holds that only the public sector will build low-income housing. This reasoning overlooks the enormous private investment made in squatter housing and unplanned urban settlements. This type of housing frequently makes up one or two-thirds of the entire housing stock in a city. Profits of between 30 and 50 percent are not uncommon among private investors in this type of housing. The real

¹Private sector refers to both the organized private sector such as construction companies and to the unorganized private sector which is made up of individual savings investments, self-help labor, and small contractors.

problem, therefore, is not that private investment refused to provide for the needs of the lowest-income people, but rather that private investment exploits the people through high rents and overcrowding.

A good example of what the private sector can do on an organized basis is provided by the phenomena of the "Company Housing" built in the Mathare Valley of Nairobi, Kenya. Private companies organized and built 1,220 structures totaling 7,628 single-room dwelling units for rent. It is estimated that 33,563 people occupy the units. The idea for forming the companies came first from the squatters themselves, but soon the need for capital forced the groups to seek outside private investors. The returns have proven so attractive that outside investors now dominate the companies and squatters no longer have a substantial role to play. Two basic approaches were taken in organizing the development: in some cases the company built the housing units and rented them; and in other cases the individual stockholders were assigned plots upon which they built housing and rented it directly. The financial returns, illustrated in the following table, have been high.

Housing built by the companies has been on land to which they hold legal title, but the housing has been for the most part illegal in that it did not meet city regulations and was built without planning permission. The government has not yet attempted to challenge the companies or stop their activities. In the newer constructions several of the companies have attempted to upgrade their construction by using permanent materials. Overall, the company housing is considerably better than the housing found in the nearby squatter settlements. The rents are higher as well, but the profit margin achieved reflects the scarcity of housing.

The experience of the companies in Kenya is not the answer in its present form to the housing problem for lowest-income people. It does show, however, that private enterprise can be organized to make a major contribution to the low-cost housing market. It now remains for government to seek a way to encourage the company development programs while at the same time recognizing the public interest and protecting the low-income family from exploitation.

It is clear that government, regardless of desire, cannot shoulder the burden of housing the urban poor. Governments have not the resources or the administrative capacity to centralize this massive undertaking. Therefore the private sector must be given the main task in house building. Government's role should be to provide the environment within which the private sector can get on with the job while at the same time safeguarding the people from exploitation.

Table 1

PROFITABILITY OF INVESTMENTS IN TWO COMPANIES

| | <u>Company A</u> (Keyna shs) | <u>Company B</u> (Kenya shs) |
|--|---------------------------------|---------------------------------|
| <u>Capital Costs</u> | | |
| Shares in Company | 500 | 1,050 |
| Building Construction Total | (2,250) | (2,500) |
| Wood for walls | 800 | 900 |
| Posts | 100 | 100 |
| Corrugated iron roofing | 600 | 500 |
| Cement for floor | 500 | 500 |
| Labor (contracted) | 250 | 500 |
| Total Capital Costs | 2,750 | 3,550 |
| <u>Monthly Income and Costs</u> | | |
| Rental Income (6 rooms @70/person) | 420 | 420 |
| Monthly Costs Total | (170) | (190) |
| Plot rent | 80 | 100 |
| Manager's salary (shs 400 prorated among 26 rooms) | 90 | 90 |
| Monthly Profit (Net) | 230 | 230 |
| Annual Profit | 3,000 | 2,760 |
| <u>Return on Investment</u> | | |
| Annual Return (annual profit/total capital) | 109% | 78% |
| Payload Period, Total Months | 12 | 16 |
| Construction period, in months | 1 | 1 |
| Monthly profit periods, in months | 11 | 15 |

Source: Joan Richards, unpublished paper,
Nairobi Town Planning Department.

Providing Channels for Upward Mobility

At the heart of the matter is the need for government to create channels for upward mobility among the lowest-income people. No amount of housing, regardless of quality, can substitute for having a job, obtaining education for children, participating in the decision-making process of the community, or the general feeling that tomorrow will be a better day.

How the government creates these channels of upward mobility becomes the crucial question. It involves much more than a concern with just the physical environment, although that is important. It means structuring economic programs to the limited skills and abilities of the lowest-income people. There must be hope of gaining employment. It means providing social services which will

connect the lowest-income people to the decision processes of the community as a whole to demonstrate that their views and voices are considered. It means a constantly improving level of the physical environment.

Even if it were possible, by some miracle, to provide a completely standard neighborhood and housing, it would not be necessary in order to demonstrate the good intentions of government. The author has been constantly amazed during interviews with lowest-income people in the shantytowns of India, Kenya, Ecuador, Brazil and other countries that their expectations are so low. When asked about improving their physical environment, the response is always for incremental change. A new water stand pipe, a paved street, a new school, etc. are the kinds of felt needs among the lowest-income people. The government would be well advised to insure that all the lowest-income people receive some benefit which they can see from the limited resources that are available rather than ignore the needs of the mass in order to spend heavily on the fortunate few.

Implicit in the concept of providing channels of upward mobility is the recognition that lowest-income people will work to improve their own conditions if they have hope of success. Observation throughout the world tend to confirm this assumption. Numerous instances of local initiative in improving shantytown neighborhoods have been recorded. In most cases it was the securing of land tenure which spurred the people to initiate improvements.

A good example was the Douar Youssef B. Alli area outside Marrakesh, Morocco. The area started about 15 years ago as a traditional invasion of people trying to escape the high densities of the Medina. As a result it was laid out haphazardly along village lines rather than urban. Later, once the government recognized land tenure for the area, the traditional mud structures were rapidly converted to permanent materials. Now electricity and other forms of infrastructure have been added. This same concept is the phenomenon which Turner describes as making possible the "incipient and improving neighborhood" in Latin American countries.

The most dramatic example of self-improvement known to the author is occurring daily in Guayaquil, Ecuador. Between 300,000 and 400,000 people live in an area called the barrios suburbanos and the total is constantly growing. The spacial growth of the barrios suburbanos is through expansion out into the tidal marsh areas west of the city. The process is a dramatic example of man's quest for urban living space. First, after agreements have been made with the local power structure, a household will stake out an area with bamboo poles. These areas are established in an orderly way to allow eventual extension of the city's street grid. The space occupied will be subject to tidal inundation every day. Second, the family establishes a shack on stilts above the water line. Third, the shack is joined to a network of flimsy walkways

that tie back to the dry land. Then the process of improvement begins. Little by little the lot is filled with rubble and dirt until it emerges above the waterline. At the same time, the foundations of the house are improved until permanent materials are eventually used. In the end, after a period of years in some cases, a house of reasonable quality on dry land emerges. The houses of the area are in all stages of completion, especially on the edges of the barrios suburbanos -- visual evidence of the incredible willingness of people to work for their own improvement.

Establishment of the channels of upward mobility for lowest-income people in their physical environment, their economic future, and their social growth should become another cornerstone in public policy for lowest-income people. Evidence suggests that the people will respond.

Chapter III

THE SITES AND SERVICES EXPERIENCE

Recently more and more interest has been expressed in sites and services projects as the solution to the problems of shelter for lowest-income people. A wide variety of proposals come under the title "sites and services". The programs are all similar in that they do not provide a completed house unit in the initial project, and therefore are less costly to construct. Within the category of sites and services projects, the following general types have been attempted.

Raw land, subdivided into plots, with a common water tap serving a number of plots, common latrines, and unpaved streets.

Plots, each serviced by a water tap and with its own latrine, septic tank, or sewer connection.

Plots, each serviced as above and with a small out-building containing the core facilities.

Plots, each serviced and with a partly finished house, which could be a plinth, a plinth with supports and roof, or one complete room upon which additions can be made.

To a greater or lesser extent sites and services projects provide less infrastructure than a completed low-cost housing project. The major cost savings are made on the housing and to a lesser extent on the infrastructure. Unfortunately, in spite of the fact that there is substantial literature on various sites and services projects, very little systematic analysis has been done of the economics of the projects in terms of cash flows, construction time, and total costs versus low-cost housing projects. Nonetheless, the following brief descriptions of various sites and services projects are useful in understanding the range of what has been attempted and in isolating for further review some of the problems encountered.

The Indian Experience

India has been a reluctant pioneer in sites and services projects. The attitude of government has been that sites and services projects are not in the best interests of urban development. But

several interesting projects have been undertaken. Two schemes of the early 1960s in Madras and New Delhi are particularly interesting because they illustrate both good and bad factors in sites and services projects.

Madras Open Plot Development

The Madras State Housing Board was one of the most aggressive and well managed in India. It consistently built more than its targeted share of housing by absorbing the unspent central government grants to other cities. Nonetheless, throughout the 1950s Madras lost ground on the slum problem. In 1950 there were approximately 300 areas designated as slums and by 1966 approximately 180 had been cleared, a remarkable achievement. Nonetheless, the total had grown to 700 slum areas with more than double the slum population (600,000 persons) of 1950. During this time the State Health Board experimented with open plot development, even though they did not support it as a positive solution to the housing problem. The open plot development projects consisted of 25 plots to the acre, a 20 by 30 foot earth plinth, water stand pipes on a shared basis, a concrete lavatory and bath in one corner of the plot (four units were therefore combined into one structure). In addition, the family was given raw materials and a small cash payment to hire skilled labor when required to build a hut. The families (at that time) were charged approximately 40¢ per month for rent, but only about half the rents were actually collected. The entire project was heavily subsidized.

The open plot developments proved more popular than the housing tenements also built by the State Housing Board. The residents felt that they had more space, the rents were lower, and they felt that the structure was their own.

The Jhuggi Jhonpri Scheme, New Delhi

This scheme was undertaken on virgin ground several miles from the city's edge. Some 20,000 families were involved in the settlement. These families were forced to relocate to the site because their shacks within the city were forcefully removed. The plots were 225 square feet (extremely small for permanent settlements). The family erected its own house out of any materials available. Each plot was issued on a one-year lease (renewable). The water supply was from stand pipes and sanitation was provided by shared (one per six families) public facilities. The rent was less than \$1.00 per month but not often collected. Though the plan set aside areas for commercial activity, nothing was done to develop these sites and individuals started a wide variety of small commercial shops throughout the project area. There were no employment opportunities nearby except for small-scale activities undertaken by the residents themselves. Therefore, most workers were forced to make the long commute to the city for work.

Many of the families refused to accept the accommodations offered in the scheme and drifted back to the city slums after selling their rights to a plot. Some people of higher incomes were therefore able to obtain the lease rights to several continuous plots and build more substantial houses. Nothing has been done to force these families off the land acquired in this illegal manner.

The Jhuggi Jhonpri scheme illustrates many of the reasons early sites and services projects failed. The distance to the city was too great. There was no consideration for providing employment opportunities nearby. The families were forced to come to the site by use of police power. Administration and maintenance of the project were extremely lax. As a result, those opposed to the sites and services concept were given considerable ammunition against these projects. In fact, the deficiencies do not reflect on the sites and services project per se but on the planning and administration with which the project was undertaken.

Dakar, Senegal Experience

Senegal reached the conclusion that it was not possible to stay abreast of the rapidly increasing squatter, or bidonville, population with conventional housing programs. A sites and services approach was included in the Second Four-Year Plan, 1965-69 and was designed to provide an acceptable standard of urban services for lowest-income people. The scheme was called "Parcelles Assainies" and consisted of clearing land for settlement and providing utilities, services, and community facilities. In the plan space was also reserved for commerce, small industry, and crafts. Within a set of minimum guidelines the residents were allowed to build any sort of housing within their means.

During the plan period the government constructed a sites and services pilot project in Pikine, a suburb of Dakar. There were approximately 4,000 lots on approximately 120 hectares. The project was fully settled with households consisting on the average of between nine and ten persons. The infrastructure included unpaved streets, water supply to stand pipes, common sanitation facilities including lavatories, baths, and waste disposal points (all at the standard of one per 100 families). The military engineers executed the project and the land remained government owned. The residents were given some technical assistance but no financial assistance in the construction of housing. The cost of the infrastructure worked out to approximately \$280 per plot.

The Government of Senegal is now interested in expanding the Parcelles Assainies Program and it is a major component of the Third Four-Year Plan with projects scheduled on the periphery of eight cities. Some 560 hectares are scheduled for development and would accommodate 100,000 people in Dakar and 60,000 in other

cities. This represents a major commitment to the sites and services solution and will provide an interesting case history on the success of undertaking a major program.

The Zambian Experience¹

John Collins studied the evolution of housing policies in Zambia from pre-independence through 1968. During this time the government perceived the futility of conventional housing solutions in keeping up with the rapid urban growth in Lusaka and attempted to initiate sites and services projects. In his thesis Collins perceptively analyzes the success and failure of the new policies.

The Zambian government inherited a traditional British colonial housing institutional framework at the time of independence. It was organized to serve the needs of the Europeans and had little relevance to Africans, who in fact were forcefully encouraged to live outside the town. Initial government efforts were aimed at raising housing standards and providing housing for all Africans. The impossibility of implementing these policies soon became obvious and increased attention was given to the concept of sites and services as a means of meeting housing needs for the lowest-income people. As Collins pointed out, the underlying reason for the sites and services program was primarily a negative reaction to the impossibility of controlling unauthorized settlements with their health hazards, their poverty, and unemployment. The result was to think of sites and services not as a positive program but as a temporary measure to be used until such time as it would be possible to provide a standard housing unit for each household.

This course of action resulted in a failure to realistically consider the need for land tenure guarantees, which is a cornerstone principle for a sites and services program. Furthermore, the sites and services program was grafted on to an already complex set of housing institutions at the national and local levels with resulting administrative confusion and overlap. Nonetheless, several important projects were undertaken and their experiences provide useful clues to understanding the strengths and weaknesses of the sites and services approach. Collins developed three case histories of sites and services projects in his thesis.

New Kanyama

This project was started in 1963 in order to provide a "temporary resettlement area" in which people could build their own houses until permanent government housing became available. The

¹John Collins; The Evolution of Urban Housing Policies in Zambia with Particular Reference to Lusaka (unpublished thesis Columbia University, 1970).

site selected was unsuitable for permanent housing because it contained rock outcrops and a flat terrain. It was one-and-a-half miles from the city center. Some 720 plots were laid out with 75 feet of depth and either 40 or 55 feet of width. Minimum services were provided -- water taps at intervals were placed along bare earth roads; pipes were laid above ground to save excavation of the rock. The monthly charge was \$1.05 per plot for water. There was a guaranteed occupancy for five years, but the structures were to be kept temporary. The residents of the area soon after settling began complaining about the temporary nature of the project, particularly the bad state of the roads and the lack of refuse collection. By May 1966 the population had increased to 7,961 persons with an average of 11.4 persons per house. Approximately 22 percent were estimated to be adult rent-paying lodgers. The project was also taking on some aspects of permanent construction as 69 percent of the houses were built of burnt bricks or concrete blocks instead of the mud-brick structures typical of squatter settlements.

The City Council responded to the residents by slowly increasing the urban amenities. The water supply was increased and taps made available for each plot owner willing to pay a \$36.50 connection charge and receive a metered supply. The capital funds required were charged to the general housing funds. Markets were allowed. The roads were improved, also with a service charge. It was generally recognized that New Kanyama was to be permanent.

The concept of a temporary urban settlement for lowest-income people is probably an impossibility. Yet by starting New Kanyama as a "temporary" settlement, a great deal of confusion was caused among the residents, probably retarding natural improvement of the area. The site was poorly chosen for residential development and probably would not have been utilized if the concept of a permanent settlement had been intended. Now the government is faced with the necessity of spending more for improvements than would otherwise have been necessary.

Marrapodi-Mandevu

This project was concerned with improvement of an existing unauthorized settlement area. The site was totally without services from government; water supply was from shallow hand-dug wells or nearby streams and there were only local footpaths. The government's response was to attempt an improvement program by superimposing a gridiron street pattern and allocating plots to the existing residents. No concern was given to the area as it existed at the start of the project. The program floundered for several years because of a constant series of administrative and planning errors. Collins describes in detail the confusion caused by the large number of local and central government agencies which countermanded each other's decisions, failed to coordinate, and delayed action on various parts of the program for inordinate lengths of time. The important lesson to be learned is that

the installation of an improvement-oriented sites and services program must begin with a well-worked-out, simplified administrative and financial plan. Cooperation and support of the people must be obtained in advance. When implementation is initiated, the government must be prepared to see it through with dispatch. The attempt to superimpose a rigid plan over an existing area should be avoided. Each of these principles was violated in the Marrapodi-Mandevu project.

Chainama Hills

The Chainama Hills project represented an attempt to establish a new sites and services project on virgin land. The major criteria for site selection was that the project be out of sight of the main road (an indication of government reluctance to view sites and services projects as a positive contribution to solving the housing problem). The site also had to be suitable for the digging of pit latrines. Chainama Hills was selected because it was out of sight below the crest of a hill near the main road to the international airport. Approximately 3,000 plots were planned for this project situated eight miles from the city center. Learning from the Marrapodi scheme's experience, the government decided to initiate a crash program and to short-cut normal bureaucratic procedures. This resulted in the creation of 90 percent of the plots ready for occupancy in nine months, an excellent achievement. The service standards were gravel roads, a water stand pipe for every 25 plots, and the residents were to dig their own pit latrines (slabs to be provided by the Council). The average cost per plot was estimated at \$196. A core house program was included with a variety of alternate schemes and some technical assistance staff. Though there were miscellaneous problems, the project was obviously moving much better than previous efforts. Within nine months after approval of the scheme, 2,766 plots had been allocated and building activity was well underway (103 houses had been completed).

Shortly thereafter the Council stopped the project. Two reasons were given: 1) the general appearance of the project was too much like unauthorized settlements (there was concern about the view of the project from the air by persons approaching the airport since the project could not be seen from the road!); and 2) the project had a one-class slum aspect which was deemed out of keeping with Zambian humanism! This most unfortunate end does not obscure the important lessons of the project. Sites and services schemes can be built quickly and efficiently at reasonable cost and people will respond (the latter all the more remarkable because the project was located eight miles from the city's center).

The Chilean Experience

Robert Merrill has studied the Chile housing experience. He points out that Chile in the late 1960s made the greatest relative national commitment to conventional housing construction in Latin

America. Yet in spite of this commitment, Chile's program has consistently fallen behind objectives -- objectives which were realistically established and well documented. His four main conclusions for this shortfall were:¹

1. *A high rate of mortgage arrears and defaults in the public sector leading to decapitalization of public housing institutions and, therefore, less capacity to construct new units.*

2. *A rising trend of relative construction costs associated with increased volume, leading to a possible situation in which the more Chile's housing sector attempts to attain planned house building goals, the higher relative costs could rise, thus hindering the very attainment of these goals.*

3. *An overestimation of the capacity to pay of a large portion of Chile's population resulting in a situation in which those lowest-income groups most affected by the housing problem were the ones who benefited the least from official programs.*

4. *A lack of attention to future metropolitan development (principally in Santiago) constructing large, homogeneous areas of low-income housing with a minimum of community facilities and services.*

In 1967 Chile recognized that its housing policies needed to be revised and a new approach has been launched. Merrill defines this shift as a switch from the "sectoral" view of housing to a "structural" view. He describes it as follows:

As views on housing and urban problems mature, many developing countries and especially Latin America seem to be shifting from a primarily sectoral view of the housing problems to a structural one. Since this shift seems to be gaining in momentum, a word on the two views is appropriate.

Whereas the sectoral view has traditionally considered the housing problem as one of producing enough minimum standard units to satisfy the need due to population growth, existing deficit and future losses to stock, the structural view holds that not only is the conventional construction industry underdeveloped

¹Robert N. Merrill, Participation of the Public, Private, and Popular Sectors in the Implementation of a Structural Housing Policy: The Case of Chile, tentative thesis title, August 1970.

as part of the general picture of economic underdevelopment, but also that the capacity to pay of the major portion of the population is so low that they cannot afford even the limited quantity of minimum standard dwellings produced. That the structural approach is, at least, more realistic is evidenced by the futility of Chile's long-range housing plans and the growing housing deficit in Latin America as a whole.

Perhaps the most significant characteristic of the structural view, however, is that while recognizing the limitations of conventional construction processes to satisfy the growing housing needs of low-income groups, it also recognizes the potential resources of these groups and seeks to strengthen them in resolving the low-income housing problem... More than merely governmental self-help housing programs which are common throughout Latin America, the forces recognized by the structural view are those natural construction processes which occur independently of legally constituted authority and often in reaction to it.

However, it is in the social and economic incorporation of marginal groups (in the sense that these groups have not fully participated in the socioeconomic development process) to the urban and national life that the effective solution to the housing problems of each marginal or low-income family lies. According to the structural view, each marginal family pursues its own "housing solution" through a gradual process of improvement in accordance with the advances it makes in the socioeconomic integration process. Moreover, since it is recognized that this process of gradual socioeconomic integration and environmental improvement will occur with or without the intervention of authorities -- and at times in spite of it -- the mandate for a structural housing policy is to utilize the resources of the low-income groups by trying to order and accelerate these spontaneous construction processes.

Although the term "structural" seems confusing in reference to housing, the concepts are clearly in line with points described in Chapter II of this paper as the basic policy assumptions which must underlie a meaningful national housing policy. Chile is seeking to implement the new approach through a "progressive improvement program". The program stresses initial improvement at the environmental level in urban areas with gradual completion of urban services, shelter and home improvement. The financial backbone of the program is the Popular Savings Plan (PAP) which consolidates 16 housing credit programs into five basic plans to provide different housing solutions. The five plans are as follows:

Plan 1: Operation Site, First Stage

Land, average 170m²

Water, one outlet per site

Electricity, one outlet per site

Wood panels for walls and roof of a temporary house

Plan 1: Operation Site, Second Stage

Urbanization completed, sewerage and pavement grids

Plan 2: Urbanized Site

Same as Plan 1, Second Stage

Plan 3

Completely urbanized site

Basic house (20m²) of definitive material or

Basic house (36m²) without interior walls and finishings

Plan 4

Completely urbanized site

Family house, two-bedroom detached dwelling of approximately 43m². Based on a standardized plan, it can be of brick, wood, or prefabricated panels and has provision for two-room expansion to rear.

Plan 5

Completely urbanized site

Two-bedroom apartment (usually in a four-story building) of approximately 45m²

A family can qualify to participate in the plans by enrolling in the PAP system and accumulating the necessary amounts of savings. Once the savings levels are reached, the Corporation of Housing Services (CORHABIT) assigns the family a plot or house supplied by the National Housing Corporation (CORVI). If Plan 3 or 4 is to be used, the houses can be built by self-help schemes organized through cooperatives, directly by CORVI, or through private contractors. It is also possible to qualify for improvement loans to upgrade housing in the program. The entire program is geared toward decentralization to the district level in order to be responsive to local needs. The new program emphasis was initiated in 1967 and the results are illustrated in the following table.

The remarkable success of achieving and surpassing the plan targets is to the credit of the country. The rapid growth of the PAP Program is shown in Table 3.

Table 2
PLANNED AND ACTUAL CONSTRUCTION OF
DWELLING UNITS VERSUS IMPROVED SITES 1965-70

| Year | Dwelling Units | | | Improved Sites | | |
|------|----------------|----------|-------------------|----------------|----------|-------------------|
| | Planned | Realized | Percent Fulfilled | Planned | Realized | Percent Fulfilled |
| 1965 | 45,510 | 52,566 | 116% | 10,295 | 11,196** | 108% |
| 1966 | 21,182 | 27,761 | 131% | 8,346 | 6,144 | 74% |
| 1967 | 28,942 | 44,938 | 155% | 27,069 | 33,644 | 124% |
| 1968 | 31,729 | 52,413 | 165% | 33,254 | 33,937** | 102% |
| 1969 | 36,731 | 37,429* | 102% | 31,600 | 42,274* | 133% |
| 1970 | 37,229 | 37,815* | 101% | 29,900 | 54,181* | 181% |
| | 201,323 | 252,924 | 126% | 140,464 | 181,286 | 129% |

*Estimated figures.

**In 1965, 44,413 wooden dwellings (mediaguas) were produced as part of Operación Techo and in 1968 1,837 were produced -- these figures are not included in the table.

Source: MINVU, Dirección de Finanzas, Central de Estadísticas and Camara Chilena de la Construcción, Revista de la Construcción, Jun. 1967 -- as quoted by Robert N. Merrill, ibid.

Table
CUMULATIVE REGISTRANTS IN THE POPULAR
SAVINGS PLAN DECEMBER 1967 TO SEPTEMBER 1969

| | December 1967 | | December 1968 | | September 1969 | |
|------------------------|------------------|---------------------------------|------------------|---------------------------------|------------------|---------------------------------|
| | Regis- trants | Initial Savings Completed | Regis- trants | Initial Savings Completed | Regis- trants | Initial Savings Completed |
| Plan 1 | 345 | 13.0% | 28,581 | 24.0% | 43,133 | 27.0% |
| Plan 2 | 141 | 6.0% | 4,035 | 43.0% | 5,227 | 38.0% |
| Plan 3 | 147 | 5.0% | 3,064 | 17.0% | 3,557 | 21.0% |
| Plan 4 | 869 | 17.0% | 11,850 | 48.0% | 17,238 | 44.0% |
| Plan 5 | 104 | 17.0% | 2,041 | 48.0% | 3,425 | 44.0% |
| | 1,606 | 14.2% | 49,571 | 32.2% | 72,580 | 33.0% |
| Total Saving Quotas | 363,720 | | 4,450,447 | | 6,453,371 | |

Source: Raimundo Guarda, Viviendas Improvisadas por Polos de Crecimiento (Santiago, Chile: MINVU, Dirección de Planificación Habitacional, October 1969), p. 13 -- as quoted by Robert Merrill, ibid.

Obviously the program is not meeting the full needs of the country as yet, but its rapid expansion since inception bodes well for the future. It is interesting to note that the "sites and services" option is by far the most popular (along with Plan 4) among the housing alternatives. Experience to date, however, has shown that there has been little actual progressive development. Families in Plan 1 sites have either remained there or moved to a Plan 4 house. Further, very little use has been made of the provisions for housing improvement loans primarily because funds are not available. The reasons for lack of progressive development are critical to the central thesis presented in this paper that housing will be improved on sites and services plots if people are given support. Merrill concludes that, in Chile, there has been little improvement primarily because of: 1) inadequate understanding on the part of the people about their options for improvement; 2) lack of emphasis upon and, therefore, funding of housing improvement loans; and 3) strict municipal and CORVI regulations requiring official approval of any improvements and that a standard CORVI dwelling must be built on the improved site.

Another substantial problem in the PAP Program is the amount of arrears among participating families. Almost two-thirds of the households are in arrears three months or more. This is a serious loss to the revolving funds upon which the program is based. Merrill suggests that the problem may be partly accounted for by the administrative procedures for collection -- no monthly bills are sent and payments are only received in the CORHABIT offices. In addition there is a tradition of condoning arrears in government housing, a fact which is difficult to overcome.

Merrill suggests that the experience of Chile with its new housing policies is optimistic and clearly headed in the right direction. There are problems still to be overcome, but these tend to be administrative rather than physical in nature. Merrill urges the need for better communication among the people and organizations involved, the introduction of greater flexibility in providing individual responses to the program, and increasing decentralization in the decision and implementation processes. Overall the Chile experience offers the beginnings of a model which other countries can follow to prepare an adequate response to the needs of lowest-income people for shelter and progressive neighborhood environments.

The Experience of Other Countries

The brief sites and services summary sketches presented here in no way exhaust the experiences of countries with these projects. In almost every developing country there has been some similar experience with sites and services, often combined with self-help housing schemes, core houses, or other partially finished structures. Among the countries with considerable experience in Latin America in addition to Chile are Peru and Colombia. In Colombia the Instituto de Credito Territorial (ICT) has been working with

sites and services projects combined with group self-help housing for a number of years. The ICT has recently reemphasized the sites and services concept, after their programs had drifted away to higher-cost solutions.

In Africa, Morocco has several sites and services schemes in advanced planning stages. Here the emphasis is on "progressive equipment" which means that the government would enter into a contract with the plot-holder to provide the infrastructure over a ten-year period according to a fixed schedule as payments from the resident are made. Kenya has been considering a major sites and services program. Their Five-Year Plan calls for 25,000 plots by 1974, but progress to date makes this goal unlikely. Nonetheless, a major project is being prepared for Nairobi, and Kenya has had previous experience with sites and services projects in the Kario-bangi scheme. This project is often considered a failure because the lowest-income people did not stay on site, choosing instead to sell the rights to their plots to middle- and upper-income people. In part this can be explained because the project is six miles from the city, without employment opportunities. In Asia, sites and services projects, resettlement schemes, and improvement schemes have been tried in Manila, Hong Kong, Djakarta and elsewhere.

All this experience makes it possible to draw conclusions regarding the suitability and potential of the sites and services concept for dealing with the shelter problem of lowest-income groups. Overall, it can be said that government for the most part has turned to sites and services solutions in desperation -- not because the projects are regarded as desirable, but because they seem the only hope as a stop-gap measure until permanent housing solutions can be found. Overall experience has not been too good; and although there is more and more evidence that sites and services projects will continue to play an expanding role in housing programs of the developing countries, this is more because of a growing recognition that permanent housing will not be available than an endorsement of the concept in its own right. In the next chapter the specific lessons to be learned from current experience are analyzed in an effort to form the basis of guidelines for future planning of sites and services programs.

Chapter IV

PLANNING THE SITES AND SERVICES PROJECT

There is enough experience now with sites and services programs that it is possible to begin to draw some guidelines on what factors are critical in planning the project. There is one factor which influences the eventual success or failure of a project. This factor is not a part of the planning process. It is government attitude. The failure of projects in Zambia and Kenya; the poor early experiences in Colombia, Morocco, and India can in large measure be traced to attitude. The governments of these countries approached the sites and services projects with an attitude that they were temporary stop-gap projects to be utilized until permanent higher-standard housing could be made available. As such, the government viewed the projects negatively from the beginning. Various officials who did not support the projects made various delays and decisions that slowed progress. Inadequate government support was given the projects administratively -- they were often allowed to drift among the bureaucratic levels. The first and perhaps most critical factor which will determine the success of a sites and services program is that government fully support it with the positive position that sites and services projects can make a major contribution to improving the standard of living among lowest-income people. This is fundamental. It is essential for planning a sites and services program.

Planning the individual sites and services project involves a number of steps, each of which must be carefully planned and executed. The diagram on the following page sets forth the basic steps in planning and executing a sites and services project. Each step shown really aggregates a number of substeps which should be identified and considered before the projects gets under way. Overall policies and institutional frameworks (see Chapter V) are assumed to be established to cover the various items discussed above.

1. Market Analysis

The starting point for a sites and services project is a careful market analysis. It is essential to know for whom the particular project is designed, the residents capacity to pay, their locational and design preferences, the number of households in the market. This information is needed if the resulting project is really going to serve the needs of a particular group of families. The experience of the Kariobangi project in Nairobi could have been avoided, for example, if better market analysis had been carried

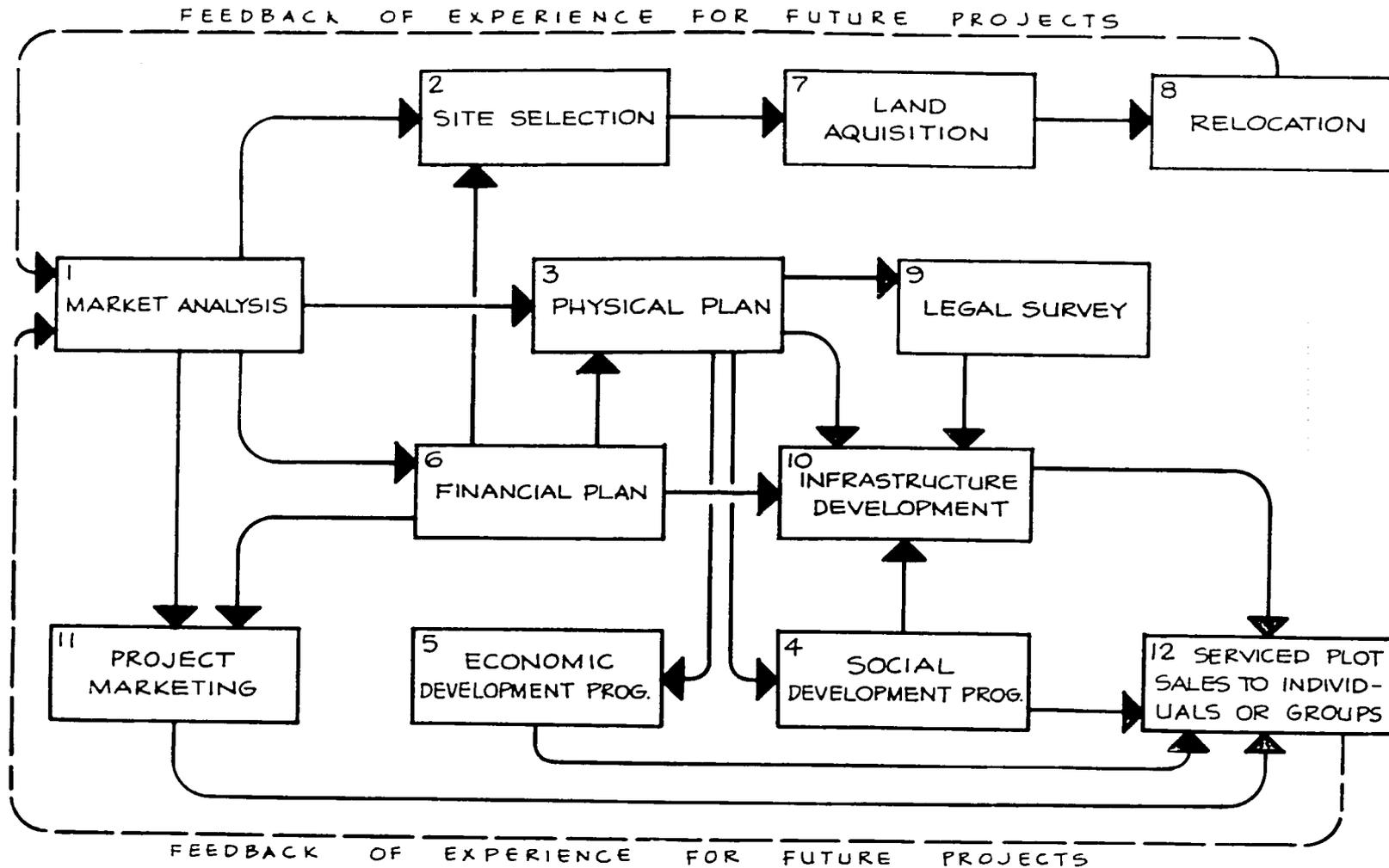


DIAGRAM 2
PLANNING SITES AND SERVICES PROJECTS

out and if the resulting project had reflected the results of such analysis. Market analysis will have a direct effect on site selection, the physical plan, the financial plan, the project marketing strategy.

2. Site Selection

Good site selection is crucial to the success of the project. If the site is not acceptable to the people to be served, the families simply will not stay. This has been illustrated over and over in the Kariobangi project of Kenya, in the Jhuggi Jhonphri scheme of India, and in the resettlement schemes of Manila, Philippines. The tendency in the past has been to utilize the cheapest possible land which is often of poor quality and located well out of town. This is a major mistake. The site must serve the needs of the lowest-income people, which means it must be located convenient to mass transportation, or preferably within walking distance of major employment sources. It must also be located within a short travel distance to the center of the city. Many of the lowest-income people depend on casual self-employment as their source of employment, which means day work at a variety of locations around the city.

The physical site should not only be acceptable to meet the immediate building requirements, but should also be able to meet anticipated improvements for settlement. Ground that will not accommodate the eventual installation of a sewer system, for instance, should be avoided even if such a system is not contemplated initially. The New Kanyama project in Zambia illustrates that higher costs will eventually be incurred if the future requirements of the project are not thought through at the time of site selection. It is desirable to consider the site selection process as one would do for any other residential neighborhood. The site should be well drained, have acceptable soil conditions, and if possible possess a rolling topography.

3. Physical Standards and Planning

There are no minimum physical standards which are relevant for all sites and services projects. The actual standards selected for each project should be predicated upon the ability of residents to pay (see discussion of the no subsidy concept under finance below).

There is no one set of minimum standards which would be applicable from city to city or country to country. The foremost consideration is to design a program which is scaled to meet the total size of the problem. Anything less is to say that a certain percentage of the people will continue to seek out squatter settlements, and will build unplanned, uncontrolled, and unserviced areas on their own. It stands to reason that even if the government can only provide raw land with a physical plan layout which will allow for later improvement, it is better than the chaos of uncontrolled development.

The concept of later improvement is the key consideration. Nothing should be done which would later block the systematic upgrading of the neighborhood. The physical plan should be concerned with reservation of space and the orderly layout which will provide the most economic situation for later installation of higher standards of infrastructure and facilities. This paper makes only passing reference to the physical standards which should be achieved in sites and services projects; however, the reader is referred to an excellent publication entitled Proposed Minimum Standards for Permanent Low-Cost Housing and for the Improvement of Existing Substandard Areas prepared for the Agency for International Development by the Division of International Affairs, Department of Housing and Urban Development, Washington, D.C. -- Ideas and Methods Exchange Number 64, May 1966. This publication provides detailed specification for the physical layout of neighborhoods and the supporting infrastructure required. It may not be possible because of financial considerations to obtain these standards in the initial construction, but the standards represent the desired minimum which should be achieved over time.

Plots

The plot sizes selected should be of minimum size sufficient to provide a living space acceptable to the potential residents. There are no fixed minimum standards that are generally applicable. The following factors should be considered in establishing the actual plot sizes in a given situation.

Method of Sanitation. If pit latrines or septic tanks are to be used, the plot must be of sufficient size to absorb the effluent without creating a health hazard. This can be established through soil tests on site.

Common Norms of Socioeconomic Group(s) to Live on Project. Social research can establish the actual patterns of living space required by each household. For instance, is it traditional to live in a joint family situation? take in renters? or will there be a large number of single men? Will households desire to carry on a marginal commercial or industrial activity on site (as is the case in India and Pakistan)?

Traditional Densities of Rural and Urban Settlements. These densities should be used to establish bench marks. If the population traditionally lives in high-density patterns, the plots should reflect this. If the traditional pattern is low density, the pattern should reflect this within tolerances of the overall financial considerations.

Site Design. Site design should establish an acceptable balance between a minimum cost layout for services installation (which means minimum frontages to plots, minimum road rights-of-way, large blocks of regular shape, etc.) and natural forms of settlement consistent with local desires. Wherever possible

traditional patterns should be used that are familiar to the prospective residents.

Land Cost. This is the least significant factor in establishing the project's physical layout (within reasonable limits). There is nothing more expensive than a layout which is not acceptable to the prospective residents. As a rule, it is better to have a well located site and layout which meets the needs of the people and reduce the level of infrastructure in order to meet the budget constraints.

Planned Long-Range Development. Long-range development of the site is also an important consideration in determining plot size. If the project is planned to be a rental scheme in which the plot owners will be encouraged to rent rooms to lowest-income people, the plots should reflect this use from the beginning. If the intention is that families will, over time, develop the neighborhood into a single-family detached house pattern, then another plot size might be appropriate -- even if a substantial portion of the initial population will be renters.

Roads

The site must be conveniently connected to the main road system of the city, but there is wide flexibility in the design and finishing of internal roads. Roads offer a major opportunity to save money. The lowest possible standard should be installed initially that will meet the minimum requirements of the settlement. The following factors should be considered in establishing the standard.

Minimum Length. Roads should be kept to a minimum length in the project and still provide access close to each plot. Presumably few residents will own cars so it should not be necessary to provide road access to each plot. However, as incomes improve over time more cars will be found within the project areas, and therefore provision should be made for the eventual parking of cars in convenient locations. These locations should be visually related to housing for security reasons.

Rights-of-Way. The rights-of-way should be sufficient to allow eventual construction of the road to the minimum standard of the city in which it is located.

Climatic Conditions. The climate should determine the initial street surface. If possible paved streets should be avoided in the beginning. Where monsoon rains or heavy dust conditions prohibit leaving the street at a rough grade, the minimum surface should be applied which will be acceptable in the local conditions. At the same time, maintenance costs under local conditions should be considered in relation to the ultimate economy of the road surface.

Water Supply

Water supply is of critical importance to the project. If water is not available, people will be forced to purchase water at very high rates privately or spend a major amount of time carrying water, often at great distances. Water is probably the most critical local service and should receive the highest priority. The alternatives are numerous and the cost considerations of each should be evaluated before a final selection is made. If tube wells are the only source available, engineering tests should be made to insure that adequate ground water reserves are present before committing a project to the site. If piped water is to be supplied, the alternatives range from stand pipes to outlets on each plot. Cost should be the primary determinant because, obviously, individual water points on each plot are better than stand pipes. However, if the quantity of water supply needs to be regulated either because of low availability or cost, it should be remembered that public water points tend to reduce the consumption per capita.

Regardless of the initial method of water distribution, the system itself should be laid out in anticipation of its eventual expansion to provide individual service to each plot. This means the easements required for servicing each plot should be established (the same holds true for the sewer system) and the water mains installed at a size sufficient to meet the ultimate needs of the project.

Sanitation

Sanitation, like water supply, is a critical element. Lack of sanitation is the most direct threat to the health and well-being of project residents and indirectly to all city residents. The range of choices available for a sites and services project are numerous -- from water-borne systems connected to each plot all the way down to communal pit latrines. Cost is a primary consideration, but other factors should be considered as well. The use of communal facilities in India and Morocco has been a complete failure. People do not respect the facilities and they become incredible health hazards. More success has been achieved with individual facilities located in common areas, but under lock and key of individual families. This should be the minimum standard attempted. Still more preferable is location of the sanitary facilities on the individual plots, even if a pit latrine or septic system is used. The maintenance of individual facilities will always be of a higher standard. In all probability water-borne sewage systems will be too expensive for initial consideration. Installation cost is high and water requirements add to the continuing costs. The exceptions might occur if the site were well located for a gravity system and an existing sewer system were nearby to minimize initial costs. Care must be taken to insure that a site can absorb pit latrines or septic tanks. Some very serious and expensive errors have been made in the past which could have been avoided if adequate testing had been done for the sites

and services schemes. Nonetheless, even if a water-borne system is not contemplated initially, consideration should be given to its eventual installation at a later date. Physical layout of the site should reflect sewer system design principles in order to minimize costs if and when it is possible to install a sewer system.

Electricity

It is highly desirable to have electricity available within the project. Electricity is important for stimulating local small industry because it allows use of power tools and small machines. Street lighting, at least on key intersections, is desirable because it adds to neighborhood security and provides a gathering place for night-time social contact. The installation of electricity can easily be made at any time and therefore can be postponed.

Other Infrastructure and Public Facilities

Unless a given situation requires special infrastructure based on the uniqueness of the site, infrastructure installation should be avoided. It will not be uncommon, however, to have requirements for storm drainage facilities. The pattern of natural drainage should be given consideration when plots are laid out in order to minimize future problems. Where facilities are required, they should be open ditches initially, unless erosion or soil conditions dictate a higher standard. Internal walkways will be required, particularly if the length of streets is to be minimized. These should be scaled to the amount of pedestrian traffic anticipated. Walkways need not be paved unless local conditions require it because of weather conditions or dust. No extraneous infrastructure should be introduced into the project. Such things as curbs or sidewalks along the street network will add greatly to cost. The money, if available at all, can be better spent on public facilities.

Installation of public facilities is frequently overlooked in the development of sites and services programs, primarily because they usually fall under the management of different government agencies than the one developing the project. This is unfortunate as it is the availability of public facilities which will often be a high priority among residents. Typical of public facilities which should be provided on site are schools, health clinics, civic centers (for meetings of voluntary organizations), a local community development office (to bring the services of government to the people and provide a sounding board for the people to make their concerns known to government), and open space for recreation. Space for religious buildings should also be provided to reflect local requirements.

As a minimum, sites for various public facilities should be included in the project layout. Construction of buildings on the

sites is secondary to instituting the government programs. It is more important to have a school in session even if it is in the open air or in a temporary shelter than to wait until a permanent building can be constructed. The construction of buildings for public facilities is one area in which self-help has been successful in Latin America and Africa. The evidence indicates that people will be motivated to work together in constructing schools and health clinics if given encouragement and some technical guidance.

4. Social Development Programs

All too often planning of sites and services projects has been thought of in purely physical terms, primarily of infrastructure and residential plots. Little or no concern has been given to the social institutions of the residents; or where there has, it has been primarily an imposition of government social workers and their programs on the people. Yet among the people themselves, a vast number of voluntary agencies exist covering all manner of activity. These voluntary groups are usually limited for funds and facilities, but collectively represent a very great potential force for neighborhood improvement, civic stability, and self-advancement of their members. The role of government should be to harness these latent potentials and provide an institutional environment within which they can develop naturally. The framework within which this can be accomplished should be an integral part of planning the sites and services program and should be recognized in the establishment of the program budget.

One imaginative proposal for a program of urban community development along the lines required was made by the Calcutta Metropolitan Planning Organization in India as a part of its basic development plan. Two pilot projects were started as part of a program with six general objectives:

1. To coordinate and stimulate existing voluntary effort.
2. To develop civic loyalties on a wider neighborhood basis.
3. To achieve effective implementation of existing programs of social education and economic development through voluntary agencies.
4. To establish a framework for voluntary relief and welfare in civic emergency.
5. To promote the integrated development of contiguous rural/urban areas
6. To involve local leaders more fully in government planning and development.

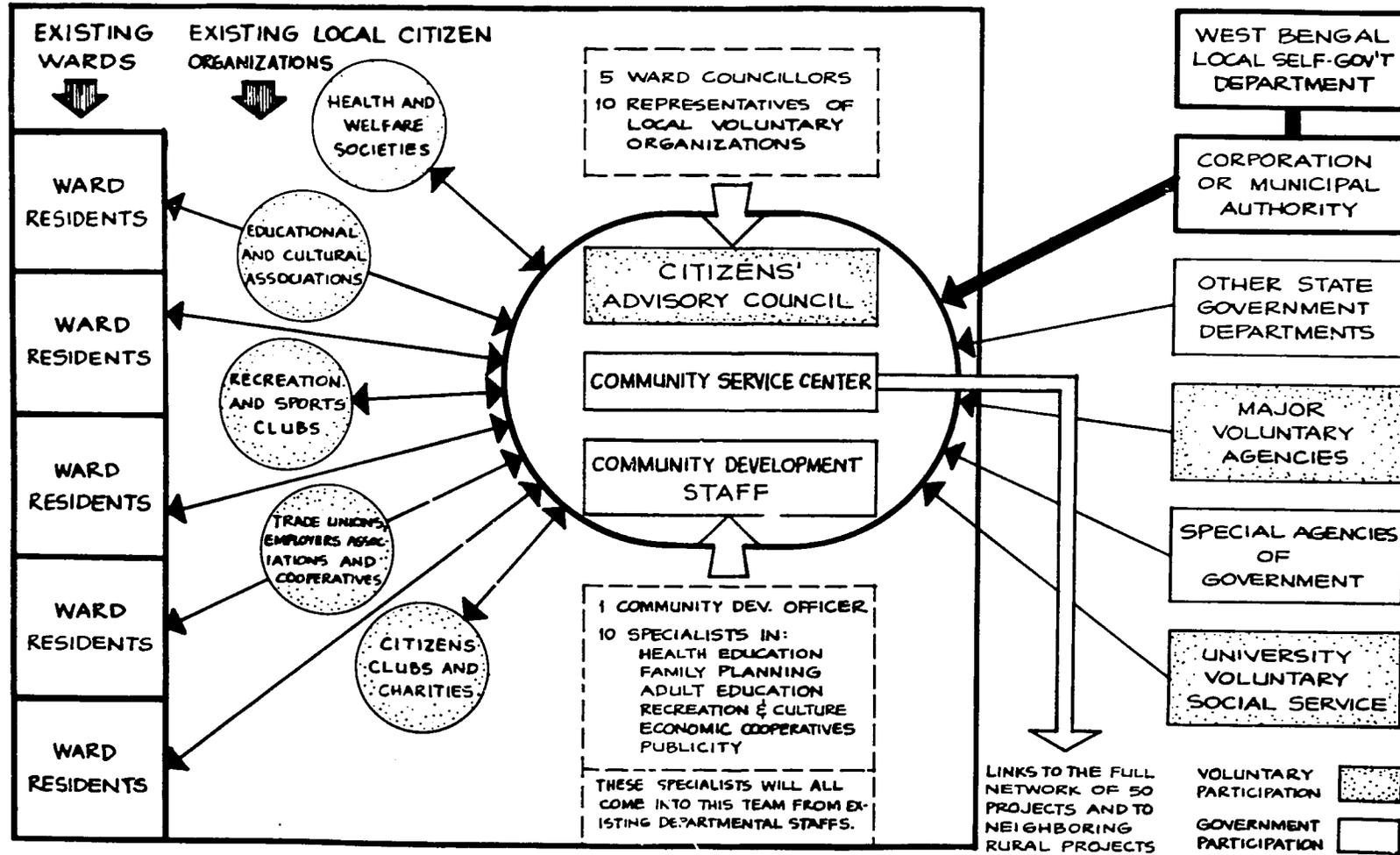


DIAGRAM 3
PROPOSED ORGANIZATION FOR URBAN COMMUNITY DEVELOPMENT

The approach to implementation was to divide neighborhoods into viable units. A centrally located structure for the urban community development program was the local base for implementation. Each center was to be multi-purpose, to include a medical clinic for out-patients and a family planning program, a citizen's advice center (for general information on government programs, employment opportunities, and referrals to other agencies), an adult education center, meeting rooms for voluntary groups, and staff offices. The staff was to include specialists in health education, family planning, adult education, recreation, and economic cooperatives. The size of the staff was set at ten, but this figure should reflect local needs, budget considerations, and the population to be served. The government officers were to be seconded from the relevant government departments. Each center would have an advisory panel of local leaders representing the interest groups of the area. A diagram¹ of how the urban community development unit was to be organized in Calcutta is presented on the preceding page.

5. Economic Development Program

Shelter is only one need of the lowest-income family and it is often given a rather low priority in relation to other needs. At the top of the priority list is the need for employment. The majority of lowest-income people are unskilled and ill-prepared for urban industrial jobs. Furthermore, industrial jobs cannot be created in numbers sufficient to absorb the rapid increase of the labor force in most cities. There is a great need, therefore, to plan for opportunities in casual labor and marginal employment. This is a main reason for insuring that the sites and services project is located reasonably close to the city center where most casual employment is generated. In addition, however, the sites and services project itself should encourage creation of employment through development of small industry and commerce.

Small industry and cottage industry operations usually abound in the settlements of lowest-income people. A walk through the neighborhoods of lowest-income people -- whether in Guayaquil, Ecuador or Bombay, India -- will show the population actively involved in a variety of small tasks relevant to the particular city and culture of which it is a part. It is important that the physical plan recognize this requirement for space to conduct marginal economic activities, and that administrative policies encourage it. Crucial to the success of marginal business is that it not be burdened with overhead. The owner must often start by working at his place of residence, outside and/or inside his house. There is not enough return to permit rental of space elsewhere in the

¹Calcutta Metropolitan Planning Organization, Basic Development Plan: Calcutta Metropolitan District, 1966-1986 (Sibpur, Howrah, India: Ganges Printing Company, Ltd., 1966), p. 105.

community; yet frequently government planners have held that businesses must be separate from residences. Such a position may be appropriate for middle-income residential areas, but it can be a crippling blow to the lowest-income household and in turn jeopardize the success of the project. The widest possible latitude should be given the lowest-income project residents in use of their plot for economically productive purposes constrained only by physical safety requirements of the neighbors.

The same principles apply to commercial development as well. A market place should be planned in the project at a suitable scale to reflect the needs of the local population. The market place should take on the natural characteristics desired by the people it is to serve. It should encourage the small trader who cannot pay rent for a permanent stall by providing space for open-air daily or weekly trading. If the market also serves as a social center, provision for tea shops and beer selling should be included. Premature efforts at formalizing the market into middle-class-oriented shopping centers should be avoided. In addition, a flexible attitude should be taken toward small individual shops on residential plots within neighborhoods. If an individual household can augment its income through such marginal operations, the residents should be encouraged to do so.

Government's role is to encourage the maximum level of self-employment possible in the sites and services projects. It should do this through providing a physical environment conducive to the initiation of marginal industrial and commercial operations and through assistance made available through the urban community development program.

6. Financial Plan

The financial plan is the most important planning document. It is essential that all costs of the project be estimated and that sources of revenues to off-set these costs be predicted in advance. The financial constraints will largely determine what is possible in the physical plan and the standards of infrastructure to be provided. As a minimum the financial plan must consider the following areas of cost:

1. Overhead costs of the agency and its operations assignable to the project.
2. Depreciation on buildings and equipment for the project (not including housing).
3. Taxes or payments in lieu of taxes.
4. Loan repayment (principle and interest).

5. Land development:
land acquisition and compensation for improvements;
relocation of people on site as required;
clearance;
survey;
basic infrastructure development.
6. Reserves for uncollected revenues and delays in sales, rentals, or leases.

A detailed estimate of the potential revenues is also required which would include the returns on sales, rentals, or leases; additional fees, grants or subsidies (if anticipated).

The financial plan should include a cash flow projection of the project over its first ten years of existence. There will have to be very close interaction between the financial plan and the physical plan. These two activities should be undertaken simultaneously and should have a close feedback relationship. No project should be undertaken if it is not possible to develop a feasible financial plan and cash flow projection for that project.

Other Planning Steps

It is not possible to fully discuss the other critical steps in the process of planning and developing sites and services projects because of the space and time limitations of this paper. It is important, however, to note them as they should be considered in formulating the sites and services program.

7. Land Acquisition

Land acquisition should start as soon after the site has been selected as possible. The procedures will vary from country to country and each country should review its existing procedures with the intent of simplifying them and making them faster to implement.

8. Relocation

As a general principle, every effort should be made to retain present residents on the site. Considerable effort should be made during physical plan preparation to incorporate existing development no matter what its physical condition. This is consistent with the recommended policy of preserving housing stock, will greatly reduce project costs because compensation is avoided, will avoid time delays in the project while relocation is accomplished, and will spare the residents the very great social and economic hardships usually associated with relocation. However, it may be necessary to relocate all or part of the residents, in which case

there should be a fair and equitable relocation plan prepared concerning where the people will go and how much they will be compensated.

9. Legal Land Survey

As soon as the land has been acquired and rough clearing accomplished, the legal land survey of plots and street rights-of-way should be taken up according to the physical plan. Speed is important here because it is not unknown to have squatter invasions of housing sites if it appears that the government is not proceeding with a given project in a reasonable length of time.

10. Infrastructure Development

The financial plan will have determined the standard of infrastructure to be developed initially, and the physical plan and survey will have determined its location. Actual development of infrastructure should be done either through private contracts or through the LDA's own staff. Local conditions and policies should determine which alternative is more feasible.

11. Project Marketing

Project marketing is not generally done at all in most projects. Frequently the demand for plots and/or houses is so far beyond the available supply that it is not uncommon to have many times the number of applications as plots available. However, if the sites and services program is to actually be designed to achieve the objective of meeting the total needs of the urban population for living space as advocated here, then it will be necessary to have a specific marketing promotion program. Such a program should be geared to making the lowest-income people aware of the sites and services program and to instructing them in the opportunities and responsibilities which are involved.

12. Serviced Plot Sales, Rentals or Leases

The final step in the project is, of course, the distribution of plots to the future residents. This step will also require planning. The policies governing the decision to sell, rent or lease should be carefully thought out and reflect local conditions and desires of the target group. The financial plan's success or failure will depend on execution of this step in the most efficient and businesslike manner possible. The planning for this step should be started well in advance of the actual time the project is completed.

Chapter V

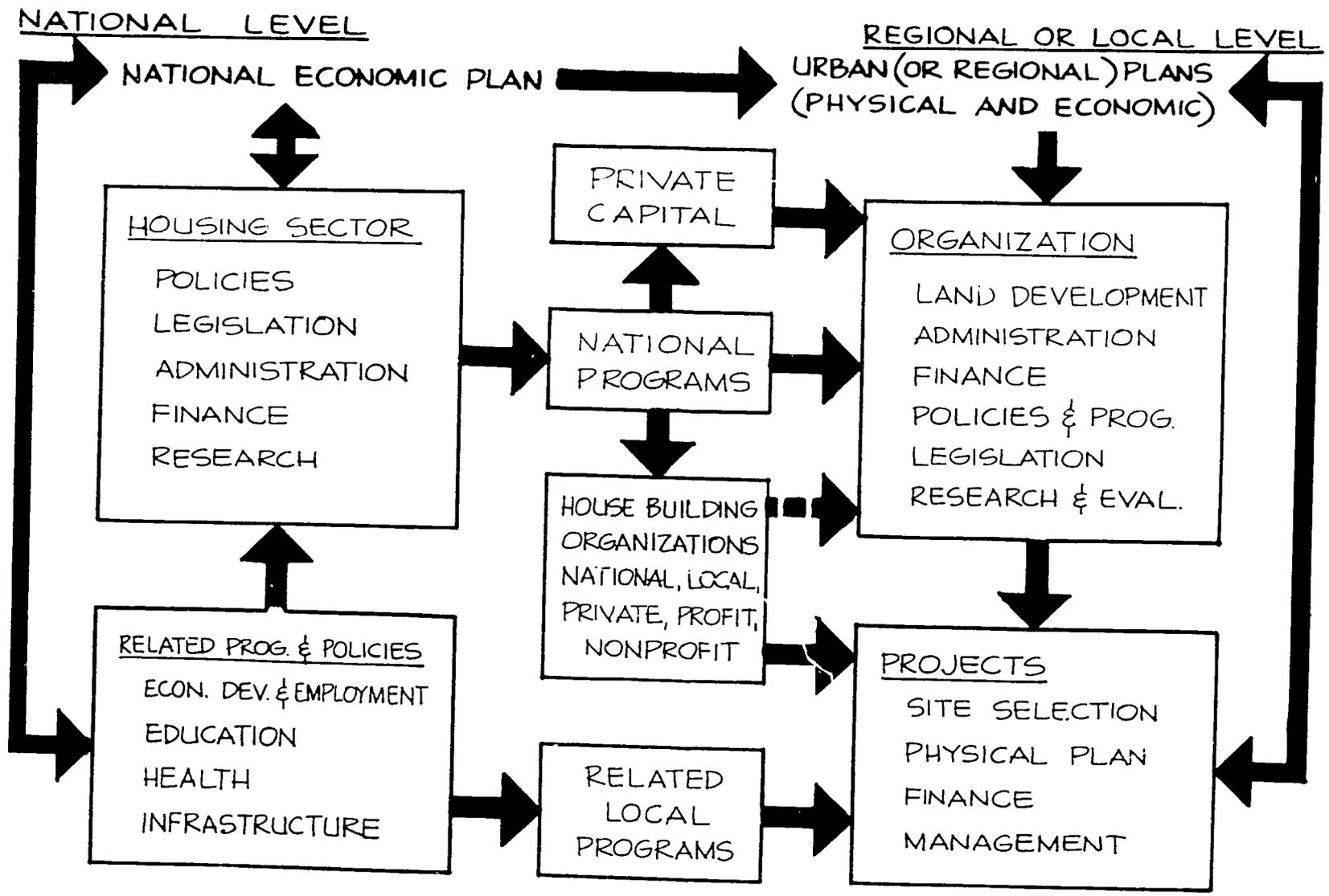
PLANNING THE SITES AND SERVICES PROGRAM

There are two basic approaches to planning for sites and services. The most frequently used is the concept of "bottom up" planning or, in other words, starting with pilot projects grafted on to an existing housing agency. The purpose of this approach is to test the concept and, presumably, if it looks promising, to extend it into a larger program framework. The advantage of this path is that it is easiest to administrate and it limits the government commitment. The disadvantages are that the sites and services project is usually an orphan in its adopted agency, the scale of the test is limited to a few hundred plots, and the method of execution is not applicable to a larger-scale program. The result frequently is that sites and services projects do not receive a full test and are considered just another housing program.

A more positive approach is to start with a national planning framework and examine the issue at its broadest scale to develop local projects which are applicable to the total problem and responsive to its constraints. The diagram on the following page presents a schematic form for the major elements of such a national planning framework for a sites and services program.

The National Economic Plan

The starting point for planning the sites and services program must be the national economic plan. It is at this level that the needs for housing are compared with competing needs from other sectors (agriculture, industry, transportation, etc.) and the major allocation of the available national capital resources are committed. In order to make these allocations, considerable research must be undertaken and policy decisions made. Therefore, there is a feedback from all elements of the planning framework into the national economic planning process, which for simplicity of discussion is omitted here. Unfortunately, the housing sector tends to be weak in most development plans, often because of the economists' bias that housing is a social overhead investment rather than a productive investment, and partly because the archaic traditional approaches to heavily subsidized housing have made realistic programming in the sector difficult. Housing needs are so great and usual solutions so expensive that allocation for housing is more politically than economically determined. The kind of planning for housing proposed here should greatly improve, over time, the quality of housing inputs into the national economic planning process.



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DIAGRAM 4
 PLANNING FRAMEWORK FOR SITES AND SERVICES

The significant output of the national economic plan for the housing sector is commitment of the maximum capital available from public sources and an estimate of the funds to be mobilized from the private sector. These budget allocations become major constraints within which detailed planning for the housing sector at the national level must take place.

The Housing Sector

The term "housing sector" is used here rather broadly to cover a variety of activities that are related to housing. The main purpose of planning the housing sector at the national level is to prepare a program for distribution of available funds, both public and private, in the optimum manner consistent with stated objectives and policies of the country. This statement appears obvious but in fact there are frequent inconsistencies between the announced policies of a government (usually supporting housing for lowest-income peoples) and actual program allocations (which frequently favor middle- and upper-income groups). Correction of these inconsistencies will prove to be a formidable task because of the tremendous vested interests involved and historical precedents for favoring upper-income people with housing subsidies. If governments are serious about solving their national housing problems, they will eventually have to face up to this difficult and politically hazardous task.

Housing Policy Research

The starting point for formulation of reasoned housing policy is background research. Surprisingly, many countries have very little information beyond estimates of aggregate demand upon which to base housing policy. A strong housing research unit should be established at the national level to detail housing demand by income groups and by social and economic characteristics. In most typical situations such a research program will show that over 50 percent of the population cannot afford a permanent housing unit of the kind usually constructed as low-cost housing (even with substantial government subsidies). The research should also propose policy alternatives for a national housing strategy along with the technical back-up support required for decision-making. The important constraint is the need to have the strategy deal with the total housing problem of all income groups. Almost certainly such a policy will suggest a commitment to a substantial sites and services solution.

Housing Policy Formulation

Clear housing policies at a national level based on research are essential. Such policies should be able to stand the test of realism. Policies based on myths and hopes for political advantage do a great disservice because they preclude the consideration of realistic solutions. The kinds of generalized policies which are

relevant to the housing requirements in most developing countries might include such things as were discussed in Chapter II, including:

1. Preservation of existing housing stock.
2. Avoidance of the use of direct subsidies for housing and the abandonment of any subsidies for middle and upper-income housing or housing for government officers.
3. Encouragement of the private sector and individual initiative to play a larger role in the construction and finance of housing programs.
4. Commitment to provide every household with the opportunity of purchasing, renting, or leasing sufficient land at reasonable rates to meet their minimum requirements for living space at locations which are convenient to their needs and upon which they can build or rent a house with their own resources.

Based on these broad principles, the specific legislation, administration and financial programming could take place to insure the implementation of programs designed to achieve the objectives.

Legislative Base

Basic to the institutionalizing of a housing policy is the establishment of an adequate legislative base. Legislation should reflect the policy objectives of government. It should include not only enabling legislation for the kind of housing and land development institutions selected but also appropriate property tax laws, modern building codes which reflect local conditions, town planning legislation to meet local needs, and housing finance laws. In establishing the legislative base, housing research should be used to formulate the policies and test the possible results.

National Administrative Framework

At the national level it is necessary to establish a central agency responsible for housing programs. This can be either a ministry in its own right or part of a ministry. The advantage of placing the responsibility for the housing program within a ministry is that it gives housing interests a voice at the highest level of government. On the other hand, the operations of a housing program can frequently best be accomplished outside of the government structure in a parastatal body or other form of public corporation. This system has the advantage of allowing conventional business practices to be utilized. It gives greater flexibility and control. The staff does not have to be a part of the civil service, which provides for better performance and accountability.

The housing agency is more free of political pressures. A combination is possible in which a ministry is responsible for policy formation and supervision of a parastatal body with responsibility for program execution. This organization is used successfully in Tanzania and elsewhere.

The amount that the operations of the housing programs can be decentralized is very important. An effort should be made to establish decentralization at least to the regional level if not to individual urban centers. The constraints which should limit premature decentralization are the ability to staff the agency with sufficient trained personnel and the experience of the agency to the point that routine operations are systematic. Until these constraints can be overcome, it is best to maintain central control.

Decentralization is desirable because it allows the housing program to be more in tune with local needs and resources, it saves processing time for routine business, and allows for closer supervision of projects.

Considerable attention should be given to establishing the operating procedures for administration of the housing programs. All too often, at least in the newly independent countries, the administrative procedures inherited from the colonial period are totally inadequate to deal with the current situation.

National Housing Finance

Planning for housing finance is the most difficult task. The financial constraints in the housing program are the most critical -- they form the absolute barriers beyond which nothing can be done. Yet finance as a subject provides many alternatives and considerable flexibility. The planning task is how to make the best use of resources available from public sources, and how to mobilize the maximum resources possible from the private sector without curtailing the flow of funds into other investments desired by government. Since the requirement for housing finance is almost unlimited in terms of need, the issue is how to make the terms of housing finance both attractive to the investor and to the borrower. To do this, careful study must be given to the alternative sources of funds and to how to structure programs which will reach these funds. This means careful attention to the role of commercial banks, the possibilities of creating a national housing bank such as the one in Brazil, etc. Plans must be outlined to capture the private savings of small investors in order that they might contribute to financing their own houses. The housing finance area is complex and must be studied in detail in order to establish the right mix of incentives which will generate the capital required.

On the public side of the housing finance issue, policy must be made on the use of subsidies (which has previously been discussed) and other possible incentives dealing with mortgage guarantees or tax abatement. These are serious questions requiring study, but

collectively they become a vital part of the housing program. In the area of technical assistance, it is not unusual to see many missions dealing with housing technology and architecture, but technical assistance support for the preparation of housing finance strategies is very rare. Yet improvements in housing finance mechanisms will have a much greater and more rapid effect on house building than any foreseeable changes in building technology.

National Housing Programs

If the research, policies, legislation, administration, and finance procedures and guidelines have been well formulated in planning for the housing sector, it should be possible to develop sharply defined and focused housing programs. For each income level there should be a specific response by government to the housing needs of that level. For middle- and upper-income people, this response might be the provision of an adequate number of serviced plots to be sold at a reasonable profit by either government or private enterprise coupled with a government housing loan guarantee program utilizing private investment capital. For lower-middle-income groups, it might mean provision of service plots at reasonable cost along with the encouragement of cooperatives or other institutions which could assist in lowering housing costs. The concepts of core housing and aided self-help might be considered. The government might further assist with direct loan programs if private monies are not available. For people below the housing threshold, sites and services projects may well be all that can be provided without major subsidy. Quality of the infrastructure should reflect ability of families to pay, but for all households there should be provision of at least unserviced plots in planned layouts. For the lowest-income people, traditional housing provided through their own initiative should be encouraged.

The government should seek to encourage both profit and non-profit private housing organizations, in line with the policies advocated here. The government's main obligation is to assist private agencies in responding to needs through financial programs and through the provision of serviced plots at reasonable rates. It may also be decided to have public house building organizations. If this is desirable, these housing organizations should be set up along commercial lines and be held strictly accountable for their programs. The central government ministry concerned with housing should maintain a supervisory control over the housing organizations either directly or, in the case of private groups, indirectly (through control of land sales, provision of loan funds, etc.).

Land Development Agencies

All residential development includes a sites and services component regardless of the quality of house eventually built and its total cost. Yet land development activities are frequently fragmented among a large number of public agencies, housing organizations

and private groups. Where the rapid development of large areas of urban land is required to keep pace with rapid population growth, it may prove desirable to establish a Land Development Agency (LDA) to develop urban land for sites and services. The serviced plots can then be sold to both public and private house building agencies or rented, leased, or sold directly to families for individual residential construction. This latter course of action is best suited to serve the needs of lowest-income families.

The LDA would be responsible to a central government agency or ministry, but would be oriented to serve the needs of a particular urban area. The structure of an LDA might be as illustrated in Diagram 5 on the following page.

The Board of Directors

The Board would represent the stockholders of the LDA. Depending on the policies established, board members could represent the central government, the local urban government, and outside private investors (if a public/private corporate structure option were selected). The Board of Directors should be responsible for hiring a Chief Executive officer, setting policy, periodically reviewing corporate performance, approving LDA project initiatives, and other duties normally executed by such a body.

Office of the Chief Executive Officer

The office of the Chief Executive would have full administrative responsibilities as are generally found in a corporation.

Community Development Division

This division would be responsible for organizing the urban community development activities (along the lines previously described) in cooperation with the appropriate government agencies. They would work directly with the project residents, particularly those in sites and services projects for lowest-income groups, in order to provide assistance in economic and social development activities.

Finance Division

The division for finance would have three areas of responsibility: 1) financial planning for the LDA; 2) contract approvals and purchases for the projects; 3) collection of revenues.

Land Development and Construction Division

This division would be responsible for site planning of LDA projects, preparation of bid specifications, collection of

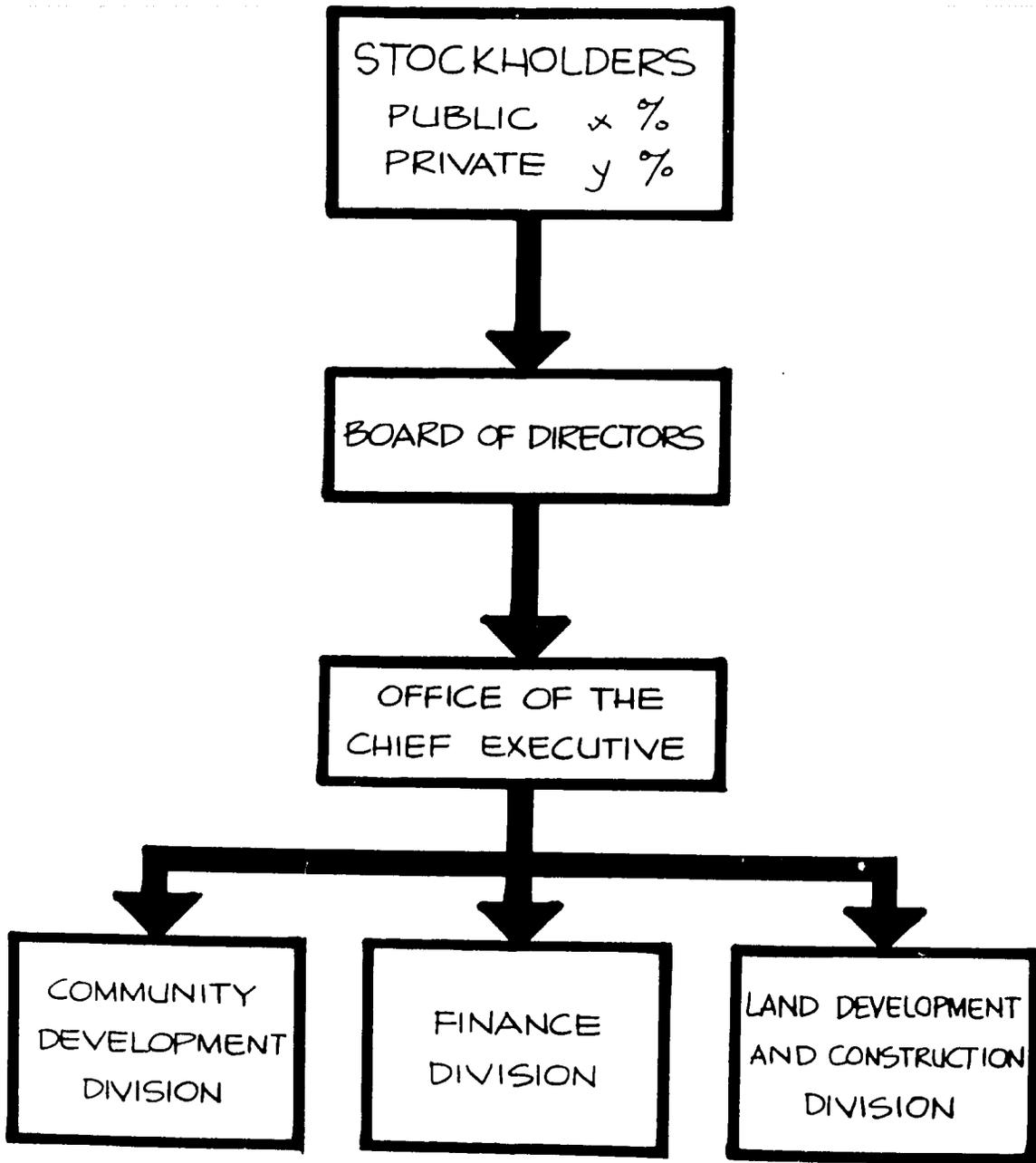


DIAGRAM 5
ORGANIZATIONAL STRUCTURE OF
LAND DEVELOPMENT AGENCY

construction cost and time data, supervision and certification of all work done under contract with the LDA, and provision of technical assistance to individuals and groups undertaking self-help housing activities.

Sites and Services Program Administration

Administration is probably the most important component in determining the success of a sites and services program. With the exception of the Chile program, sites and services projects have essentially been undertaken as separate entities, usually by an agency responsible for permanent housing construction. The administrative effort required to complete a given project has been very high and the costs in time very extensive. Generalizing from the experiences of various countries with sites and services projects, five basic problems seem to frequently occur.

1. Policy and program formulation proceed on an ad hoc basis. Each project is considered a separate undertaking with little concern for working out a systematic approach to developing an ongoing routine program. For instance, land acquisition is for a given project rather than part of an overall program to provide a steady flow of land ready for development to meet total requirements.

2. Program implementation proceeds in an uncoordinated and inefficient manner. In almost every case the agency primarily responsible for a given sites and services project does not control all the elements required for even the physical development of the site. Land acquisition, land survey, installation of utilities and roads, and public facilities are usually handled by separate agencies of government. Usually both central government and local government agencies are involved, which further complicates the proceedings. The result is inordinate time delays while coordination is sought and, worse, the loss of money and confusion which result when one agency countermands decisions of another.

3. Existing administrative procedures are designed to accommodate only small numbers of individuals seeking plots. Reliance on financial subsidies (see financial discussion below), the extremely heavy administrative burden associated with each project, the reluctance of governments to fully commit themselves to the sites and services concept, and the constant desire to increase the level of infrastructure provided combine to stagnate the sites and services program. The result is that only a small number of households out of those seeking residential plots are able to participate in the program.

4. Existing practice tends to involve a high degree of central government management and control. Though the situation varies from country to country there is a tradition, particularly in the newly independent African countries, to concentrate the development process at the central government level. The result is that

communication with towns outside the capital city is time consuming and difficult. Local initiative is reduced. The people feel that they are dealing with a distant and abstract body.

5. There is a basic orientation toward providing a high standard of physical development regardless of needs or economic limitations. Over and over again, projects in sites and services areas have begun at the initial planning stage with minimum standards and then well meaning government officers have slowly raised the standards to the point that costs preclude settlement of the site by lowest-income people who were the initial target group. There is a great psychological barrier, which is only slowly breaking down, involving facing up to the need for a truly minimum standard project. Government officers have been quoted as saying that sites and services schemes are nothing but slums and that the government should provide better for its people. The experience of Zambia stopping a successful program for these reasons is not unique.

The Tanzanian experience reflects these administrative problems. Tanzania made a major commitment to the sites and services concept by calling for the development of 25,000 plots during the Second Five-Year Plan period. The responsibility was assigned to the National Housing Corporation (NHC), a well run parastatal body which has been developing a little over 1,000 permanent housing units per year for lower-middle-income families. NHC officers were not enthusiastic to the sites and services concept and have felt that it was a program for little more than slum development. The Second Five-Year Plan called upon NHC to also construct 15,000 permanent housing units (almost three times the number built in the previous five years). The inevitable result was to relegate the sites and services program to a secondary status -- it was first programmed to develop 3,000 plots during the first year of the plan but this was soon cut back to 500 units on a pilot project basis. Later it was agreed that these plots would contain a permanent sanitation unit on the back of the plots and a core house which the residents could finish through self-help. International technical assistance was volunteered to make the pilot project into a cooperative and the project is now going ahead. In the process, however, the concept of a minimum standard sites and services approach has been abandoned and a much more expensive program instituted. The size of the program has been greatly reduced.

This is not to say that core housing and higher standards do not have a place in the overall spectrum of housing supply. They clearly do serve a purpose. The illustration is only to point out that all too often the target group -- lowest-income people -- is lost in administrative policy-making through a series of independent decisions. Also, the administrative framework is often not adequate to meet the demands of the optimistic objectives. In this case, NHC was totally unprepared administratively to take on this vastly expanded mission even though it was an excellent organization at the scale of its then current operations.

Administrative planning is therefore a critical ingredient in establishing a sites and services program. Such planning should start with a firm commitment to the sites and services concept, not with apologies but with a positive sense that this is a highly practical and desirable solution to the needs of the lowest-income groups. The scale of the program should be set so that the administrative machinery required can be determined and organized. This will probably require a training program to provide the staff necessary. Such a training program should be organized and instituted. Detailed administrative practices should be formulated. The means of insuring coordination should be instituted. All of this should at least be considered and preliminary proposals made before instituting pilot or demonstration sites and services projects.

Pilot projects are a popular approach to getting started in the sites and services area. Governments like to start with a pilot project because it presumably will give information on how best to proceed with future projects and it tests the acceptability of the ideas. Pilot projects are an important technique in structuring the sites and services program. Unfortunately, all too frequently the so-called pilot project does not really accomplish its objective. If the long-term administrative and financial program planning have not been done in advance, the opportunity of using the pilot project to test the concepts and procedures is lost. By concentrating resources, both administrative and capital, it is possible to develop a given project, but this may have no relation to what is possible if a large-scale program is undertaken. Pilot projects should be utilized under proposed long-term program conditions so that the experience is meaningful. In addition, specific evaluation techniques should be used to systematically record the experience and clarify the lessons to be learned. Without formal evaluation, pilot projects do little to contribute to the preparation of a long-term program.

Probably the most important initial question in administrative planning is the organizational structure of the group responsible for the sites and services program. There are no specific guidelines which are universally applicable, but consideration should be given to the following:

1. As many of the elements of the program as possible should be grouped together under one agency. Where possible the agency should be able to completely develop the infrastructure required.

2. Financing should be controlled by the development agency in order to have better cost control and to tie revenue collection into the ongoing program. It is highly desirable to avoid situations in which the construction financing comes to the agency by way of annual appropriations and the revenues are returned to the government treasury. Such a system makes planning

for future development extremely difficult and confuses the accountability for the program.

3. Where coordination is required among agencies, it should be formalized by establishment of a joint committee and preparation of joint work programs and budgets for the program. It is essential that all agencies involved be a part of the coordinating process, including those providing social services.

4. The administrative agency should be organized to support an ongoing program rather than a series of separate projects. This means that a steady flow of land for development must be acquired, work crews must be on a permanent basis, special contracts can be let for work on several projects at one time, and administrative overhead is spread over a larger program. All of these things, and others, should be designed to reduce costs through economies of scale.

The question of what kind of agency to use as the primary group will depend on a number of local considerations. There is an obvious advantage to utilizing a house building agency that already exists. It will have had relevant experience, some skilled management talent, possibly a skilled labor force, sources of capital, etc. On the other hand, house building agencies have been reluctant to take on sites and services responsibilities because of a basic feeling that they are somehow inferior to building permanent housing. If this is the case, the sites and services program can flounder because of a basic distaste on the part of the housing agency. Care must be taken to insure that the housing agency is prepared to take on the new responsibilities in a positive manner. It may well prove desirable to have a training program or seminars before getting started so that a full appreciation of the concept can be gained.

Another advantage in utilizing a housing agency is the possibility of taking profits earned through the development of middle- and upper-income housing and applying them to the sites and services program, thereby reducing the costs to the residents. This would also open up the possibility of mixing the sites and services plots with higher levels of housing, which would have several advantages. It would make a better physical layout because permanent housing would break the uniform nature of the sites and services area. It would permit charging off part of the infrastructure to the higher-cost housing, which would reduce costs for the sites and services part of the project. An interesting proposal along these lines was made for Tanzania. The proposal suggested that middle- and upper-income housing should be built in linear layouts along collector streets, which would serve to open up new land areas for sites and services development. In this way the extension of utilities could be made to service both groups at little additional cost.

And the social objectives of the government to mix income groups and avoid class segregation could be achieved.

Experience suggests that the idea of mixing housing types is very practical in terms of cost savings and is in line with the social objectives of most countries, but that it is not looked upon with favor by the middle-income and upper-income groups. Also, most housing agencies are losing money because they substantially subsidize middle- and upper-income housing. Therefore, there is little chance to obtain a surplus which could be used in the sites and services program without thoroughly revamping the entire public housing approach.

For these reasons, serious consideration should be given to the formation of a new land development agency which would be responsible for the sites and services program. At the same time, this agency might develop residential plots of a higher standard of infrastructure which could be sold either privately or to other public housing agencies for construction. In this way the land development agency might still make a profit on the higher standard plots which could be used to reduce the sites and services program costs. Also, they would be able to stay out of the house building business, which involves more complicated technology, financing, and administration. By making the sites and services program their primary activity instead of the secondary activity of a housing agency, a more dedicated organization can be obtained. However, it is not possible to generalize on this important question and each individual situation should be studied in its own right.

The administrative responsibility for sites and services programs is usually thought of as a government undertaking. In almost every case the sites and services project has been a government activity. The only exceptions have been some sites and services projects undertaken by private industry for their workers. This does not necessarily have to be the case. The success of the private companies in the Mathare Valley area of Nairobi, Kenya suggest that with proper incentives it may well be possible to stimulate private initiative in the sites and services program area.

Consideration should be given to attracting private participation into the sites and services program. The main advantages would be reduction of public capital required, use of private management personnel (which would mean greater flexibility), and relieving government of the political burden of providing sites for large numbers of low-income families. This latter point is important because when the government is involved in housing, it creates an obligation which the citizens are quick to exploit through demands for greater subsidies, higher standards, and by avoiding payment of rent through political pressures. A private organization can exercise greater control and discipline over the project.

The best solution may be a compromise which would combine the advantages of public and private participation. A land development corporation owned jointly by government and private investors might prove attractive. The government could contribute land as its paid-in capital; the land could either already be in its ownership or be acquired through land acquisition powers. The private investors would put up the working capital for development. The Board of Directors would have both public and private investors represented. The management of the corporation would be through private employees not covered by civil service regulations. This kind of organization has the advantages of a private firm with its flexibility and aggressiveness, but still would be regulated by the public interest.

The basic rule is that if the sites and services program can be shown to be a profitable undertaking, then it will be possible to enlist private enterprise. To date no country has tried to make this approach work.

Financial Factors

Financial factors must be the major constraint on what is possible. The choices are relatively clear, but financial implications are frequently ignored in public housing programs. There will only be so much capital available from government for housing or sites and services projects. The government has the responsibility to allocate this money to best serve its objectives. Next, government must determine how the money allocated to the lowest-income people for sites and services projects is to be distributed. To do this, it needs to calculate the reasonable payment level that can be expected from potential residents (allowing for contingencies such as nonpayment of rents, inflation, etc.). Finally, it must decide whether or not the project is to be subsidized and if so by how much.

If the decision of government is to create a nearly subsidy-free sites and services program, the task becomes one of fitting the prospective residents' abilities to pay against the cost of constructing the sites and services project. This suggests the need for a variety of alternative levels of infrastructure. For the very lowest-income group it may be possible only to provide raw land laid out in a workable pattern which will permit improvement at a later date as income levels increase. Nonetheless, the problem is one governed by financial realities and not a given set of minimum standards (regardless of how desirable they may be).

There may be sound grounds to provide some form of subsidy to the program. This subsidy might legitimately come from profits earned in other activities of the responsible agency. It might come through tax reductions on the plot holders, or below-market interest rates on capital, or on reduced rates for utilities if the subsidy is to be absorbed by other users within the city better

able to pay. The important point is that whatever subsidy is used, it should not require annual capital transfers from government to the agency in order to keep it solvent. The subsidies should be borne by the government outside the framework of the responsible agency. In this way the responsibility is clearly placed on the agency to carry out its activities in an economic manner and they can be clearly held accountable.

Initial capital for the sites and services program will most probably have to come in large part from government. This money should be in the form of a loan, possibly with some grace period on repayment and with a below-market interest rate. However, the government need not be the only source. Private savings should be mobilized through programs similar to those underway in Chile. Priority for plots could be given based on participation of the individual in a savings program. Criteria, however, should not be so rigid as to preclude participation of a substantial segment of the lowest-income people. Private investment capital should also be considered as a financing source. If the program has been designed on a profit-making basis, it should appeal to private investors -- especially if additional incentives were given, for instance tax-free status for dividends or interest on the money.

The preparation of a financial strategy for the sites and services program will, of course, depend on many variables. The important point is that this is a crucial aspect of the planning process and one which should receive major consideration during the program formulation stage. There are various alternatives which should be explored and which will affect project costs considerably. For instance, a one percent increase in the interest rate will mean an increase of 26 percent in the total amount of interest paid on a loan over a ten-year period. A change in the interest rate or the length of time allowed to amortize the debt will make a major difference in the amount of investment in infrastructure possible in the project without raising monthly payments.

The effect of inflation must be considered in developing the financing plan for sites and services. If mobilization of private savings is to be a part of the program, it will be necessary to have safeguards available to the saving participants to insure that their money is not lost through inflation. Without such safeguards the supply of funds will quickly dry up. With protection, savings can be mobilized even during an inflationary period as has been shown by the Brazilian and Chilean experiences.

In order to insure the success of financing sites and services programs, the following basic factors must be handled satisfactorily:

1. There must be an adequate legal framework for the program. The program must be regulated by government to prevent abuse, but at the same time there must

be sufficient flexibility to allow administrative response to changing conditions.

2. There must be adequate procedures for leasing land, or selling land with efficient and speedy recording of deeds, clarity of titles, and other legal documents.

3. The procedure for foreclosure must be simple and rapid in order to insure that people who do not pay their obligations can be removed from the plots and that the overall system will not be penalized by defaults.

4. Administrative procedures concerning collection of rents or other payments must be efficient and forceful.

5. Ideally, a system of insurance on savings and mortgages should be instituted to protect both the agency and the program participants.

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