TERRITORIALITY AND SPATIAL FORMS[1]

Spatial forms and the physical location of slums vary from region to region, from city to city and even within the same city. The working definitions of slums, suggested in Chapter 1, as non-complying with building regulations and standards, having inadequate basic services provision and insecure tenure status, leave a great deal of room for variation, from marginally inadequate in one feature to being a place of multiple insanitary and deprived conditions.[2]

Though the term slum includes the traditional meaning of housing areas that were once respectable or even desirable, but which have since deteriorated, it has come to include the vast informal settlements that are quickly becoming the most visual expression of urban poverty. Indeed, the majority of dwellings in most of the world's developing cities are in slums. Informal settlements come in many forms; but virtually all are either squatter settlements or illegal settlements and so it is important to distinguish between these even though they have an overwhelming range of similarities. The twofold tenure problem of squatters – that is, that they have neither the owner's permission nor the permission of the local authorities (while illegal settlements have the owner's permission) – tends to render life there more tenuous and to discourage investment.

Many important historic cities are in danger of terminal obsolescence. Fine traditional environments such as Old Cairo, Shahjahanabad (Old Delhi), the *medinahs* and *casbahs* of the Arab world, and the walled cities in Rajasthan, are just a few examples of important historic areas that now demonstrate the characteristics of slums. They are particularly sensitive areas as they may attract fervent loyalty from many citizens, provide accommodation for rich, traditionally powerful families or their retainers, harbour important traditional craft enterprises, and surround important religious and cultural edifices.

At the same time, many peripheral neighbourhoods, even in the same cities, are being constructed with the characteristics of slums from day one, or soon after. Some of these are government- or employer-built estates of low-cost housing, providing minimal accommodation for formal-sector workers. These often quickly deteriorate through lack of maintenance and unplanned levels of occupancy. Some are even built to standards of servicing that render them inadequate – for example, the Bastuhara housing at Mirpur, Dhaka, Bangladesh, where no toilets or water taps were fitted when the tiny dwellings were built in the 1970s.[3] Others are informally built, peripheral settlements that ring many developing cities. Some of the most spectacular can be seen in Rio de Janeiro, Caracas and La Paz, beginning in the lower slopes at the edge of the formal city and climbing to dizzying heights, often using the roof slab of a lower dwelling as their site. There is astonishing dynamism displayed in the founding and improvement of these settlements, and the lessons learned from them should not be ignored. At their earliest stage, they may be extremely poorly built and unserviced; but through the years they can develop into sturdy, well-serviced neighbourhoods. The transition from one to the other is not, however, automatic; encouragement and *de facto* security are important.

It is important to note that owners of dwellings in many slums are attached to them in a way that formal-sector house buyers may not be. If one has constructed a dwelling on empty land and seen a neighbourhood develop and improve, there is bound to be a tie to the dwelling that is strong. In central city areas, many dwellings are steeped in family history and are precious, although they are of little value. In addition, some households are so poor that even a ramshackle shack is more than they can bear to lose.

Many of the slums are very tiny, perched on a traffic island, on a small piece of back land in the business district, next to the railway goods depot. The issues they face may have less to do with servicing, as they can often free-ride on other people's water supply and sanitation. Instead, they have greater issues of security and recognition, and concerns about who will defend them against threats of eviction. At the same time, they may be holding up important development, or creating dangers for themselves and others. The task of solving the dilemma they present for city authorities is, therefore, beset with problems.

Were all of these slums simply illegal, then the tenure issue and their security would be much clearer. However, they possess many grades of security, leaving a much more complex context of intervention for the authorities and a more difficult future of improvement or decline to predict. This dynamic trajectory of the neighbourhood, whether it is in decline or progressing, was memorably expressed many years ago as the dichotomy of slums of despair or slums of hope.[4] The division by potential has, thus, been influential in policy. A neighbourhood in an old city centre area, which, seeing better days, has now been converted from palatial single-household dwellings into ever-cheaper rooming houses and small apartments with shared services, requires a different set of interventions to improve residents' livelihoods from those needed for a newly settled shack neighbourhood. Similarly, a relatively new government-built

The dynamic trajectory of the neighbourhood, whether it is in decline or progressing, was memorably expressed as the dichotomy of slums of despair or slums of hope

estate, in which the combination of poor maintenance and multiple social deprivation leads to rapid physical decline, is very different from an area where poor quality buildings have been erected on semi-legal subdivisions.

This chapter attempts to set out the range of neighbourhoods that fall under the classification of 'slums' and presents the context in which the later discussion can be understood. The criteria used encompass such diverse characteristics as origin and age; location; size; legality and vulnerability; and development dynamic, so there will inevitably be some overlap. However, this is a way of demonstrating the diversity of slums and the need for a multitude of approaches in order to improve the livelihoods of residents.

SLUM FORMATION PROCESSES AND SPATIAL TYPES

Despite a great range of varieties mentioned above, slums fall into two broad categories: declining areas and progressing settlements – each of which can, for the purposes of expanded analysis, be broken into:

- *Declining areas*:
  - 'old' city centre slums; and
  - 'new' slum estates.
- *Progressing settlements*:
  - squatter settlements; and
  - semi-legal subdivisions.

In different ways, all four subcategories sustain the livelihoods of the urban poor and, at the same time, exacerbate their poverty in the ways described above. However, as described in the discussion of the Chicago Model of urban change and development, their impacts on the shape of cities and the strategic approaches to improving them differ significantly.[5] Not all central area slums and deteriorated housing estates are slums of despair, declining into worse and worse conditions. There is a cycle by which

> **The process of the physical deterioration of central city housing stock can be reversed through processes of gentrification**

slums are demolished and redeveloped for commercial use or renovated into upper-income housing. By the same token, not all self-built squatter settlements and other informally constructed housing are on the road to becoming integrated into the regular housing stock of the city, providing adequate space, amenity and services to their inhabitants and revenue to the city.

Inner-city slums

Inner-city slums gave birth to the concept of the slum: the process whereby central, prosperous residential areas of cities undergo deterioration as their original owners move out to newer, more salubrious and more fashionable residential areas. This is a commonplace and predictable consequence of the growth and expansion of cities, manifest by both an increase in the central commercial and manufacturing areas and activities, and the influx of migrants looking for employment opportunities. Initially, the housing vacated by the better-off is still structurally sound and serviceable, and provides an ideal housing opportunity for those willing to make do with less space and shared amenities. The location of buildings provides residents with good access to employment opportunities. Since the buildings were originally built for middle- and high-income groups, they are usually reasonably well serviced with urban infrastructure, though, over time, as dwellings are increasingly subdivided and the level of overcrowding grows, strain on those services can reach breaking point.

In general, occupants pay rent and often that rent is at relatively low levels, which in some cities is controlled by legislation, typically at levels below the economic cost of adequately maintaining the building and its services. This policy of rent freezing is widely recognized as contributing to the deterioration of tenement housing, making it uneconomical for owners to invest in the upkeep of their properties.[6] For example, the 1947 Bombay Rent Control Act was introduced to freeze rents at the 1940 level and to establish rights of tenants against evictions.[7] This meant that the construction of housing for workers became unprofitable for landlords, and also discouraged investment by owners in the repair and maintenance of existing buildings. Thus, these provisions had a negative impact on private investments in rental housing, and adversely affected property tax collection. The act was revised in 1986; later, in 1993, it became applicable only to new properties. Rent control was not exclusively applied to the city centre areas, however. In Beirut, slums generally have witnessed the development of large-scale rental markets, and renting has become, since 1982, the primary method of accessing housing and a main source of income for old property owners in slums.[8]

This process of the physical deterioration of central city housing stock can be reversed through processes of gentrification, as has been frequently seen in ex-slum neighbourhoods in Northern cities, where (usually young) professionals, themselves marginalized by the rising cost of 'acceptable' housing, are willing to move into a traditional slum, attracted by the architecture and cheap housing prices

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Box 5.1 Barcelona inner-city slums

The district known as the Ciutat Vella, or old city, in Barcelona was the entire city until the mid 19th-century expansion. The old city had developed very high housing densities and had associated problems of lack of light, air and open space. As the city expanded, the more well-off population moved out. Slum conditions developed in various areas, and continue to the present day in several neighbourhoods, such as the Barri Gòtic, Santa Caterina and the Barceloneta. The highest concentration is found in the neighbourhood known as the Raval, and most specifically the Raval Sud, or Southern Raval. This area was traditionally known as the Barri Xino, or 'Chinatown', and, partly because of its proximity to the port, has been characterized by marginal activities and the highest levels of poverty in the city. It has also traditionally served as the gateway for new immigrants to the city, providing cheap lodging in very poor conditions, in the form of boarding houses, dormitories and subdivided apartments. The buildings in this area vary in age – some are several centuries old – and the existence of slum lodgings in the area can be traced back at least to the mid 19th century.

Source: Barcelona case study, 2002.

and, perhaps, encouraged by official renovation programmes. Gentrification can lead to a rapid shift in population, with poor tenants being pushed out to make way for wealthier occupants and new commercial and service developments – for example, in Morocco's development of medina areas in response to tourism and a conservation agenda.[9] However, gentrification in the cities of developing countries has been limited, and traditional slum housing remains very much the domain of the poor.

The Chicago Model of concentric rings of city growth that sees the development of central area slums is only common to the older, larger cities of Europe and the Arab States, the Americas and Asia. In most modern African cities that were developed as part of a colonial process, the houses of the rich were large sprawling bungalows, set in extensive grounds, usually kept at a distance from the 'old' or 'native' city. Rarely have these lost their value or attraction for those who can afford them.

Even where the process of the transformation of once desirable, centrally located residences has taken place in developing countries, it represents a relatively low proportion of a city's slums. The main reason for this is the high rate and scale of in-migration over the last 50 years. The stock of central area was unable to accommodate more than a very small fraction of the migrants, even when such dwellings are subdivided to house 10 or 20 families. Bogotá is one such example where the central areas represent a small proportion of the city area and population, compared with the growth of squatter settlements and illegal subdivisions elsewhere in the city.[10] The strategic location of such central areas, coupled with the visibility of physical and social degradation, have, however, drawn political attention to the area and prompted intervention in recent years.

Secondly, though it took almost 100 years, most of the cities of Europe and America were able to overcome the worst of the poverty and, therefore, were able to eradicate the slums through industrialization, colonization and, eventually, prosperity. More importantly, the rate and scale of in-migration and population growth was much lower than in developing countries, allowing the worst excesses of city centre degradation to be controlled.

The relatively slow pace of economic development in most countries of the South has also meant that the central slums of developing countries have yet to undergo the next phase of redevelopment: the replacement of slums by newer, taller buildings, often for commercial purposes. The major exception are the capitals of the 'tiger economies' of Southeast Asia, such as Jakarta in Indonesia, that went through a rapid rebuilding and renovation boom during the 1980s and early 1990s.[11]

Slum estates

This category differs from the traditional city centre slum in that the structures are relatively new and generally not in private ownership. Examples include both public housing estates and housing built by industry or to house industrial workers, such as the hostels for mine workers in Southern

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Box 5.2 Bogotá inner-city slums

The inner-city slums of Mártires and Santa Fe are deteriorated zones in the centre of the city of Bogotá. As the city developed, some of the zones of the traditional downtown area were abandoned and progressively became occupied for low-income economic activity and housing. The buildings are tenement houses that were occupied in the mid 20th century by several families with independent rooms but collective kitchen, laundry and sanitary facilities. During the 1960s, the central tenement houses increasingly became lodgings for immigrants to the city, who took such accommodation for the first few years, then moved to unplanned settlements. The overuse of such houses has led to physical deterioration. Furthermore, while tenement housing still serves as temporary lodging, this is decreasing as families who live in less central areas increasingly provide rented rooms to supplement their household income.
Source: Bogotá case study, 2002.

Box 5.3 Hostels in South Africa

In South Africa, the 'hostel' accommodation provides one of the more extreme examples of housing-turned-slum. Hostels were built as predominantly single-sex accommodation to house and control (usually) male workers who were employed by institutions such as the railways, municipality or large industrial employers. The inadequacy of the buildings arises through gross overcrowding and a high intensity of use, which, combined with a lack of maintenance, has led to rapid deterioration. However, the tensions between rival political factions, particularly fuelled under the apartheid regime, have also led to notorious violence, intimidation and power struggles. Political and criminal control over the allocation of accommodation has led to a breakdown in formal systems of revenue collection and little formal reinvestment.
Source: Durban case study, 2002.

Africa and 'chawls' in India.[12] Both have experienced social problems arising from overcrowded and pressured conditions, making residents vulnerable to organized crime and political exploitation.

Ironically, in many cities, much of the public housing built between the 1950s and 1970s to re-house the residents of central city slums and squatter settlements, typically in four- to five-storey tenement blocks with minimal, if any, community amenities, has itself now joined the stock of slums. During the early 1990s in India, the Tamil Nadu Housing Board had a major programme to upgrade

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Box 5.4 Chawls in Mumbai, India

In Mumbai, 'chawls' were rental tenements constructed by factory owners and landowners for low-income workers between 1920 and 1956. Later, the port authorities and a few other public-sector units began renting out similar tenements to their workers. Accommodation was designed as one room in a tenement with shared cooking and sanitary facilities, provided to house mostly single men for nominal rents. With the consolidation of male migrants in the city, their families joined them. Consequently, densities of these single-room tenements increased phenomenally and structures began to deteriorate rapidly. Rent control laws led to a halt in the supply of such accommodation; the same laws led to a lack of appropriate maintenance and worsened the degradation; and, in many cases, residential tenements were put to commercial/industrial use, resulting in excessive loading and damage to the structure. Environmental conditions of salinity and humidity also caused damp and corrosion in the structures. With such decay and dilapidation, conditions in chawls became very precarious, some collapsing during the monsoon every year.
Source: Mumbai case study, 2002.

Some of the public housing built between the 1950s and 1970s to re-house the residents of central city slums, typically in four- to five-storey tenement blocks with minimal community amenities, has itself now joined the stock of slums

tenements built by the Tamil Nadu Slum Clearance Board in Chennai less than 20 years earlier. Many apartment blocks built by the Tema (New Town) Development Corporation in Ghana during the early 1970s are in a precarious structural condition. Housing and living conditions in public housing estates have been further worsened through the lack of appropriate dweller control or involvement in the day-to-day management and maintenance of either individual dwelling units or the housing estates as a whole, including their public infrastructure. Often, this has also been accompanied by the omission, closure or breakdown of common amenities and facilities, usually due to shortages of resources to address the extent of need. Another common reason for the deterioration of relatively new public housing estates has been their peripheral location on the edges of cities where land was available, but access to work, markets, kin and social amenities was not. The relative isolation of such estates meant that the cost of transport was often unaffordable to the low-income inhabitants. As a result, they became abandoned by all but the most destitute and desperate.

Slum estates also embrace tied workers' housing that was built by employers, usually state industries, for the use of their work force during the period of their employment. These estates suffered even more than public housing estates from a lack of any form of occupant involvement in their management and maintenance, leading to their rapid deterioration. For example, in Chengdu, China, now that industry is no longer responsible for the provision of housing, units have been abandoned and left to private residents who, facing unemployment, are unable to maintain them. As a result, they face the possibility of serious deterioration.[13]

Squatter settlements

One of the most important components of the slum housing stock, and one that has attracted the most discussion during the last three decades, is squatter housing. Squatters are people who occupy land or buildings without the explicit permission of the owner. They often differ from other informal settlements only in this particular. Thus, squatter settlements are settlements established by people who have illegally occupied an area of land and built their houses upon it, usually through self-help processes. Included in this category are settlements established illegally on pavements or rooftops. English language terms used to describe such settlements include self-help or self-built settlements; spontaneous settlements; marginal settlements; squatter areas; shanty towns; and slums. Terms in other languages include *barrios*, *tugurios*, *favelas*, *bidonvilles*, *gecikondus* and *kampungs*.

Squatter settlements are generally found in the towns and cities of developing countries. Some of them, in South and East Asia, date back to the 19th century; but most have much more recent origins. They are, primarily, though not exclusively, built on public land. They can be the result of organized 'invasions' of land, which may have occurred overnight (especially in Latin America), or they can be the result of a gradual process of occupation and incremental growth. Many land invasions and squatter settlements have grown to become municipalities in their own rights, housing hundreds of thousands of people. With them has come the commerce and services that characterize any town – although, perhaps taking a different form or on a different scale from that of the formal city. For example, Villa el Salvador in Peru started as an informal invasion of peri-urban land with pole and matting shelters in 1970 and is now a municipality of greater Lima with a population of nearly 300,000.[14] Ashaiman in Ghana was a village that, during the 1960s, provided shelter for the construction labourers and port workers in the new town of Tema, and is now a thriving town of 100,000. There are also the vast inner-city squatter areas of Asian cities, such as Dharavi in Mumbai and Orangi in Karachi, each with a population estimated at over 500,000.

Although the initial settlements may have been the result of the authorities turning a blind eye, particularly during the immediate post-independence inflow of migrants to the cities of Asia and Africa, squatting became a large and profitable business, often carried out with the active, if clandestine, participation of politicians, policemen and privateers of all kinds. In most cases, the prime target was public land or that owned by absentee landlords. In many cities, the process of illegally occupying public land has become highly organized. During the 1970s, political parties and organizations in many Latin American cities used the process of organized invasions of land as a political tool to build up a constituency or a power base.

Many squatter settlements, however, are small and makeshift. They may be located under bridges and flyovers, on vacant plots of land between formal buildings, or on pavements and dry-season riverbeds. In order to diminish the chances of immediate eviction, settlements frequently develop on land that is unsuitable for any other purpose, such as railway reserves; canal and river banks; steep (and unstable) slopes; flood-prone and swamp land; and garbage landfill sites. The size, location, condition and resilience of squatter settlements will be determined not just by the characteristics of their residents, but, more importantly, by

the political context of official tolerance or intolerance towards them.

Contrary to popular belief, access to squatter settlements is rarely free and, within most settlements, entry fees are often charged by the person or group who exerts control over the settlement and the distribution of land. In Phnom Penh, for example, the majority of slum dwellers consider themselves owners of their plots; but the purchase of the plot is usually from local people with influence (such as the police, village chief and/or representatives of the Sangkat or Khan), who themselves have no prior ownership rights.[15] In some cases, the bribe paid is described as a registration fee for the 'right' to settle on a piece of public land.

Within settlements, there exists a range of actors from owner occupiers to tenants, subsistence landlords to absentee petty-capitalist landlords, and developers to rent agents and protection racketeers. Variety also exists in their legal status; while squatter settlements begin with an illegal occupation of land, over time some form of security of tenure, if not formally recognized legal title, can be transferred to the residents. In time, *de facto* legality can be implied by the simple fact of the settlements not being demolished, and/or public services being provided.[16] Since the 1970s, tolerance of squatter settlements by government and the public alike has grown and the numbers of forced evictions and demolitions have probably diminished, though they have certainly not ceased. This has enabled some of the more established squatter settlements to develop rapidly, with residents feeling sufficiently secure to invest in improving their homes and local environment. Where the state has also invested in settlements, through environmental and infrastructure upgrading projects and the provision of social services, the transformation can be such that, over time, the settlement loses its attributes as a slum. In this way, processes of gentrification can occur in squatter settlements as they do in city centre slums – although, in this case, the new occupants are likely to be lower-middle income groups, rather than an adventurous professional class.

Thus, squatter settlements in and on the fringes of cities in developing countries play an equivalent role to two forms of housing in Europe and North America in terms of providing accessible and affordable housing: the conventional central-area slum housing and low-priced suburban housing. Initially tolerated as a 'temporary' phenomenon by most city authorities, what started as a small-scale activity of largely self-built, makeshift housing by construction workers and other labourers very quickly mushroomed into a major settlement activity, far surpassing the formal housing efforts of most cities in most countries. In São Paulo, more than 60 per cent of the population growth in the 1980s is considered to have been absorbed by the *favelas*.[17]

Squatting, like living in conventional slums, provides a solution to the housing needs of those that cannot afford, or even find, alternative formal accommodation. As with conventional slum properties, some squatter settlements are cramped, high-density areas, with substandard construction

and inadequate levels of services and infrastructure. For instance, parts of Huruma settlement in Nairobi have residential densities of over 2000 people per hectare in single-storey structures.[18] However, others, especially those in newly developed peripheral areas, may be much more spacious.

The poor who occupy squatter settlements are often desperate and susceptible to pressure from organized crime. Their location, lack of services and poor infrastructure leave occupants prone to disaster, disease and disability. Like central-city slum dwellers, those who live in squatter settlements are widely perceived as petty criminals or under the control of organized crime, and a threat to society; but the reality is often very different, with a broad cross-section of people living under strong local social controls.

Illegal settlements and subdivisions

Not all of those who live in poor-quality, under-serviced housing areas are squatters, in the sense that they are occupying land to which they do not have rights. Unauthorized land developments or illegal subdivisions are widespread on the fringes of cities. Illegal subdivisions refer to settlements where the land has been subdivided, resold, rented or leased by its legal owner to people who build their houses upon the plots that they buy. The settlements are illegal owing to any combination of the following: low standard of services or infrastructure; breaches of land zoning; lack of planning and building permits; or the irregular nature of the land subdivision. Illegal subdivisions are very common in developing countries, but are not restricted to them or to occupation by people living in poverty, as the Naples example in Box 5.7 shows.

In some cases, farmers have found that the most profitable 'crop' for their land is housing. Peri-urban land is transformed from agricultural to urban use by landowners who divide it into plots for housing. The majority of these subdivisions are done without reference or recourse to the official urban planning mechanisms involving permission fees and licences. As informal and unrecognized settlements, they lack all but the most rudimentary public

Access to squatter settlements is rarely free and, within most settlements, entry fees are often charged by the person or group who exerts control over the settlement and the distribution of land

Squatting, like living in conventional slums, provides a solution to the housing needs of those that cannot afford, or even find, alternative formal accommodation

Settlements are illegal owing to any combination of low standard of services or infrastructure; breaches of land zoning; lack of planning and building permits; or the irregular nature of the land subdivision

Illegal building, which is elsewhere commonly associated with slums and poverty, is actually associated with middle-class neighbourhoods in Naples. The best-known case of illegal construction is Pianura, a neighbourhood that sprung up during the 1970s and 1980s, when five- to seven-storey buildings were built without authorization from the city in an area that the zoning plan classified as agricultural. They are illegal in the technical sense of having no building permits and violating the zoning plan; but the land was legally bought by private developers who respected building standards, and homes were placed on the market at prices only slightly (15–20%) below the cost of legal units. With the connivance of the authorities, they were linked to the public water and electricity system, and later to the sewerage system. Growth at Pianura is still strong – rising from 38,500 residents in 1981 to 54,000 in 1991, with young families, productive (although undeclared) businesses and higher homeownership rates than the city average. This type of illegal construction is widespread outside of the centre of Naples, but is usually limited to the expansion or construction of single-household homes. Many residential areas, of varying scale, have appeared spontaneously throughout the city.

Source: Naples case study, 2002.

infrastructure; however, this is what makes them affordable. Nevertheless, the housing built on them, while often substantial and constructed of permanent materials, in response to confidence in the security (legality) of the land sale process, rarely meets or is subjected to building and planning regulations and permissions. Though the conditions in these settlements are usually better than squatter settlements of the same age, they tend to have high densities since little provision is made for open space or access, and the plots themselves tend to be small, with high ratios of floor space to plot size.

In sub-Saharan Africa, customary landowners are often the main providers of land for housing, even if their right to the land is not formally recognized by the state. In many situations, the underlying issue is that customary law still applies and overlaps with statutory law. What distinguishes this form of development from squatting is that the sale of land is generally through a legal transaction, although not always formally registered. The land may not be recognized as suitable for urban development or housing, or the development may not comply with planning laws and

regulations, or with norms and standards regarding the provision of infrastructure and services.

As in squatter settlements, most occupants of illegal subdivisions build, extend and improve their own housing over time, and consider themselves to be owner occupiers, which, *de facto*, they are. Of course, not all dwellings in such settlements are owner-occupied. There are many unauthorized land developments where there is a vibrant rental housing market, controlled both by individual plot owners and by speculative developers and agents, sometimes on a fairly substantial scale. In Nairobi, Kibera – to the west of the city – is the largest uncontrolled settlement.[19] Its relative proximity to the main industrial area allows residents to save on transport costs and to walk to work; but shortages of accommodation mean both overcrowding and high rents.

Illegal and informal subdivision or change of land use are not limited to land on the urban fringes. It is also common to the process of raising densities in low- and medium-density inner-city areas as households, unable to acquire new accommodation for expanding families, or in order to benefit from rental income, extend and subdivide their properties. They may build in courtyards, gardens and circulation space, add floors, or extend onto flat roofs. Where housing is owner-occupied, this process tends to occur anywhere that the authorities allow it and often involves quite sophisticated neighbourly negotiations.[20] There is little evidence that such extensions lead to overloading of public infrastructure and services, although this may be expected. Where the dwellings are owner-occupied the chance of maintenance is increased.[21] Where houses are rented to many households, however, it is more likely that alterations and extensions carried out by tenants will be harmful as they will have little concern for the whole building.

Diversity of slums' spatial forms and associated opportunities

In general parlance, and in the official language, little differentiation is made between types of substandard housing. In practice, all and any of such housing is referred to as 'slums', or 'slums and squatter settlements', or 'slums and shanties', often interchangeably. Understanding and articulating the difference between them is critical to developing effective strategies that address the problems in slums, and to support the processes of improving settlements, alleviating the impacts of poverty within them and encouraging the spontaneous improvements that may follow, increasing wealth within them.

Each slum or area of poor housing possesses a number of attributes. For example, a slum on the urban periphery or in the city centre may be well established or relatively new. It may be large or small. Each of these conditions will endow it with certain qualities that reinforce both its strengths and its weaknesses, and may increase or decrease the potential to benefit from particular forms of upgrading or other improvement intervention.

The following section discusses a framework for analysing slums with reference to their settlement formation

Understanding and articulating the difference between slums is critical to developing effective strategies that address the problem

Over half of the population of Greater Cairo resides in private housing that is constructed on agricultural land purchased from farmers in areas where there were no subdivision plans and where building permits were not given. This constitutes almost half of the residential area. Since the 1960s, small agricultural areas on the fringes of 'formal' Cairo began to be subdivided by farmers and middlemen and sold to individual owner builders. This accelerated dramatically after the 1974 open-door policy was proclaimed, fuelled by ever increasing flows of remittances from the hundreds of thousands of Egyptians working mostly as labourers in the Gulf and in other oil-rich economies. Finances came from personal savings, remittances from relatives or conversion of other assets; as a result, incremental construction was a necessity. Plot coverage of 100% and incremental (room by room and floor by floor) reinforced-concrete construction are the norm. While the quality of construction of housing is generally good, there is a very common trend of increasing the density of areas over time and a parallel phenomenon of serious overcrowding.

Source: Cairo case study, 2002.

process, form, spatial organization and construction, strengths and weaknesses, and opportunities. A number of characteristics (see Table 5.1), used in combination, serve to identify issues pertaining to vulnerability, the social networks, physical and economic assets with the potential to improve livelihoods, and levels of and incentives for community organization and representation.

ORIGINS AND AGE

Origins and age indicate the legacy of a slum, such as its physical assets of building heritage, the root and speed of its formation, and the establishment of community. Given the pejorative associations with 'slum' discussed in Chapters 1, 2 and 4, this legacy will be fundamental to determining what initiatives and momentum will be required in order to effect change. There are clearly geographical and historical regional patterns to the world's cities. Nevertheless, many cities have some combination of old established slums, which may, indeed, be the original city itself. At the other extreme, there are the slums and areas of poverty that are currently forming; and between these are the remaining settlements of various vintage and degree of integration within the city.

Historic city-centre slums

Most cities in Asia and Africa that have a pre-colonial existence, also have some or all of that original settlement largely intact. The equivalent in Latin America are the colonial pre-independence cities, laid out according to the code of *La Lay de Indias*. In many instances, the original city is separated from the more modern city by its old defensive wall (for example, in Lahore, Pakistan) or a moat, or it is on a hill (such as Salvador, Bahia, Brazil), and often has a distinct name, such as the *kasbah* (for example, in Marrakesh, Morocco) or the old city (as in Old Delhi, India). It is a distinct neighbourhood or even a sub-city within the city. Many such neighbourhoods are a mixture of grand buildings and public spaces, many in semi-ruins, others taken over for private use. Those of the original inhabitants who could afford it have moved out to the new city, leaving the odd retainer, or even some members of the older generation, too set in their ways to move. Many of the buildings and places have been subdivided and let to poor households, perhaps employed in the old businesses and manufacturing units that remain, still producing the goods for which the city was once famous.

Many established historical city cores are classified as slums because they have high residential and commercial densities and overcrowding, as well as levels of services and infrastructure only suited to much smaller populations. This is especially evident in streets that are too narrow and irregular to accommodate cars, lorries and refuse-collection vehicles. In addition, the drains and water supply pipes often leak, and electricity and telephone cables, many of them unofficial, festoon the streets. In many, the once fashionable balconies now hang perilously, propped up by decaying posts, their facades blocked to provide additional rooms.

These are the classic inner-city slums; yet, each building often also represents a fortune, if not for what it manufactures, stores and sells, then for the rents it brings in from the many households that now share its once noble rooms. However, this economic return is often negated by rent control, which, in turn, encourages owners to withdraw maintenance and further accelerates decline. They are also often the subject of ownership disputes, feuds, claims and counterclaims. The many claimants and litigants make it difficult for these properties to be redeveloped; in the mean time, they go neglected and unmaintained. Slums of this kind are found in Karachi, Cairo and other established cities in the developing world.[22]

Nevertheless, these buildings, individually, and more so collectively, represent a part of the cultural heritage and generate claims for conservation, competing with those for demolition and modernization. Their strength also lies in their location within the city and in relation to the centres of commerce and production. The easy access to employment, real and potential, combined with cheap if run-down housing, are natural magnets for the poor.

The continued presence of the older generation, with ties and traditions that go back many years, is often an effective counterbalance to any socially disruptive tendencies. The continued presence of communities and community leaders, as well as the traditions and relationships between them, help to bind the newcomers, as well.

Run-down and inadequate infrastructure can be upgraded, and there are many technological advances that

Table 5.1

Major categories of slum spatial analysis

Origins and age	Historic city-centre slums
	Slum estates
	Consolidating informal settlements
	Recent slums
Location and boundaries	Central
	Scattered slum islands
	Peripheral
Size and scale	Large slum settlements
	Medium-size slum estates
	Small slums
Legality and vulnerability	Illegal
	Informal
Development stages: dynamic and diagnosis	Communities/individuals lacking incentive for improvement
	Slums with ongoing individual- and community-led development
	Intervention-led improved slums
	Upgraded slums

In Ibadan, the inner-city core area consists of the oldest, the lowest-quality and the highest-density residences of the city. During the 19th century, large compounds for Yoruba-extended families and warrior lineages constituted this part of the city. The area still has a strong cultural identity based on its heritage, and the presence of non-Yorubas in this part of the city is rare. Housing is constructed of mud, with virtually no sanitation facilities. It is highly residential, up to 90% in Elekuro ward, and the simultaneous presence of many old markets and street trading in the area cause traffic congestion and exacerbate overcrowding while providing essential employment and services. The colonial area developed beside the old city, making this area the worst case of deterioration less than 2 kilometres from the current city centre. Residents rent or squat. Some of the wealthier people of Ibadan, who were born in the core area, have kept their family house for cultural and familial reasons, although they now live in villas in the new government estates. However, the buildings and land that they occupy remain sacred to the original owning family and it is very difficult to change them from residential use. They are of little economic value but are precious to their multiple-related owners.

Sources: Ibadan case study, 2002; Amole et al, 1993.

Old Havana has an irregular grid of narrow streets and small city blocks, with buildings sharing party walls and with inner courtyards: a coherent urban fabric with dominant squares and churches. As the city expanded during the 1700s, it developed typical *calzadas*: wide streets with tall porticoed pedestrian corridors opening into stores and dwellings above. However, in 1859, the new western suburb of El Vedado attracted the sugar-plantation aristocracy and, during the 1920s, a further upmarket area, Miramar, was developed close to the waterfront, which deliberately lacked stores and other amenities to discourage the less affluent. The mansions of the old city were turned into stores or subdivided as tenements with shared facilities: poverty masked behind classical facades.

About half of the residents of tenements with high ceilings have built *barbacoas* – makeshift mezzanines or loft-like structures that create an extra floor. They are often unsafe, poorly ventilated and their bricked up windows deform building facades. Moreover, *barbacoas* add considerable weight to load-bearing walls, already weakened by leaks, often leading to partial or complete building collapses. Another source of extra residential space, as well as extra building weight, are *casetas en azoteas* – literally, 'shacks on roofs' – which are usually wooden structures built on top of multi-household buildings. The Cuban regime's encouragement of development away from Havana has indirectly helped to shield Old Havana from some overuse; nevertheless, most slums are still concentrated in the inner-city municipalities of Old Havana (La Habana Vieja) and Centro Habana. The result of density, additions and poor maintenance is regular building collapse – Old Havana averages about two partial collapses every three days. In these cases, residents are usually assigned to emergency or existing transitional shelters, but are often reluctant to go there.

The restoration of Old Havana and San Isidro started after Havana became a World Historic Heritage site in 1982. In 1993, Havana's Historian's Office was granted the right to run its own profit-making companies in the real estate, building, retail and tourism fields, and to plough back part of its earnings into restoring the historic district. In addition, it could devote a portion of its own resources to financing community facilities and social programmes for local residents and to repair and rehabilitate dwellings, even in non-historic areas. Most residents remain in the area, and gentrification has been avoided, to some extent, since housing for local residents is included in the upper floors of restored buildings. Some, however, are displaced to apartments built and financed by the Historian's Office, where some residents welcome the more spacious, well-equipped new dwellings, while others find commuting extremely difficult. Temporary relocation housing is sometimes provided in Old Havana itself while rehabilitation is under way. Local economic development also takes place; some residents have received training and jobs as skilled construction workers for the restoration process, others have received incentives to produce crafts for sale to tourists, or obtained other employment in the tourist industry.

Source: Havana case study, 2002.

make this possible without endangering the structures. The inaccessibility of motorized transport may be a blessing, and the dilapidated structures can be refurbished. Very often, it is not the know-how or even the resources that prevent improvement of these areas, but the complexity of ownership and the economic risk of investing in a single building on the chances that the whole neighbourhood will be upgraded and allow the investment to be recovered. Where this does happen, of course, the poor are often denied access to affordable, centrally located housing and business premises.

Slum estates

From the time that the old city lost its place as the centre of attraction for the rich and the affluent, and was replaced by the new city, parallel developments for the less well off have emerged. Some of these have been in the form of formal public housing estates constructed relatively recently (at least three decades old in developing countries). The vast majority of others have been older illegal and informal settlements laying claim to land deemed unfit or unsafe for planned residential development.

As mentioned earlier, some slum estates have developed where relatively new estates, usually built for renting, have deteriorated quite quickly into areas where few would choose to live, but in which many low-income households are trapped through having no affordable alternative. Examples include government-built mass public housing estates, and housing built by industry or to house industrial workers, such as the hostels and estates of small dwellings for mine workers in Southern Africa, and 'chawls' in India.[23] Other examples include the 'new towns' of Cairo (Helwan, Moktam and Shubra), Ciudad Kenedy in Bogotá and the large State Housing Board developments that were constructed in virtually all of the major Indian cities during the 1970s and early 1980s.[24] Both have experienced social problems arising from overcrowded and pressured conditions, making residents particularly vulnerable to organized crime and political exploitation.

Another common reason for the deterioration of relatively new public housing estates has been their location on the edges of cities where land was available, but access to work, markets, kin and social amenities was not. The relative isolation of such estates means that the cost of transport is often unaffordable to the low-income inhabitants. They are, therefore, abandoned by all but the most destitute and desperate. In general, a lack of public resources is the most cited reason for the deterioration of physical conditions, as well as the conviction that, somehow, it is the culture of poverty of its residents that is the root cause.

Slum estates also include large amounts of housing built by employers as tied housing for workers. These vary from the tiny bungalows on featureless 'locations' in Southern Africa to the slab blocks in the former Communist bloc. They tend to be even more poorly maintained than publicly owned housing and may even be hated by their occupants. As many dwellings are transferred to occupier

ownership, and many occupiers then lose their jobs in the decline of formal industries, conditions and the quality of life of the occupants decline in parallel. The Chengdu, China, case study shows that dwellings in public housing estates in the city are likely to suffer from serious deterioration.[25]

Consolidating informal settlements

Much of the urban development in rapidly developing cities of the South has been through informal settlements in which land has been informally subdivided and sold or leased to households who have built their own dwellings. Some of the land used in this way is deemed unsafe or unfit for planned residential development, such as the land occupied by the extensive informal settlements built on stilts over the tidal swamps of Guayaquil (Ecuador) and Cartagena (Colombia), and the Tondo Foreshore of Manila (Philippines). In some instances, it is land reserved for future development (by the sides of roads, railway tracks and canals, or even around airports and other facilities) that has been pressed into serving the needs of the otherwise unhoused.

Over time, some of the first of these settlements have been grudgingly recognized, tolerated and even accepted, such as Policarpa Salavarrieta, a large 1960s land invasion in central Bogotá, Colombia. There may have been attempts to dislodge these settlements; but there have also been interventions to improve them. Whether legal or not, their continued presence gives them a *de facto* right to exist and to develop.

In many countries, traditional authority structures have powers over land in tandem with the state and its agencies. Many areas are allocated by chiefs and traditional councils with or without the agreement of state institutions. Subsequent development may conform to some regulations but many do not fulfil all of the official requirements for housing neighbourhoods. These may be indistinguishable from, and treated in a similar way to, other informal subdivisions.

Although often not as substantial as in the more established slums, the majority of housing in informal consolidated areas is built of durable materials, though the piecemeal construction and improvement of such areas have given them a more chaotic (or organic) overall appearance than in formally developed areas. There are fewer public facilities, such as schools and playgrounds, and few formal commercial outlets than in the established slums. There are manufacturing and marketing activities; but these tend to be small-scale, family-operated enterprises. Similarly, though generally fairly accessible by road and public transport to the periphery, the internal streets of these settlements tend to be less adequate.

The general level of earnings and incomes is not the lowest, with more owner occupiers and self-employed residents than in newer, poorer settlements. The potential for improving such settlements is generally high as a result of the greater perceived and, to some extent, real benefits from upgrading for the residents. The most frequent constraint is the planning and zoning legislation that the

> **Box 5.12 The *medinas* of Morocco: Rabat-Salé**
>
> The deterioration of some parts of the two *medinas* (the old neighbourhoods of the pre-colonial city) finds its origin, as in other Moroccan cities, in a double loss of affection: that of a housing model abandoned by middle-and well-off classes, who migrated to new neighbourhoods, and that of economic activities and craftworks that move elsewhere. The former leads to the densification and pressure on building fabric, and the latter directly impoverishes community members. In the twin cities of Rabat-Salé, rental, room by room, has led to rapid deterioration, and renewal movements are slow to appear. In other cities, concern for the historic building fabric has taken precedence over the livelihoods of the poor within them, and the policy was initially to 'depopulate' in order to promote the district for tourism. But greater recognition of socio-economic aspects is leading to investigation of alternatives. Some commercial and service activities remain, along with a number of craft businesses. However, those activities have been widely supplanted by the illegally built neighbourhoods in Rabat: Hajja and Maadid, and in Salé: Hay Inbiat. Thus, while the *medinas* at the moment continue to constitute a source of informal, irregular and provisory employment, for residents, the threats to livelihoods are yet to be addressed.
>
> *Source:* Rabat-Salé case study, 2002.

settlement contravenes, even though, in practice, the city government has learned to accommodate and adjust to the presence of these consolidating slum settlements. This occurs as it becomes apparent that political opposition militates against the demolition of such slums, and it is, therefore, in the interest of the city that they should be absorbed within the formal housing stock and improved in order to maintain the land values of the areas that surround them.

In general, a lack of public resources is the most cited reason for the deterioration of physical conditions

Recent slums

Recently developed slum neighbourhoods are often similar to the consolidated informal settlements, but are newer and unconsolidated. Their newness is expressed in poorer, less permanent materials, especially in settlements where residents are unsure of whether and for how long they will be allowed to stay before being evicted. In cities where evictions are common, or on sites where they are unlikely to be left alone, shacks are likely to be very rudimentarily built of recycled or very impermanent materials (such as straightened oil drums, used corrugated metal sheets, plastic and canvas sheets, cardboard cartons and discarded timber).

The potential for improving consolidated slums is generally high as a result of the greater perceived and, to some extent, real benefits from upgrading for the residents

> **Box 5.13 Consolidating *favelas* in Rio de Janeiro**
>
> The *favelas* of Rio de Janeiro have appeared throughout the city since the 1950s. There are now about 700 and they house an estimated 1million inhabitants. The *favelas* are frequently on hilly sites and are primarily located in the suburbs, where public utilities are rarely available and environmental conditions are poor, owing to few connections to trunk infrastructure. Access to bus routes is reasonable; but they tend to be far from employment opportunities.[i] The dwelling is considered to be owner-occupied, though there is no security of tenure on the land. The *favela* movements of the 1970s and 1980s have helped to consolidate settlements and the *de facto* tenure, and a policy shift from settlement removal to upgrading has encouraged structural improvements as residents expect to remain there permanently.
>
> *Note:* i However, the location of some, high up, overlooking the beautiful Atlantic coast and the rising sun, became valuable briefly as they were rented out to richer households wanting to celebrate the sunrise on the Millennium dawn.
>
> *Source:* Rio de Janeiro case study, 2002.

Where authorities are more tolerant, or where such settlements are the norm for establishing new neighbourhoods (for example, around Lima), or if there are about to be elections, then the settlers are likely to build with more confidence, using more permanent materials and standards of construction. In either case, infrastructure is likely to be absent or only available through clandestine connections.

New or recently established slums tend to have lower densities as there are fewer constraints and less competition for the land; yet the individual plots and parcels occupied by each dwelling are unlikely to be any larger than in the more consolidated slums. This is because households tend to occupy only enough land for their individual needs, rather than explicitly seeking to profit from land holding and development.

Recently developed slums are generally found on the periphery of the built-up area of the city, or in pockets of even more marginal land than the more established slums. Increasingly, occupants of the newer slums often use the grid-iron layout, even without the assistance of external organization and support. There are several advantages in adopting grid layouts:

- It is easy to lay out.
- There is a stronger likelihood of obtaining urban services and recognition if the settlement is orderly.
- There are likely to be fewer disruptions and demolitions when services are installed.

LOCATION

To some extent, as has been indicated above, there is a correlation between age and location, with older slums in the city centre and the newest on the periphery. Although this follows from the realities of a growing city, it is not always the case. For example, with a relatively young, but fast-growing, city, the oldest slum areas may well be outside of the centre. Regardless of age, the location of the slum endows it with certain attributes.

Central

As mentioned in the section on 'Inner-city slums,' central-city slums tend to have been formed by the classic process where central, prosperous residential areas of cities undergo deterioration as their original owners move out to newer, more salubrious and more fashionable residential areas. Initially, the housing vacated by the better-off, which generally has reasonable infrastructure and services, is ideal for those willing to trade off less space and shared amenities in exchange for access to employment opportunities.

Centrality of location does not necessarily imply the old city, or the central business or commercial centres of cities. As used here, it also embraces formal industrial areas, ports, wholesale markets and other areas of employment that are some distance from the central business district (CBD). Residents of slums that are located close to such zones are able to benefit from the high concentrations of employment opportunities, especially those related to unskilled and casual jobs. They are also likely to be better off in terms of transportation because of the tendency for cities to grow outwards radially and, therefore, to have roads and transport converging on centres of formal employment. This makes centrally located slums much more suitable for unskilled workers. If the neighbourhood originated in the old city centre, then it may also have the benefit of substantial

buildings and a reasonable level of infrastructure and services, though it may have fallen into disrepair and infrastructure may be severely overloaded (see the case of Havana in Box 5.11).

The historic cores of many ancient cities (for example, Delhi, Dhaka, Cairo and Istanbul) are now in much reduced circumstances and would fit the description of city-centre slums; but these are dealt with separately as historic city slums.

As mentioned in 'Inner-city slums' on page 80, much of this housing is controlled by rent control legislation, which fixes rents at levels that are affordable by some measure, but which are usually unrelated to the value or replacement cost of the accommodation or to the economic cost of adequately maintaining the building and its services. Introduced in many countries during World War II, or in the economic upheaval caused by it, rent control is now widely recognized as contributing to the deterioration of the housing to which it applies as owners remove value from it by withdrawing maintenance or by converting it from residential to other uses (for example, cheap boarding houses).[26]

In West African cities, central areas are often dominated by traditional housing that is owned in common by many members of one lineage and is occupied by elderly or poor family members. This 'family housing' embodies a curious contradiction: it is both precious and valueless. It is sacred to the family and, thus, is precious. However, it suffers from multiple occupation by the people least able to maintain it; but it is not for sale and therefore is unlikely to develop into commercial or other uses to make economic use of the central location. Indeed, because of this, CBD functions tend to be spread around the city. These circumstances are unlikely to change without a major reappraisal of the function of housing in West African urban societies. This, in turn, could generate serious dysfunctions, which may be inimical to the cohesion of families and society there. Especially at risk are those who need the social safety net that free accommodation in the family house provides.[27]

Centrally located slums are most prone to being controlled by organized racketeers through their control over jobs, as well as property. The extent to which the *favelas* of central Rio de Janeiro, Brazil, are controlled by drug barons is legendary.[28] The majority of slum central-area dwellers tend to be wage earners, and are either on piece rates or are casually hired. The majority of them are tenants, renting or subletting from slum landlords, rather than owner occupiers living in dwellings that they have built themselves.

In more socially and economically mobile cities, notably in Latin America, many central-area slum dwellers, over time, move out to new and more peripheral locations, seeking less precarious and more permanent housing. They are the most likely candidates for official slum relocation programmes as they succumb to pressure and enticements from better-off households who want to move into the central locations once they have been improved or, in the more developed cities of the North, as part of the process of 'gentrification'.

Scattered slum islands

Scattered throughout cities are 'islands of slums', surrounded by formal housing and other officially sanctioned land uses. These islands may have been intended as open or green spaces, as the land was thought to be unsuitable for future housing, or locations that are physically or environmentally unsafe. Slum islands are typically small, as few as eight to ten dwellings. They often get their water from fire hydrants or neighbours in formal areas and dispose of their waste, both human and refuse, in the city's gutters and open spaces. They cannot support their own social infrastructure (school, clinic, etc); but use the facilities of the neighbourhoods in which they are located – unless they are denied access through social discrimination, which is quite common.

Slum islands that are closer to the centre share many of the advantages and attributes of the central slums described above. However, they are often physically isolated from the surrounding areas by barriers such as canals, storm drains, railway tracks or motorways, and, though close to urban facilities and opportunities, may not actually be able to benefit from them. Some islands may have started as rural communities that became engulfed by urban expansion; but this is rare, except towards the periphery.

Peripheral

Large slum settlements cannot rely on the services of the settlements around them and need their own, even to the extent of internal public transport systems.

Slums on the city fringes are, as described above, either squatter settlements in which households have invaded (usually public) land, or they occupy land that has been subdivided and for which they have paid or entered a rent-purchase arrangement with the developer or landowner. The urban periphery has distinct advantages over more central and urbanized areas as there is less competition for the use or control of land, especially if it is located outside of the municipal boundaries. Peripheral slums can be quite large settlements since they are rarely constrained by competing development.

In many cases, the quality of housing is relatively good – significantly better than is to be found in the adjoining rural areas – but the level of services is generally low. While this is not a great hazard to health and amenity when the overall density is low – as it can be during the early period of development – it can become a serious problem as the slum grows larger and denser. While dwellings are often owner-occupied, in many cities the provision of housing in peripheral settlements is controlled by a 'developer': a well-connected businessmen or politician who has the necessary power and resources to lay out and allocate land.

An overriding problem facing peripheral slum dwellers is the low level of access and high cost of transport to jobs, markets, schools and the centres of administration of public services. Thus, households living in peri-urban areas can spend up to 30 per cent of their incomes on transport, or as much as three to four hours a day walking to and from work and school. Increasingly, middlemen are beginning to realize the potential offered by the women in these settlements by offering them piecework, bringing in the raw materials and collecting the finished products.

One of the main problems of home-based piece-working (home-working, as it is called in the literature) is that the 'invisible' workers can easily be exploited since control by labour authorities is very difficult.[29] When workers are scattered around new, unmapped areas, control is even more difficult, so exploitation is easier. In addition, the further that potential workers are from their jobs, the easier it is for exploiting employers to flourish.

A very significant feature of informal settlements on the urban periphery is their potential for efficient and effective upgrading through the provision of infrastructure and public services, especially if it is done before dwellings consume all of the available land. Increasingly, NGOs recognize this and are developing strategies to help new land invaders and informal developers to impose some discipline in the subdivision and layout of land in order to prepare for the installation of public infrastructure.

SIZE AND SCALE

The size of a settlement or slum area has obvious implications for what is, or is not, possible in terms of social organization, community cohesion and future intervention.

Large slum settlements

There are many slums around the world that are equivalent to cities in size. Dharavi in Mumbai, India, or Orangi in Karachi, Pakistan, house hundreds of thousands of households; Kibera in Nairobi, Kenya, has a population of 400,000 people.[30] To a large extent, this is a function of the size of the city of which they are part. However, it is possible for a slum or informal settlement to be larger than the city upon which it depends. For example, Ashaiman (in Ghana), referred to earlier, has a larger population (150,000) than Tema (140,000), the municipality of which it is formally part.

With such large slums, the need for local management and social organization becomes clear. Many different social groups may live and work within the slum's geographic boundary. While some large slums, such as Antop Hill in Mumbai, India, are organized spatially on ethnic lines, it is important for groups to cooperate with each other, whether or not it is traditional for their people to do so. Large slum settlements cannot rely on the services of the settlements around them and need their own, even to the extent of internal public transport systems.

With large numbers of slum dwellers, even though they are poor, there are substantial economies of scale and viable internal markets. It is possible for as many as 40 per

cent of the population to find employment servicing and serving the needs of their own neighbours. The markets that spring up in large slums often attract custom from the surrounding formal settlements, as the produce tends to be cheaper than in formal-sector markets. The impacts and implications of such trends were discussed in Chapter 4.

Medium-sized slum estates

This is the most common situation, with neighbourhood-sized settlements developing in and around the city. The process of deteriorating conditions that led to falls in land and property values is self-perpetuating and, in many cities, relatively rapid. Of course, given the higher density of most areas that house the poor, a relatively small piece of land is required to house a community. Most often, the origins of such settlements is land that has been undeveloped or abandoned, since it was felt by the urban planners and developers to be difficult, if not impossible, to develop. These areas include swamps, marshes and steep slopes.

Medium or neighbourhood-sized slums are quite effective in resisting attempts to demolish or relocate them. In part, this is because they tend to form a cohesive community who support an active internal leadership, and because there are sufficient households to ensure that they have enough political and voting power to generate external political support.

Small slums

Scattered throughout cities are small, or even very small, slums that are surrounded by formal housing and other officially sanctioned land uses, sometimes on land designated for public or communal use, but most often on land left as reserves for future development or to serve or service roads and highways, waterways or railroads. The sites may have been intended as open or green spaces, or land thought to be unsuitable for future housing, or classified as locations that are physically or environmentally unsafe. These very small pocket-sized slums, characterized earlier as 'scattered slum islands', often contain as few as eight to ten dwellings. In many cases, occupants of neighbouring upper-income housing areas tolerate, or even protect, such slums as the residents often work as their domestic staff and other employees. Because of their small size, they cannot support their own social infrastructure (school, clinic, etc); but residents have easy access to public services from the neighbourhoods in which they are located. Sometimes, however, this is denied because of social discrimination. Where such settlements are not protected by their neighbours, they are vulnerable to exploitation and are ineffective at resisting eviction or relocation. These very small pocket-sized slums are often attractive to their residents because of their closeness to the centre. In the major cities of South Asia, very small pocket-sized slums occur through the occupation of pedestrian walkways. In Mumbai, India, it is estimated that there are more than 20,000 pavement dwellers who live in dwellings built on the pavements of the city centre, with residents using part of the carriageway as living space during the day.[31] Many of these dwellers have been there for 20 years or more.

Because of their small size, these slums have easy access to public services from the surrounding areas. On the other hand, where they are not protected, their small size makes them vulnerable to exploitation and less effective at resisting eviction or relocation. This precariousness is often responsible for the lack of substantial investment in housing, most of which is usually made from second-hand or recycled materials and components.

The markets that spring up in large slums often attract custom from the surrounding formal settlements, as the produce tends to be cheaper than in formal-sector markets

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Box 5.20 Karachi: women's access to employment

The Khuda ki Bustee housing in Hyderabad, Pakistan, is located on the Karachi-Hyderabad Highway, on the edge of the city limits. While men were able to work, women were unable to find any employment locally and readily welcomed the approaches of middlemen to undertake piecework. Though this provided them with an income, the bulk of the money was kept by the middlemen. Consequently, when a local non-governmental organization (NGO) with experience of similar activities in Orangi, Karachi, offered to take on the role of the middlemen in providing raw materials and delivering to markets, the women joined readily, and now receive much more for their inputs. Similar stories of women succumbing to low wages are found in many low-income settlements in Pakistan, where the seclusion of women makes it difficult for women to enter the open labour market.

Box 5.21 Mexico City: Valle de Chalco Solidaridad

Valle de Chalco Solidaridad is a municipality that was created during recent years following massive settlement – in this case, in the agricultural municipality of Chalco, to the south-east of Mexico City. Agricultural land was originally appropriated after the construction of a canal during the 19th century. After the Mexican Revolution, the *haciendas* and other large agricultural properties were expropriated and distributed as *ejidos*, or agrarian communal properties, to the local communities.

By the late 1970s, Mexico City's growth began to affect the Chalco area. On the one hand, the demographic growth of the local communities meant that agriculture was increasingly unfeasible as a means of subsistence, on parcels of *ejidal* land averaging 1.7 hectares per household. On the other hand, demand for housing meant that the illegal sale of this land was an attractive proposition. In the case of Chalco, before 1984, many of the transactions were not handled by the *ejidatarios* themselves but by professional intermediaries or developers who bought the land from the individual *ejidatarios*, parcelled it out into lots of mostly between 120 and 250 square metres and sold them on credit. By this means the settlement process began between 1970 and 1980, when the population of the area now included in Valle de Chalco Solidaridad almost doubled from 44,000 to 82,000 individuals, living in about 18 *colonias*. During the following decade, it increased still more to about 220,000 reaching over 323,000 individuals in 2000.

The state embarked on an extensive regularization process, and a survey in 1998 found that 90% of the plots in Valle de Chalco had been regularized. Once this was underway, material improvements could be financed by the new federal poverty programme Solidaridad, which invested 407.9 million pesos (about US$160 million) in Valle de Chalco between 1989 and 1993, including street lighting, water mains and schools, then electrification, hospitals, pavements and main drainage. However, this regularization of tenure, public works and social investment programmes, as well as an influx of national and international NGOs and religious groups, is not reflected in the 2000 housing indicators: 78% of the dwellings have no inside tap; 40% have corrugated cardboard roofing; and 20% have only one room. Today, Valle de Chalco still contains some of the worst housing conditions in Mexico City.

Source: Mexico City case study, 2002.

Box 5.22 Mumbai: Prakash Nagar Pavement Community

This settlement originated 35 years ago; by 1998, it had 300 households who were made up of different ethnic groups. Most workers have daily wage-based activities on construction sites or domestic work. Dwellings are small and consist of plastic sheets precariously arranged on wooden poles. The community has faced demolition three to four times a year since 1985, generally without notice, including finally being evicted for the construction of a flyover in 1999. However, the community struggled to retain their foothold and has re-housed itself on a nearby privately owned plot, wishing to live in the vicinity in order to sustain livelihoods. Many households have filed applications for the necessary 'photo pass' in order to validate their residence in the community since 1994. Currently, the community is counter-claiming at the local courts and the National Human Rights Commission against their treatment by the authorities.

Source: Mumbai case study, 2002.

LEGALITY, VULNERABILITY AND SPATIAL FORMS

The threat of eviction is probably the most potent force in galvanizing communities – it can help to transform a heterogeneous group of households, settled in a particular locality, into a community

As has been pointed out above, not all slums are squatter or illegal settlements, and not all illegal or squatter settlements are slums. Therefore, legality and resident perception of its relative vulnerability are important considerations, both to the process and nature of viable development interventions. Indeed, it is commonly held that legality, or security of tenure to land and property, is the single most important criterion in any slum upgrading or regularization process.

Illegal

The informality that makes it easy to access land in these settlements and to build dwellings may make it more difficult to obtain credit or to transfer or sell these rights to others

There are settlements that are illegal, either because they are squatter settlements, without the right to be on or use the land, or the land on which they are settled has not been designated for housing and related activity in the statutory land uses of the city. Few cities in developing countries actually have up-to-date statutory land-use or zoning plans. In theory, residents of illegally occupied land are very vulnerable to being evicted as they have no right to occupy the land. However, what usually matters more, in practice, is the extent to which legality is enforced – and this may be not at all.

The literature on slums has made much of legality and the threat of eviction as the key to determining the level and extent of investment and other decisions. In practice, while the threat of eviction makes an enormous impact on the perceptions and, therefore, the behaviour and priorities of the slum dwellers, not all of their actions are governed exclusively by it. The threat of eviction is probably the most potent force in galvanizing communities – it can help to transform a heterogeneous group of households, settled in a particular locality, into a community. However, while the actual threat is there, it is likely to divert attention away from more long-term or development-oriented activities. If the threat is withdrawn, however, the community may be sufficiently enabled by the experience to undertake more development activities that require a collective effort, investment or the pooling of resources.

Many slums are built on land that is designated for housing, and the occupiers have a legal right to be there. However, the layout or type of housing may not have been given formal consent; often it may not have been sought! Essentially, dwellings in this type of settlement do not comply with municipal regulations. Consequently, these settlements may be denied access or connections to the urban infrastructure, or they may not have their land title registered or recognized. This will make it difficult or impossible for residents to obtain any form of certificate of title, access to housing finance and other such facilities. Thus, many settlements are unable to develop beyond basic structures and householders cannot use the value of their property as collateral for credit to invest in enterprises or development.

Informal

In many countries, the process of registering title to urban land and obtaining permission to develop it is a relatively recent introduction. Therefore, as has always happened in many rural areas, households settle and construct their dwellings without any thought to their formal recognition. For this reason, many well-established settlements are considered informal – this is a common occurrence in the peri-urban areas of many African cities. Thus, strictly speaking, these are illegal settlements; but, in practice, it is unlikely that urban authorities would test this in court and they prefer to adopt a more tolerant, *laissez faire* approach.

However, the informality that makes it easy to access land in these settlements and to build dwellings may make it more difficult to obtain credit or to transfer or sell these rights to others. While generally constraining, this has advantages in that it makes it equally difficult for settlers to give up their land at a lower-than-market price to cash buyers who are more aware of the potential of the particular location.

DEVELOPMENT DYNAMICS

Even within similar common geographical regions or contexts, settlements that share common characteristics in terms of age, origin, location and legality may still vary considerably. Different drivers and dynamics of development, both from internal (community) and external

Box 5.23 Phnom Penh: living in the grounds of a pagoda

A settlement of 60 households has developed along a dirt lane leading to the pagoda because of the proximity to the city centre and jobs. Most heads of households are unskilled construction workers or vendors, and find work on nearby construction sites and markets. To settle on this public land, each household had to pay a bribe of US$10 to US$20 (approximately, one week's earnings) to the Sangkat authority as a 'registration fee'. The majority (around half) live in low-quality shelters with roofs and walls of palm, floors of recycled plywood, and doors and shutters of leaves. Around one third live in better dwellings with zinc roofs, thatched walls, wood floors, palm doors and shutters, and equipped with a bed, a table, a few dishes and pots, and a stove. The remainder are the poorest, often widows, sleeping on floors, living in shacks made of palm and old rice sacks, with no door or window, and furnished only with basic cooking utensils.

Source: Phnom Penh case study, 2002.

(NGO or other agency interventions) will render living conditions vastly different.

The first two criteria within this category are based on the community's inherent perception of, and attitude towards, their ownership of the physical environment based on the origin of that settlement. The second two criteria cover the impacts of external or 'upgrading' interventions.

Ongoing individual and community-led development

Individual or household-led development is manifest in very many slum areas. Without perceived security of tenure, access to some means of generating livelihoods, and the necessary capacity to manage threats such as environmental hazards, the majority of slum dwellers are unlikely to make incremental improvements to their own housing and living conditions.

The extent to which there is community cohesion and organization to undertake broader development initiatives that serve the wider neighbourhood depends, partly, on the social structures of the neighbourhood and, partly, on either a supportive or a benign attitude by the authorities – which gives residents confidence that there will be no eviction. Where other settlements have experienced upgrading and improvements, there may be spin-offs as other neighbourhoods emulate the improvements. However, where settlements have been regularly subjected to evictions and demolitions, there may be a reluctance to take any action that would bring the neighbourhood to the notice of the authorities.

Intervention-led improved slums

These are settlements where some intervention has been made to improve one or more aspects of the settlement, housing or social and economic facilities and opportunities; however, they have not had a complete upgrading project.

The actual impact of such interventions is liable to vary, depending, in part, on what has been improved or introduced. More importantly, perhaps, is the way in which the improvements were performed. Often, they are part of a local politician's efforts to improve his/her standing and to win votes. This may have been done in a way that residents feel was only necessary; rather than being grateful, residents may see it for what it is: a bribe. Many settlements are very well aware of their voting power in countries where elections are regular occurrences (such as in India).

Ironically, where these improvements have been the result of a struggle that has taken time and effort, it probably also helps to create a greater sense of community. The resulting improvements, therefore, are more likely to have an enabling effect, empowering the residents to increase their efforts to further improve the settlements.

Upgraded slums

These are slums that have been the subject of a fairly comprehensive upgrading and improvement programme,

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Box 5.24 Illegal districts in Rabat-Salé, Morocco

Illegal districts in the Rabat-Salé agglomeration have housing varying from concrete versions of traditional buildings to poor-quality dwellings. They are built on purchased plots of land, but without appropriate permits. Because they are illegal, these districts are also often deprived of the basic infrastructure; but conditions vary considerably. Older housing estates, for instance Hajja and Maadid in Rabat, appear less 'planned' but now include gardens and market gardens. More recently, larger settlements have been informally 'designed' in anticipation of achieving legal status. They appear similar to legal housing with respect to street network, division into blocks, and size and homogeneity of plots of land. Such is the case of the most recent part of Hay Inbiat and Oued ed Dehheb in Salé, or of Sidi Taibi. The last is a huge housing estate whose environment, currently, greatly benefits from its proximity to the rural environment.

Source: Rabat-Salé case study, 2002.

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whether gradually over time or as a one-off intervention. Nevertheless, the intervention may not have reversed the basic conditions, or – if it did – there is no guarantee that improvements will last long. Furthermore, improved conditions can serve to attract more households to the settlement, increasing pressure on the housing and services to create, once again, slum-like conditions.

It is also often the case that, while a settlement may have had a project or a programme of upgrading, in practice, the application of the funds and efforts were superficial, and much of the funding might never have reached the settlement. In some cases, where such insensitive upgrading occurred, the neighbourhood condition has been worsened by it.[32] Most city authorities now recognize the need to address the problems of slums and squatter settlements in their cities and to do so in partnership with residents.

There is another possibility where, although a slum has been upgraded, the residents refuse to acknowledge the upgrading – not because the improvements have not happened, but because there are often positive-discrimination measures that benefit the slum dwellers who would lose those benefits if their settlement were no longer a slum. On the other hand, the fact that the settlement was once a slum may

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Box 5.25 Informal areas in Cairo

In Cairo, informal areas have developed on former desert state-owned land. The history of the settlements varies according to location. For example, Manshiet Nasser began as a relocation site for slum dwellers and garbage collectors, and Ezbet El Haggana began as a hamlet for the households of coast guard soldiers stationed nearby. However, in each case, a core settlement was allowed to take hold, and expanded as the neglect of the government towards its own property became apparent. Usually, quite large plots on the fringes of the established core were walled, and then sub-parcels would be sold by these pioneers to other settlers. The rate of growth of individual communities varied greatly, with spurts of expansion at certain periods being quite common. The development process was completely informal, with no legal paper work and a total reliance on personal trust, mediated, when necessary, by the existing community, referred to as a 'hand claim' process. Although these areas are technically illegal, settlers have certain customary rights derived from interpretations of those portions of the civil code pertaining to hand claims on desert land. Residents tend to amass either the receipts from paying *tahkir* (a nominal rent imposed by a Governorate's Amlak (Properties) Department) or awayyid (property tax), from electrical connections, and from other items to establish as much paper legitimacy as possible.

Source: Cairo case study, 2002.

Table 5.2

Summary of opportunities linked to tenure

	Characteristics	Opportunities for upgrading
Communities sited legally on public land – mainly owner-occupiers	Situated in the older and more central parts of the city.	Less likely to resort to community-based action if local municipality has provided a certain level of service.
	Standard of provision of infrastructure is moderate, though much of it may be run down and in a poor state of repair. Overcrowded.	However, housing upgrade schemes could be embraced – potential profits to be gained are a driving factor.
Communities sited legally on public land – mainly tenants	Occupied by low- and middle-income households in walk-up flats.	Tenants unwilling to pay more in rent to improve conditions.
	Maintenance and services are the responsibility of local government but are likely to be inadequate due to low-rental income.	Improvements possible if ownership and responsibility for conditions are transferred – this situation best supports the creation of housing and community associations to manage common areas and coordinate upgrading and repairs.
Communities sited illegally on public land – mainly occupiers of own structures/houses only	Comprises a variety of locations and sizes. Many such communities are able to remain on the land through the intervention of a local self-styled 'protector' with appropriate influence.	Communities keen to obtain security of tenure and legal title to their homes. Communities seek recognition for the whole group, with individual scope to buy their own title over time.
		Usually very keen to upgrade.
Communities sited illegally on public land – mainly renters of structures/houses	Few settlements of this type. Frequently, though not necessarily, made up of people who see themselves as temporary to the city – for example, seasonal workers.	Residents have little incentive to upgrade due to transitory nature and level of tenure insecurity.
Communities sited legally on private land – mainly owner-occupiers	Consisting of middle-income households keen to make an investment.	Forging 'community' difficult.
		Less keen on managing services themselves; prefer to 'buy' services.
Communities sited legally on private land – mainly tenants	High demand for security of tenure and willing to invest their time, money and effort into upgrading, in return for a guaranteed period of rent freezes and no eviction.	Landlords benefit from gradual upgrading of their property, though tenants may be apprehensive about resulting rent increase.
Communities sited illegally on private land – mainly occupiers of self-built structures/houses	Such squatter settlements are few but exist where there is a powerful patron, political leader or other intermediary to provide protection.	Securing tenure is the primary objective in these cases with any upgrading possibility that security of tenure provides.
Communities sited illegally on private land – mainly tenants	Less likely to be interested in security of tenure without, correspondingly, more secure economic situation. Distinction to be made between tenants temporary to the city and those unable to acquire their own housing.	Differential pricing required to cater to different characteristics of the tenants.

Box 5.26 Mexico City: Ciudad Netzahualcóyotl

Ciudad Netzahualcóyotl is a vast irregular settlement built on the Texcoco lake-bed. Since the draining of the lake in 1900, a series of government acts that dealt with selling and regaining the land, coupled with the existence of historic titles, rendered the legal tenure situation of plots and properties complex and ambiguous. However, the first settlements came about in the 1950s, after speculators 'sold' unserviced plots for development. Subsequent resale was legal in the sense that development was authorized by the state government. However, at the same time, this was illegal, because building failed to comply with state regulations for urban services – paved roads, street lighting, water and sewerage mains and areas for public facilities. Nevertheless, hundreds of thousands of unserviced plots were sold and resold to create a rectangular grid of plots averaging 150 square metres. Towards the end of the 1960s, the population was approaching 600,000.

Over half of the population was in *colonias*, without any form of drainage or water supply. Severe conflicts arose out of the irregular tenure and multiple sales of the same plot of land. The *colonos* (settlers) organized on a massive scale to form what was one of the first urban movements, the Movimiento Restaurador de Colonos, demanding incarceration of the land developers for fraud, expropriation of the land and regularization of tenure, together with the introduction of services. After a decisive monthly payment strike, the federal government stepped in with a solution that would eventually meet the demands of the *colonos*, but at a price. Some of the developers were jailed for fraud. But most of them cooperated with the government, putting their stake in the land – their portfolio of credits – into a specially created trust, Fideicomiso de Ciudad Nezahualcóyotl (FINEZA), set up in 1973, which would effectively regularize 43 of the 83 *colonias* in the municipality. After lengthy negotiation, an agreement was reached in 1977 on payments and, a year later, over 60,000 properties were regularized. In 1981, FINEZA, as a federal trust, was abolished, and the portfolio and functions were later handed over to the state government organization, Comisión para la Regulación del Uso del Suelo del Estado de México (CRESEM). Under CRESEM, regularization accelerated; by 1991, titles to a total of 159,000 lots had been issued. By the late 1990s, only an estimated 12% of the plots in Netzahualcóyotl had irregular land titles.

Most of the *colonias* in the municipality had electricity by the early 1970s. However, street lighting, paved roads, water and drainage were only introduced after the regularization process was under way, starting with the main thoroughfares. By 1980, most of the streets were paved and supplied with main water lines and drains. During this time, the population doubled to over 1.3 million, due to the influx of households who could pay higher prices for serviced land, and also to the proliferation of rented housing of all categories. During the 1990s, the population actually fell as Netzahualcóyotl was the principal exporter of population to other areas of Mexico City. The resident population is now highly mixed, as is the quality of housing: 63% of dwellings have inside tap water, for instance, while 15% have poor-quality roofing.

Consolidation resulted in more than improvement – albeit unequal – in housing conditions and diversification of social class. Over the past two decades, trees, banks, shops, offices, libraries, schools, universities, cinemas and even McDonalds have all appeared on the main streets of Netzahualcóyotl, which also has its own cathedral and Olympic sports stadium. What was once considered a 'slum dormitory' is now the place of employment of 262 thousand people: over 4% of Mexico City's economically active population.

Source: Mexico City case study, 2002.

carry a stigma that residents may not be able to shake off, even after the settlement has been upgraded.

Upgraded settlements are likely to have much better facilities and urban services than other slums. They may also have had the benefit of cash handouts or access to loans and other forms of financial assistance that would have enabled the residents to improve their housing and, indeed, their means of earning a livelihood. They may, even, have been 'promoted' out of slum status.

Lacking community incentives for improvement

There are instances when residents expect slums to provide only the bare minimum in terms of shelter, and the individual residents and owners have no incentive to undertake improvements. Where residents are temporary, pay little rent, do not feel part of a community network, and where the building itself is owned by an (absentee) landlord, there is little reason for individuals and households to invest in order to improve those living environments. The owners also often have little incentive, owing to rent control legislation, or where the asset no longer has economic potential in terms of location near industry. In the case of industry-provided housing – for example, chawls in India, hostels in Southern Africa – the building fabric does not easily lend itself to affordable conversion and upgrading.

Incipient slum creation

Where poverty is growing, there is a high probability of slum appearance. Many established historic city slums and others in the centre of cities fit this description. Where there is multiple ownership through inheritance (for example, family houses and old tenements), occupants are likely to be too poor to carry out major renovations and owners are unlikely to agree to pay, especially where rent control is in force. It is estimated that 5 per cent of Moscow's housing stock of 'first-generation' prefabricated apartment blocks built at the end of the 1950s falls into the category of housing that is in urgent need of replacement or upgrading. More than

Box 5.27 'Incipient slums' in Moscow

After Perestroika during the 1990s, Moscow's city authority experienced for the first time the difficulties of dealing with an influx of economic immigrants, particularly from former Soviet Republic states. Refugees and homeless beggars began to crowd railway stations, airports and subways, and migrants to the city sought temporary accommodation in 'squatter flats' and, to a lesser extent, in abandoned buildings awaiting demolition. The squatter flats are often in former municipal dormitories or barracks built in and around industrial zones in the middle belt of the city, during the 1950s, in order to provide temporary shelter for in-migrant workers, called *obschagi* (Russian jargon for 'dormitories'). Almost 700 dormitories currently exist, typically four- to five-storey high brick buildings, but occasionally one- or two-storey wooden or brick structures with a rudimentary infrastructure. They are overcrowded with refugees, illegal immigrants and seasonal workers. Present-day residents pay very little or no rent at all, often renting or sub-renting illegally and waiting for the alternative of state housing or support. Poor maintenance and vandalism has hastened their deterioration; but employers (they should, by law, provide accommodation for the incoming workers, such as a room or an apartment) have no incentive to invest in the repair and maintenance of buildings if they recognize that the housing is 'dilapidated'. The backlog of housing in Moscow, however, is such that municipal housing has a long waiting list and people will continue to live in deteriorated locales.

Source: Moscow case study, 2002.

318,000 households live in such housing. Box 5.27 gives additional details in this respect.

The deterioration and degradation of such housing estates has been hastened by the poor quality of construction and materials. In many instances, especially in Soviet-assisted and inspired economies, where prefabrication and mass production were widespread, poor attention to design details and the lack of adequate site supervision during the construction phase accounts for much of the rapid and dangerous deterioration in both structures and cladding. Around one third of Moscow's housing stock is of mass-industrial housing production built during the period 1955 to 1970. It is primarily located in the mid-zone between the central and peripheral districts. Typically, five-storey prefabricated concrete buildings, some 40 per cent of them, suffer from engineering and construction faults.[33]

NOTES

1 This chapter draws on an initial draft prepared by Patrick Wakely in collaboration with Babar Mumtaz and Kate Clifford, Development Planning Unit, University College London, UK.
2 See Chapter 1.
3 Tipple, 2000.
4 Lloyd, 1979.
5 See Chapter 2.
6 Tipple and Willis, 1991; Malpezzi and Ball, 1991.
7 Case study – Mumbai, 2002.
8 Case study – Beirut, 2002.
9 Case study – Rabat-Salé, 2002.

10 Case study – Bogotá, 2002.
11 Case study – Jakarta, 2002.
12 Case studies – Durban, Ahmedabad, Mumbai and Chengdu, 2002.
13 Case study – Chengdu, 2002.
14 Case study – Lima, 2002.
15 Case study – Phnom Penh, 2002.
16 Payne, 2002.
17 Case study – São Paulo, 2002.
18 Case study – Nairobi, 2002.
19 Case study – Nairobi, 2002.
20 A S Dasgupta, New Delhi, pers comm, based on his work in

public housing in Kalkaji and Lakshmi Nagar.
21 Tipple, 2000.
22 Case studies – Cairo and Karachi, 2002.
23 Case studies – Durban, Ahmedabad, Mumbai and Chengdu, 2002.
24 The extensive literature on segregation, spatial isolation and social exclusion in European cities includes Andersson, 1999; Bolt et al, 1998; Harth et al, 1998; Krantz et al, 1999; Lee, 1999; Lee and Murie, 1999; Madanipour et al,

1998; Musterd and Ostendorf, 1998; Power, 1997; Taylor, 1998.
25 Case study – Chengdu, 2002.
26 Tipple and Willis, 1991; Malpezzi and Ball, 1991.
27 Amole et al, 1993.
28 Case study – Rio de Janeiro, 2002.
29 Boris and Prügl, 1996.
30 Case studies – Mumbai, Karachi and Nairobi, 2002.
31 Case study – Mumbai, 2002.
32 Case study – Mexico City, 2002.
33 Case study – Moscow, 2002.