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Regulatory Guidelines for Affordable Shelter Case studies of Navi Mumbai and Hyderabad, India

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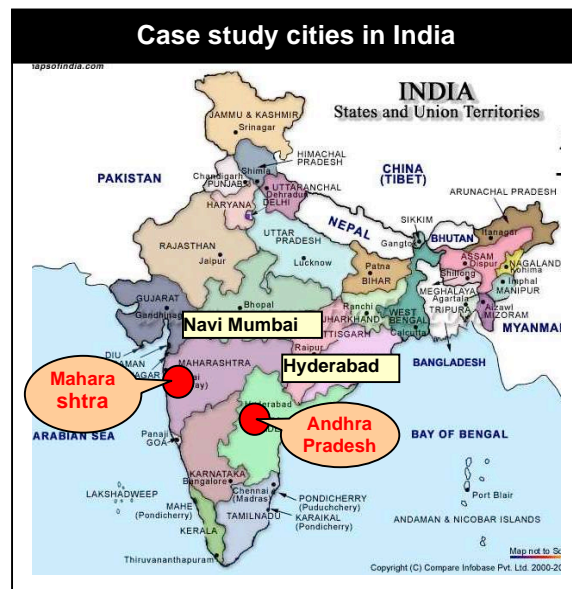
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THE CONTEXT

In accordance with the Indian Constitution, responsibility for urban development and housing rests with State governments. The Government of India is responsible for setting out the policy framework; offering incentives for investment in housing to households and building material markets. It also enacts model legislation to ensure equity and social justice in the distribution of land resources and for the acquisition of land for public purposes. Each State has a Town Planning Act guiding urban development, under which various local authorities are empowered to prepare development plans and implement these using the instruments of development control regulations. Major towns in each State have Urban Development Authorities to prepare plans and guide development in the urbanisable areas around existing municipalities. In the shelter sector, each State has a Housing Board and/or other such State-owned institutions to provide public housing. The local authorities have evolved different instruments to regulate development and provide housing. Thus, while, the policy framework comes from Central Government, State governments provide a legislative background within which the local bodies and development authorities regulate land development and housing activities.

In Indian urban areas, less than 10 percent of the total housing stock is provided by the public agencies. There are a few examples such as Navi Mumbai, with major contributions by public sector agencies. Individual households obtain formal housing through self-build approaches on independent plots, housing co-operatives, real estate developers and various companies providing staff housing. Non-formal housing mechanisms such as slums and illegal land-subdivisions also accommodate 16 percent (in Hyderabad) to 60 percent (in Mumbai) of the urban population according to the census of 2001. The formal and non-formal housing supply systems in India are explained in Annex 1.

The present research started in September 2001 and sought to understand to what extent planning standards, regulations, and administrative procedures are a constraint to low-income groups accessing legal shelter, or was driving them into slums. The two case studies chosen in India were Navi Mumbai and Hyderabad. Navi Mumbai is a new town under development since 1970. The entire land is owned by the nodal agency CIDCO¹ and forms the prime resource for development. The land and institutional resources offered an excellent experimental ground in the new city for fulfilling the requirement of all sections of the population. In Hyderabad, a conducive policy environment exists along with private sector initiatives for large-scale housing developments for the low and middle-income groups. The city has a history of viewing low-income housing as a welfare measure and adopted an urban community development approach for slum upgrading which offers an opportunity to examine the current issue from a different perspective than viewing housing as the sole benefit². This paper is in two parts covering the two case study cities.



¹ The City and Industrial Development Corporation of Maharashtra is a company wholly owned by the Government of Maharashtra.

² The authors are Additional Chief Planners in CIDCO. Uma Adusumilli hails from and is also professionally associated with Hyderabad.

The study focuses on the extent and nature of constraints, which the regulatory framework poses for low-income groups in accessing legal shelter. In the Indian context, the land use plan and development control regulations stipulate:

- spatial standards, such as land use, plot sizes, marginal open spaces and road widths;
- infrastructure standards, such as water supply norms;
- social amenity norms such as schools, community centres etc;
- planning regulations such as building heights, density controls, Floor Space Index (FSI)³, fire, environmental and other special regulations etc; and
- administrative procedures for obtaining accessing land and public housing and for obtaining development permissions.

Various acts at State level provide guidelines for property acquisition and registration and disposal, the formation and functioning of housing co-operatives; slum improvement and re-development, etc. The primary procedures are often formulated with a view to provide uniformity and ease for the clerical staff dealing with these. The first such planning regulations were inherited from the British administrative system and were subsequently copied from one place to another, with modifications to suit local requirements. The changes in regulations are generally either brought about at the instance of funding agencies or by local pressure groups. Generally, the regulatory authorities do not invite stakeholders to pro-actively and periodically debate the regulations in force to see if changes are needed in view of changing behaviour patterns, the success or failure of a particular regulation in achieving its intended target, and technological innovations.

To assess the extent to which the existing regulatory framework constrains or facilitates access to legal housing for the poor, the study conducted a comprehensive audit of planning regulations, planning standards and administrative procedures and identified key constraints with a view to lobbying for necessary changes.

The study attempted to provide answers to the key question as to why people are living in slums and to what degree the regulatory framework contributed to this. It also sought to identify which aspects of regulations are a constraint and the nature and scale of the constraint. The study aimed to identify the changes needed, the nature of such change, the change agents, the time frame for change and the aspects of change that the research project itself can attempt. The cases of Navi Mumbai and Hyderabad are presented below with regard to the regulatory mechanisms related to housing and land development.

An introductory UK workshop in September 2000 identified the scope of work common to the two research projects on regulatory guidelines for urban upgradation and for new developments⁴ and what is common to the participating case study countries. The regulatory framework in the Indian case study cities was enumerated up to January 2001 and discussions were held with various housing actors up to middle of 2001. Fieldwork in Navi Mumbai and Hyderabad was carried out to the end of 2001 and culminated in local workshops in both the cities in December 2001 to discuss the preliminary constraints. A second UK workshop in February 2002 compared the regulatory situation in all the case study countries for new developments. The Phase 2 report was completed by September 2002 and its recommendations debated in a local workshop in Navi Mumbai in January 2003. Implementation of changes was initiated and monitored from January 2003 to January

³ FSI refers to the floor space index used as a tool to control volume of the built up space on a piece of land. It is the ratio of total construction area to the plot area

⁴ The present study addressed regulatory frameworks for affordable new housing. A parallel study was being carried out by ITDG reviewing regulatory frameworks for urban upgrading. The two teams kept in close touch.

2004. The last UK workshop in September 2003 compared the recommendations and their status of implementation in respect of both the upgrading and new development projects. The workshop also discussed the scope, contents and dissemination method of the combined manual to be produced for both the projects. The final three months of the project, i.e., from January to March, 2004 were spent on redrafting the report and providing necessary country information for preparation of the manual.

Navi Mumbai



Case study settlements, Navi Mumbai

Over 50 percent of the new housing stock created in Navi Mumbai is built by CIDCO and half of that has been built for the poor⁵. Despite this achievement and the availability of large tracts of land in public ownership, the existence of disgruntled villagers, poor political leadership, multiple planning authorities functioning in the same area; have all contributed to the emergence of various informal settlements and illegal encroachments. The result is that in 2004, 24 percent of the 1.3 million population today live in informal housing, (9 percent in encroachments around villages waiting to be allotted and 15 percent in squatter settlements and therefore is outside the formal regulatory system.

CIDCO provides fully built housing intended for all income groups and also small (25 m²) serviced sites, primarily for the poor.

Table-1 Housing supply sub-systems in Navi Mumbai

Housing supply sub-systems	Population		Housing units occupied	Housing units added bet 1991-01	Annual rate of supply
Formal sector housing supply systems	880,000	80%	220,000	95,000	9,500
1. CIDCO	400,000	36%	100,000	46,000	4,600
2. Families, housing co-ops and private sector	250,000	23%	62,500	34,000	3,400
3. Old settlements (villages and towns)	230,000	21%	57,500	15,000	1,500
Non-formal housing supply systems	220,000	20%	55,000	40,000	4,000
2. Encroachment around villages	120,000	11%	30,000	20,000	2,000
3. Slums	100,000	9%	25,000	20,000	2,000
Total	1,100,000	100%	275,000	135,000	13,500

Being a new town starting with a clean slate, Navi Mumbai aspires for higher standards of living and also follows higher infrastructure norms, both physical and social, than are found in many established cities. The city has underground sewerage system, piped and treated water supply, a storm water system to prevent flooding, and a daily collection of garbage.

⁵ In India, the poor are defined as LIG (Low-income Group) and EWS (Economically Weaker Section). As of 2000, the LIG was defined as households with gross monthly incomes of between Rs 2000 (US\$ 44.44) and Rs5000 (US\$ 113.63), whilst the EWS is defined as households with monthly incomes of less than Rs 2000 (US\$ 44.44).

Since a third of the city was initially low lying (being on the coast), land reclamation was an expensive necessity. The new city is developed on a self-financing pattern using land as the sole resource, (Adusumilli 1999). For this reason, all the costs incurred, even at the city scale, such as the railway lines, are to be recovered from land sales. This, coupled with high infrastructure standards, pushed up land development costs in Navi Mumbai. But the residents fully appreciate the level of services as many studies conducted periodically have shown⁶.

Hyderabad

The capital of the state of Andhra Pradesh, Hyderabad is the fifth largest city in India. The city is nearly 400 years old and is spread over an area of 260 Sq.km. Hyderabad is often referred to as Cyberabad due to its emphasis on information technology in all aspects of development. It consists of the Municipal Corporation of Hyderabad (MCH), nine surrounding municipalities, the Secunderabad Cantonment and several villages, many of which are urbanised. The Municipal Corporation of Hyderabad urban agglomeration recorded a population of 5.2 million in 2001, with a growth rate of 9.2 percent per year.

In Hyderabad, 37 percent of the households were living in one-room (formal and informal) dwelling units, 31 percent in two-roomed (formal and informal) units and 25-30 percent of the population in the municipal area in slums. However, the census of 2001 showed only 16 percent living in slums.

Hyderabad has a thriving private sector to develop real estate for all income groups, but such developments for the lower income groups are located in the peripheral areas where land is cheaper. These efforts are also mostly plotted developments and therefore attract lower middle-income groups in need of incremental housing rather than lower income groups. This is largely due to the peripheral locations, relatively larger plot sizes to ensure profits for the developer, and the affordability of poor. The public agencies are not providing new housing units for the lower income groups, even though until a few years ago the State level Housing Board did this. As to the lower income groups, the housing options available are portioned plotted developments by higher income groups in the legal rental market, or slums in the informal markets.



As of 2004, the Andhra Pradesh State Housing Corporation is the nodal agency for implementing housing programmes for the economically weaker sections of the population,

⁶ 62 and over 75 percent of the population living in the formal sector housing expressed satisfaction about the level of physical infrastructure and social amenities in Navi Mumbai respectively (TISS, 2000)

which includes new housing for the poor and slum redevelopment in Hyderabad city. The norms of the APSHC specify a cost ceiling of Rs.25,000 (US\$556) per house for the EWS⁷ which enables only the grant of land tenure (ownership) and the building of reinforced concrete frame structures for the multi-level tenements. The beneficiaries are expected to build the external and internal subdivisions themselves. The local body is expected to develop the infrastructure networks and provide the services. MCH undertakes overall community development including health, women and child welfare, employment generation, environmental improvement, etc. in the slums under the Urban Community Development (UCD) Scheme. The funding for the schemes of the UCD Cell has recently gained statutory provision (as UCD and Services Fund) and constitutes 10 percent of the total property tax revenue of the MCH and 30 percent of the per capita grants received from the State and Central Governments. This statutory provision has been made in pursuance of the 74th amendment to the Constitution 1994, which envisages urban poverty alleviation as a legitimate function to be undertaken by the local bodies.

RESEARCH METHODOLOGY

The case study cities provide scope to study how the regulatory framework of urban planning regulations, standards and administrative procedures influence the lower income groups' access to legal shelter. To this extent, they provided excellent variety. One settlement each from the formal and informal sector was carefully chosen from each of the cities for detailed study. In Navi Mumbai, the settlements chosen were the Bombay Urban Development Project sites and services scheme in Koparhairane for the formal sector and Ganeshnagar slum in Airoli from the informal sector. The two settlements were chosen as they have similar demographic, social and economic characteristics, were developed during a similar time period (1992-93) and have similar plot sizes and level of services.

Though a conventional household survey was not conducted in the case study settlements, discussions were held with different groups of people such as representative associations, known families, shopkeepers, women and youths to separately cross check the information furnished. As the sample of households that can be studied was going to be too small to be statistically significant, it was felt this method would be adequate. The information so collected was supplemented by the recent survey information available in CIDCO and outside.

In Hyderabad, a local researcher (Professor Ravi Anand) was associated with the project. The data were collected by a group of local university students who were already engaged in studying the local slums, both regularised and un-regularised and were available to understand the situation. But in Hyderabad, processes and costs were gathered specifically by tracking down individual experiences of low-income persons employed in the formal and informal sectors. The informal sector consisted of slums as well as redeveloped slums. Apart from this, the methodology of conducting research was the same as in Navi Mumbai. The one day workshop arrangements in Hyderabad also offered lessons as to what and when to do sequential activities leading to a purposeful short workshop. These were related to sequencing the events, identifying useful participants and determining the extent of participation.

Field research was undertaken in both cities between July and December 2001. In both cases, prior to conducting the case studies, existing regulations were documented and recent changes in the local development control regulations were noted. A series of discussions were held individually and in groups with the residents of low-income

⁷ EWS stands for Economically Weaker Sections and is the term used in India to define the poorest income group.

settlements in the case study areas and with the regulatory authorities, real estate developers, NGOs involved in the shelter sector, and practicing architects and other housing professionals. The broad regulatory constraints were identified at this stage. The key points that emerged in the above discussions were further discussed in a wider and collective forum at the one-day workshop in the case study cities held in December 2001. The country findings were then compared with the findings from other case study countries in the international workshop in UK held in February 2002.



Workshop in Navi Mumbai, 2001



Workshop Hyderabad, December 2001

KEY FINDINGS

The manner in which planning standards and planning regulations are referred to in India may be different from how they are viewed in other countries. Generally, the physical and social amenity standards including open spaces, the minimum plot and dwelling unit sizes, the maximum densities and the means of access are counted as standards in India. The land-use, floor space indices, heights of buildings, building setbacks and the internal arrangement of rooms are referred to as regulations.

In Indian cities, housing for the urban poor is provided mainly in two forms. Slums and illegal land sub-divisions operate generally outside the legal framework, and hence standards and regulations are a non-issue for them. This is due to the fact that the low-income group has only two options for accessing shelter. First, unauthorised or informal settlements, which operate outside the regulatory framework. In the legal housing market, the public sector agencies provide subsidised housing intended for the poor. Any contribution by co-operative and NGO sectors is not numerically significant. Local authorities are able to modify standards, regulations and procedures when they are the providers themselves.

Navi Mumbai case study

There are three sets of regulations in Navi Mumbai for shelter development. The general set and one special set each for the economically weaker section housing schemes and for the plots returned to the original villagers⁸ as land compensation. Special standards are prescribed in Navi Mumbai for the preparation of layouts and building bye-laws for EWS schemes, primarily making them more affordable. These include smaller plot sizes, reduced road widths and open spaces, pedestrian pathways instead of vehicular roads, and other reduced building standards⁹. However, the utility service levels are not reduced¹⁰. The plots

⁸ From whom private lands were acquired for the Navi Mumbai project

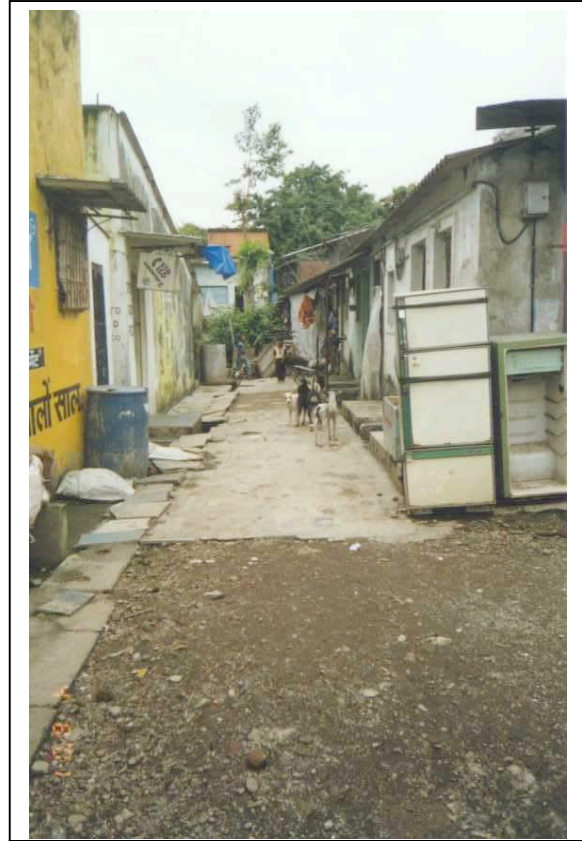
⁹ Ex : The open space requirement is 10 percent as against 15 percent in a layout for other developments. Similarly the front and side open spaces required for EWS plots are 1.0 and 1.5 mtrs. as against the 3.0 mtrs. required for general developments.

allotted to the original villagers as part of the compensation package for acquisition of their lands, also have reduced standards and regulations. As a political commitment, these plots are allotted with higher development potential (FSI) and for a mix of residential and commercial uses¹¹. Thus different sets of standards serve different purposes in Navi Mumbai. The three sets of regulations are described in Annex 2.



Ganeshnagar Slum, Navi Mumbai

The stakeholders in both case study cities considered that administrative procedures and the people implementing the regulations are the central problem. They also agreed that planning standards and regulations are a minor impediment for poor people in accessing legal shelter, But procedures (in both cities) amongst the regulations and the people implementing the same are perceived as a bigger impediment, but not only for housing and lower income groups¹². Most stakeholder groups agreed that simplified procedures would reduce costs.



Ganeshnagar Slum, Navi Mumbai

The real estate developers considered regulations like floor space index, setbacks, and parking and open space standards as constraining their potential to deliver marketable ventures. The poor saw regulations and standards as protecting their rights within land and housing markets, which are increasingly becoming regressive. The residents of both formal and informal low-income settlements expressed this opinion during group discussions. Slum households felt that lack of information and availability of affordable options at the appropriate time and location is a problem. They saw no threat to their tenure security in the slums, though would have opted for a legal house for better community amenities and social status. The low-income group households in legal housing were worried about stringent transfer procedures¹³ and the high legal cost of obtaining permissions, which forces them to carry out additions and alterations

¹⁰ Ex : The road width is reduced but not the specifications of road construction. Similarly plot level water supply, sewage and electric connection are provided.

¹¹ The permissible FSI on these plots is 1.5 whereas for general residential development it is one, and 15 percent of the FSI can be utilised for commercial purpose.

¹² An interesting argument put forward by the poor communities in Hyderabad during discussions with groups in informal settlements, is that although procedures are a problem; they are a problem not only for housing provision, and not only for the urban poor.

¹³ The procedures require that the original owner should provide no objection to the transfer. This became a problem because the transfer in the first ten years is not permitted. However, households transfer illegally and further transfers also took place in the last ten years. By the time transfer is permissible the original owners are not traceable or charge a hefty amount for signing the no objection certificates.

illegally. Practicing architects are weary of the subject and consider only the government officials as the problem. For them every additional regulation is an extra seat where money and time will have to be spent. NGOs working on shelter issues were worried about any regulation that comes in the way of their smaller interventions and seek modifications for local benefits. But they also agreed that policies rather than regulations are the main problem.

The regulatory constraints are enumerated in the form of a regulatory matrix enclosed as Annex 3. Planning standards were not seen as a problem in Navi Mumbai, but zoning amongst regulations is seen as restricting. In reality, zoning is not so restrictive as the Development Plan only indicates predominant use zones and permits a large number of compatible uses within each zone. However, once sold for a specific purpose within the zone, plots had restriction to stick to a particular use or uses. CIDCO also sells plots for



Serviced sites in Navi Mumbai

mixed uses called commercial cum residential user plots and permits 15 percent commercial on all lands returned to villagers and permits incidental uses in large developments of residential complexes. The restrictions on plot and building uses are now relaxed, through a change of user policy. Therefore, zoning becomes a problem only when the illegal developments take place in a 'no development' or 'regional parks' zone and then also it is attempted to change the use of the zone legally if really found necessary.

In Navi Mumbai, a subsidised plot of 25 sq.m. costs a minimum of Rs.¹⁴ 750 (US\$16) per sq.m. in 2002. It is calculated that for a self-help construction on the same, registration-obtaining development permission-access to utilities would cost 165 percent of the cost of land and construction would cost another 333 percent. An additional 32 percent would have to be spent on informal costs and time. Details of itemised costs are shown in Annex 4. For larger developments, the proportion of legal and informal costs of obtaining permissions would be considerably lower, as revealed in the discussion with real estate developers in Navi Mumbai. The legal costs are higher per square metre of land for the smaller plots, as many of the charges follow a minimum charge irrespective of the plot size. Annex 4 provides more details about the actual estimated costs. The informal costs in Navi Mumbai are reported to be lower than in other cities as CIDCO owns and allots lands, which eliminates procedures such as title clearance, etc.

The case studies revealed that a sizeable number of households have multiple dwelling units in slums and or in the legal housing schemes for the low-income groups. As already discussed, this is possible due to the lack of a unique identity system for the citizens in the whole of India. Presumably, it is also a consequence of providing subsidies, since this

¹⁴ The Indian Currency is Rupee with one Rupee being approximately equal to US\$45 in the year 2001 and remained more or less at this rate until 2004.

encourages people to capture the subsidy rather than just obtain housing to meet their own needs.

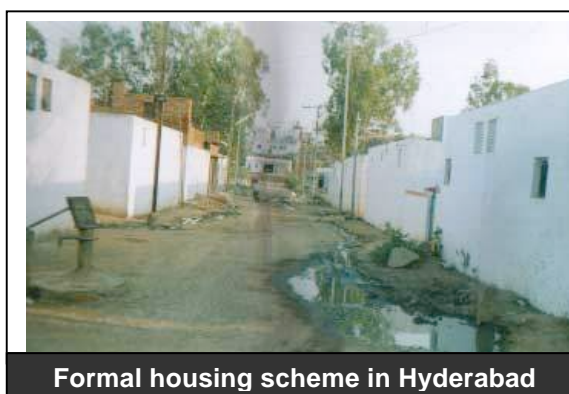
The study in Navi Mumbai concluded that planning standards and regulations are a minor constraint in comparison with ineffective land markets and housing delivery mechanisms; and housing finance institutions, which do not favour the unorganised sector.

Hyderabad case study

Hyderabad has carried out three recent innovations in the field of regulations related to housing development and maintenance. Firstly, the property registration procedure has gone on-line. Secondly, the applicants for development permission can now monitor progress of their case on-line. Thirdly, e-service centres provide a single window service for the citizens at decentralised localities in the main cities in Andhra Pradesh including Hyderabad. Known as e-sewa centres, these windows permit citizens to pay for all utilities; apply for passports, licenses etc.; and register births, deaths, marriages etc. The direction being adopted shows an apparent willingness towards people-friendly, single window, hassle-free and speedier procedures. The information on e-sewa as obtained from the official web site is placed as Annex 5. These processes are still new (most of them were opened since 2000) and no indicators were available during the fieldwork to measure their effectiveness in terms of meeting the intended targets. However, the e-sewa was the most widely used service offering easy accessibility, flexible hours and different modes of payment. General enquiries during and immediately after the local workshop in 2001 whether the same window can be utilised for introducing information about land and housing availability did not find much response as they were not on the government's agenda to be included in the services listed.

Table 2: Growth of slums and slum population in MCH area

Year	Slums	Popln. in millions
1962	106	0.12
1967	194	0.16
1972	282	0.30
1976	300	0.32
1978	377	0.40
1979	455	0.40
1981	470	0.54
1986	662	0.86
1994	811	1.26



Formal housing scheme in Hyderabad

Andhra Pradesh is shifting its approach on housing for the weaker sections from welfare to that of cost recovery. In the process, the scale of schemes has been reduced and is tending to cater to the middle-income groups. It is also common in Hyderabad, like in most other cities in India, for the middle-income households to acquire lands in the peri-urban areas for speculation. This has reduced the availability of even peri-urban land for poor.

Annex 6 shows the regulatory matrix identifying the constraints in Hyderabad. While Hyderabad's efforts at slum redevelopment over the last three decades may have contributed to reducing the percentage of population living in slums¹⁵, policy and efforts to provide and encourage legal and affordable shelter options for the poor are not visible. An often-cited reason for this, which came up in the workshop in December 2001, is the non-availability of land in the city area. However, this appears not to be entirely true looking at

¹⁵ The slum population as per the preliminary reports of 2001 census indicate a very drastic reduction in this percentage (16 percent) thereby raising questions about its accuracy.

the rate of development by the private sector and the manner in which vast lands are being made available to the large educational and research institutions by the State government.



Re-developed slums in Hyderabad

Conclusions

In the context of Navi Mumbai, the research has shown that planning standards and regulations in themselves are not a problem. Neither the professionals nor the low-income households see them as a constraint. Observance of similar standards in both planned and unplanned settlements further strengthens this view. What is impeding the poor's access to legal housing is its unavailability of legal options at desired locations on a continuous basis. Even though in Navi Mumbai CIDCO attempted a comprehensive programme approach until 1994 to provide affordable housing for the lower income groups, the qualitative aspects of the programmes proved to be inadequate to ensure retention of such stock for the same groups. Backed by public land ownership and thus control on land market, the efforts should have been more effective. Twenty four percent of the population living in slums and other illegal housing by 2001 is a matter of concern in a new city where land is in public ownership. If the proportion of the slums reaches that of Mumbai, living in slums too may prove to be unaffordable to a large section of the poor in future. As reported in the newspaper, to live in a Mumbai slum, one has to go through as many, if not more, procedures as in a formal building¹⁶ (Ramaswamy, Ranjani; 2002).

In the slums and legal low-income group housing, it is observed that the accommodation levels, entry costs, recurring shelter costs, and the resale value of property are all not very different. What is different is the level of open spaces, social amenities, sanitation, the legal tenure and therefore the ability to raise credit. The low-income households themselves feel that legal shelter will bring in improved services and raise education levels. Also, there are a number of shortcomings in informal systems that have always formed the basic premise justifying and determining public intervention (Verma, 1996). Wadhwa argues that the problem of poor is not unaffordability of land per se but that of unaffordability of land in desired locations and feels that better land management is the key to making land available at affordable prices in urban areas. She further argues that government interventions through regulatory tools, amongst others, to arrest speculation on land, discouraging excessive use of land by public or private sectors, reduction in the cost of conversion and

¹⁶ If one wants to live in Mumbai slum, one has to go through as many if not more procedures than in a building. A deposit is mandatory (average minimum of Rs. 10,000 to 12,000 to a whopping 60,000 in some areas). This is compounded by a Rs. 500-2,000 rent that varies according to location, rooms within and the type of room. The rental agreement is a 11 month contract that is signed on stamp paper and even ratified by two other witnesses. This is reported by Ramaswamy, Ranajani in "Unreal estate" in the Mumbai Newslite, Indian Express dated 19th May 2002.

cost of transaction of lands, reduction in the minimal plot size and prescribing maximum plot sizes are necessary to achieve the desired results (Wadhwa, 1996).

OPTIONS FOR CHANGE AND RECOMMENDATIONS

General considerations

The study in Navi Mumbai concluded that planning standards and regulations are a minor constraint in comparison with ineffective land markets, housing delivery mechanisms; and the non-availability of institutional housing finance for those engaged in unorganised sector. In this respect, a larger role for the public sector intervention and particularly for channelling institutional finance for the lower income groups by way of hire-purchase schemes is seen as a preferred option.

CIDCO has largely withdrawn from providing housing for the EWS in the last decade. The poor in Navi Mumbai are exposed to the market for their housing needs, though the formal market is not responding. CIDCO should therefore reconsider its responsibility as provider of legal housing for the poor as well as its provide responsive regulatory framework.

A major effort should be to reduce the percentage of households in need of real help by better protection of lands and timely implementation of land compensation schemes. A matching effort at preventing the possibility of multiple identities for single households will focus the problem on the real target. Though such an identity system would plug misuse of subsidies and target them more effectively, the recommendation cannot be implemented at the city level and hence is out of scope of the research project as a practical recommendation.

Options for change and recommendations for action in Navi Mumbai

In view of the opportunity Navi Mumbai city provides for pro-active action by way of land in public ownership and an autonomous institution undertaking the development, it will be very discouraging if the only option available to the low income households is entering the legal housing market through regularised illegal housing. This route may encourage organised squatting and land grabbing (Nayani and Adusumilli, 1989), and may also exacerbate inequity in urban land distribution as criticised by Verma (Verma, 2000). New developments with a reasonable minimum dwelling unit/plot size are necessary preconditions to improve access of the poor to legal shelter. A comprehensive policy, steady delivery of legal stock of the desired development type by both public and private sectors, backed by simplified, transparent and response-oriented administrative procedures can help improve the situation.

CIDCO is presently undergoing institutional reform and also trying to introduce citizen-friendly processes to improve the marketability of its services in a sustainable manner. With this institutional support, it was attempted to build in some of the recommendations of the research. However, the actual degree of success will depend on the consistent support of CIDCO.

Planning standards

As no aspect of planning standards is considered a constraint by stakeholders, no recommendations are made in this regard.

Planning Regulations

Regarding the regulations, the regulations matrix (Annex 3) identified restrictions on the use of land and buildings, zoning regulations, maximum height of rooms and such others as constraints. Change of user policy adopted in Navi Mumbai takes care of some of the

problems, and zoning becomes a problem only when unauthorised occupations happen on completely non-conforming zone¹⁷ which is proposed for regularisation and grant of land tenure. The pro-active measures in terms of making more legal options available to such settlers, rather than changing the zoning regulations is recommended. The following long-term recommendations were also made in respect of regulations.

A slum survey available (TISS, 1996) shows that 80 percent households are migrants and arrived directly in the slum and therefore do not fulfil the 15 years domicile criteria set by the government of Maharashtra state for accessing any shelter provided by public agencies at fixed or concessional price. This is a regulatory constraint for enabling the poor to get legal shelter. CIDCO has appealed to the State government since 1998 to remove this regulation, but the result is still awaited.

Sanctioning of changes in land-use zones and modifications to the General Development Control Regulations of Navi Mumbai by the state government takes many years. It was recommended that the period for approval of modifications to the development plan be restricted to one year, especially because they are minor modifications to the already sanctioned Development Plan. The report of the technical group on urban planning system (Planning Committee, 1996) also recommended the same. It was proposed to forward this recommendation to the Urban Development Department of Government of Maharashtra for consideration, but approval is not expected easily.

Administrative Procedures

The scheme announcement and allotment procedures have drastically changed in CIDCO since 2001. However, since no housing schemes were initiated for the poor during this time, the impact is not visible to them. The modified method requires no documentation, but only a simple affidavit stating facts. The idea is to avoid increasing documents, which are in most cases incorrect. However, citizen identification systems are a key to reduce the leakage of subsidies. The research will only attempt to strengthen any additional simplifications and announcement methods that can specifically help the poor. In view of the research finding on information flows being a constraint, it is recommended that in future schemes for low income groups, information centres should be opened in the known low-income areas and public places where information dissemination, distribution of application forms, assistance for filling the same and enrolment can take place. The cost implications of this recommendation are very marginal as community workers can be employed on a short-term basis to do this. This is still considered a long-term recommendation due to administrative adjustments and attitudinal change necessary to realise this.

It was also proposed to hold periodic (annual) audits of regulations through brainstorming sessions involving all actors in the real estate market, to obtain feedback. A smaller committee could then translate the outcome into needed modifications. This has already been discussed in CIDCO and there is general agreement to go ahead with this. Accordingly, the first stage of discussions has already been held. The Planning Committee report (Planning Committee, et.al.) also recommended periodic reviews of spatial norms based on economy, security, social viability and the needs of the emerging planning system.

The cost of obtaining legal permission and utility connections in Navi Mumbai is very high, particularly for the low-income groups as detailed in Annex 4. This is acting as a constraint and driving some households who can otherwise afford a legal house, into illegal housing. It is also noted that in the formal case study settlement, a majority of the households that added a first floor have done so without any permission. Their original ground floor was

¹⁷ As discussed earlier under planning regulations, the land-use zoning in Navi Mumbai is only on broad basis where most compatible uses are permitted.

partially constructed by CIDCO and no building permission was necessary. Incremental additions now cost Rs.18,000 (US\$400) as additional premium to CIDCO and Rs.12,000 (US\$267) towards obtaining development permission and service connections, apart from the actual construction cost. Therefore, they prefer to pay a small informal cost of Rs.5,000 (US\$111) for continuing with the unauthorised additions. The study recommended that the minimum ceiling on certain costs be removed to bring the unit rates for small plots at par with that for the larger plots. This has already been discussed with CIDCO and the Municipal Corporation officials who agreed to look into the matter soon. This appears to be achievable, though the extent of reduction of costs is not yet known.

Obtaining development permission takes anything up to 4 years for an individual household as found from tracking actual cases. It was therefore recommended that applications be checked on receipt so that any inaccurate or incomplete applications could be returned for completion without delay. This was intended to help reduce delays and the consequent multiple visits for obtaining development permission. The formats of submissions as well as scrutiny were then recommended to be made available on the internet to further speed up the procedure, as is done in Hyderabad. Known as 'window checking', this recommendation has already been implemented by CIDCO and NMMC. A proposal is under consideration whereby development permission can be granted in one day by granting 50 percent of the admissible construction restricting, so that work can commence on site immediately. The rest will be granted after due scrutiny.

Under the Maharashtra Regional & Town Planning Act of 1966, plot development plans once approved, require revalidation every year until commencement. The intention is to suggest modifications if any changes are found to be necessary in that area due to developments or policy changes during the intervening period. However, in Navi Mumbai, it was found that revalidation of approved plans is sought even if the construction work commenced, causing some more trips to the public office. It was agreed by CIDCO as an avoidable step and the procedure has been removed already.

A 'Green' channel for obtaining development permissions is being introduced in some parts of India. Hyderabad has already done away with granting permissions for individual homebuilders plots of up to 300 sq.m. This is potentially very beneficial for the poor, as no permission means reduced shelter costs. The study recommended that the same can be done in Navi Mumbai, but up to plots of 100 sq.m., because, multi--dwellings are expected to be constructed on plots larger than this. In addition to what Andhra Pradesh has done, it was recommended that type designs for 'ground floor only' construction should be prepared for a variety of plot sizes. The households can then directly go to a contractor and get going. In reinforced cement concrete constructions, a licensed architect's supervision may be necessary. A suitable model has yet to be worked out and submitted to CIDCO for adoption.

The development control regulations for Navi Mumbai are modified from time to time. At present, the regulations are contained in a small book, which is reprinted once every 6 or 7 years. The modifications in the intervening period are not found in the book. The development control Regulations (DCRs) are recommended to be placed on the web site in English and Marathi, so that an accurate depiction of the regulations scenario would be available to anyone wishing to use it. This is already implemented by CIDCO by posting the English version on its web site.

A small and simple guidebook giving the details of key regulations and procedures to be followed and the charges to be paid is recommended to be printed in both English and the local Marathi language. However, the researchers are yet to prepare the guidebook for distribution by CIDCO.

Long-term policy recommendations

Most of the recommendations made for Navi Mumbai are in respect of procedural changes relating to development permission. These can simplify mechanisms, and reduce delays and costs to the households who already have access to legal plot. Only the recommendation to remove development permission procedures altogether for the small plots and to analyse and work out ways to reduce the legal costs of obtaining utility connections have a small potential to improve the poor's access to legal shelter. This is again on the assumption that some of the households settled in the slums because these aspects acted as impediments. Therefore, it is also felt necessary to come out with long-term policy recommendations oriented towards improving the housing delivery systems and will take much longer to find acceptance and show results on the ground.

Efforts to involve the private sector in delivery of shelter

With the overall objective of increasing legal housing options for the low-income groups, the Indian cases of Navi Mumbai and Hyderabad suggested that there is a need to have a variety of supply options. Due to a variety of reasons, most Indian cities have significant sections of their population living in slums. Apart from the political patronage and poverty, inefficient land management by public authorities and profit-driven private sector have also contributed to this state of affairs. The Navi Mumbai example showed that powerful intervention by a development authority owning all the land could not in itself ensure that the poor get access to legal shelter. In most Indian cities, the intervention of public authorities is confined to slum upgrading with no pro-active action for creating new legal options. The Hyderabad workshop especially focused attention on this aspect.

A number of attempts in the past by CIDCO to involve the private sector for the delivery of small dwelling units have failed. The result is that while about 50 percent of housing constructed by CIDCO is for the low-income groups, only 5 percent of the privately built housing stock is for this group. The field study showed that this contribution by private developers is now on the rise due to the real estate market having shifted from speculative to real needs. The study recommended that there is a need to encourage this trend and also offer incentives to increase this share. Preliminary discussions with a few real estate developers of Navi Mumbai showed that given an incentive of 10 percent extra floor space, they may be able to deliver up to 20 percent of their tenements for the lower income groups. A similar incentive is already available to the State owned Housing Board if it builds 60 percent of the units for the low-income groups. Also, the residents do not appreciate the combination of low and high-income group units generally. This problem is being discussed with the architects engaged in the land ceiling related projects apprehensive that developers would show smaller units until approvals are granted and amalgamate them in to larger units later. However, when discussed during the second workshop in Navi Mumbai in January 2003, the participants including the real estate developers, felt that such additional concessions will not be necessary and what they require is the ability of low income groups to raise institutional finance. Therefore, the recommendation of granting additional floor space index to the developers for delivering small units was not pursued by the researchers. However, the recommendation remains for encouraging private sector to deliver small units.

Direct provisions by CIDCO

CIDCO's direct provision of housing can also have a variety of forms. These can include fully built walk-up apartments, fully built single floor tenements. In Navi Mumbai, partially or fully built housing proved to be much more affordable to the city in the long run than the serviced sites enabling tenements to remain available for future low-income households when the original residents move out (Adusumilli, 2003). They offer ready-to-move in accommodation with most procedures taken care of reducing the cost, effort and time involved for the poor. Fully constructed apartments also provide high densities, thereby putting land to intensive

use. However, it has high initial costs for the family and does not allow the possibility of incremental additions to built space. On the other hand, serviced sites offer low entry costs and thus easy access for the lowest income households and the possibility of incremental additions, though the occupation rate is slower¹⁸. Also, the high land values in metropolitan cities in India make them susceptible to market forces and frequent transfer of plots to higher income groups.

A recommendation was made for CIDCO to reserve a proportion of its land development schemes as serviced plots for lower income groups. The resulting unutilised construction potential can be transferred and utilised on the remaining developments for higher income groups, which will also cross-subsidise the small plots. This recommendation is yet to be discussed with CIDCO. Another recommendation is for CIDCO to either directly channel or facilitate other housing finance mechanisms for improving access to institutional housing finance by low-income groups. When such finance was channelled directly in the past for serviced sites, as well as built housing units for the lower income groups, the loan recovery rate was over 75 percent¹⁹, which is very encouraging for re-starting such a facility. The threat of re-possession of property also ensured better utility payments. This could be CIDCO's biggest direct contribution to improving the access of poor to legal housing.

Recommendations for Hyderabad

No direct recommendations are made for Hyderabad. As discussed during the local workshop in December 2001, vacant land will have to be audited and adequate land will have to come to public ownership for the public authorities to initiate proactive action. It was concluded that financial credit giving regulations and the administrative regulations that may affect land banking rather than planning regulations that needed change in respect of Hyderabad. The associate researcher of the project is also involved with the DFID funded project in Andhra Pradesh state called AP Urban Services for the Poor, which is being implemented in other towns in the state. Shelter being one of them, it was likely that certain findings and recommendations from that study may converge and lead to more effective action proposals. In view of the recent land and shelter related regulatory changes introduced in Andhra Pradesh, particularly in Hyderabad, monitoring and reviewing their performance in meeting the intended targets was expected to be of significance. Discussions revealed that there was potential benefit in undertaking further research to monitor the performance of e-governance, particularly the property registration process, tracking status of development permissions on-line, e-service and the citizens' charters. However, recommendations in respect of Hyderabad were not pursued after Phase 2 due to financial constraints.

Achieving Change

Of the recommendations made in respect of Navi Mumbai, it was decided to negotiate for implementation of the short term ones for two reasons. First, they were the easiest to make, as decision making is at CIDCO level and second, they are implementable in a shorter time

¹⁸ The individual plot holders will take up construction as and when it suits them thereby prolonging the occupancy of tenements. Going through some files granting development permissions in a 1994 allotted sites and services scheme, it was found that it took 4 to 6 years for individuals or housing co-operatives of low income group to obtain building permission.

¹⁹ This positive sign can be attributed to the low monthly instalments (only Rs. 130 {US\$ 3} for the serviced sites sold in 1994) and the general ability of many households to pay (the Ganeshnagar slum dwellers pay Rs. 250 (US\$ 5.5) per month towards television cable alone and an equal amount towards water, electricity etc.). The discussions revealed that prompt payments are due to the threat of severing of utility connections by CIDCO such as water supply. This was acknowledged to be the factor that ensures regular payments to the television cable operators. The households expected some kind of protection from the local leaders against severing connections once the Municipal authority took over the utility functions as they have not mortgaged any property to the Municipality.

so the research project period may could some results. Accordingly, the recommendations pursued were:

- conducting a regulatory audit with stakeholder participation;
- reducing legal costs of obtaining development permission and utility connections;
- establishing a window checking system for receiving applications for development permission;
- tracking the status of such proposals on internet, and providing a 'green' channel for development on small plots²⁰;
- removing irrelevant procedures such as annual revalidation of plans even after the development has commenced on the plot;
- publishing and placing on internet the planning regulations; and
- publishing information guidebooks about any policy affecting the general public in both English and the local language.

These recommendations were pursued during 2002-2004, but achieved with varying degrees of success as described in the above section on recommendations.

The recommendation of conducting frequent regulatory audits, window checking the development proposals and placing planning regulations on the internet could be negotiated by the researchers with CIDCO and NMMC using their position in CIDCO's planning department. Management of CIDCO and NMMC, which are the two regulatory authorities in Navi Mumbai, real estate developers and architects associations could be easily consulted due to this. Thus, the researchers being part of CIDCO has greatly helped, but also acted as a constraint at times to the ability of the researchers to negotiate changes. On the whole, it was felt that both the recommendations and their implementation would have been more balanced and achieved more fully if the research team included regulatory authorities directly and also some outside professionals.

At the policy level, it is felt that most recommendations made required a long time for realisation, extensive debate and negotiation with CIDCO, NMMC and the state government. Further, it was also necessary to wait for a favourable and enabling political and institutional environment before actual policy proposals could be initiated. The set of recommendations for CIDCO included construction of mass housing projects for low-income groups at regular intervals and channelling a suitable housing finance mechanism to low income households to make housing products more affordable. However, it was made clear by the management of CIDCO that the researcher must come out with detailed strategies as to how CIDCO can financially actualise such proposals. Similarly, the recommendation of using both incentives as well as prescriptions for the commercial private sector to deliver low income housing could not be initiated due to the divided opinion of stakeholders on the possible outcome of such initiatives²¹.

Thus, some of the recommendations could not be pursued due to their financial implications, the gestation period required for realisation, the climate for accepting change, limitations of the researcher, and most importantly, changes in the State government and in the management of the institutions concerned. These bureaucratic changes presented two problems for the implementation of the research recommendations. First, progress of ongoing reforms in both organisations has changed speed and secondly, the whole purpose

²⁰ by permitting architects to submit the plans directly for record without scrutiny

²¹ The group against the incentives argued that the private sector will utilise the incentives but will find a way of circumventing the provisions for low income housing. Some also opined that there are enough incentives at present for investment in small houses but what is preventing the private developers is the level of profit expected.

of the research and the benefits of implementing the recommendations had, once again, to be explained to the new Chief Executives.

FUTURE CONSIDERATIONS

An analysis of the experience of conducting the present regulatory audit threw up some interesting considerations to be kept in mind for similar future projects, particularly if they involve negotiations for implementing recommendations. These are both lessons for such projects as well as factors that affect the outcome of the research. The foremost benefit is to make the local regulatory authorities active partners in the research as that would make the authorities more committed in identifying regulatory concerns for the local area and in achieving change.

Other suggestions include:

- Clearly identifying regulations on various bases such as the level of government responsible²²
- Observing political and institutional climate in favour of change,
- Including multi-level regulatory audit mechanisms to check if constraints are real and measurable and then arrange overlaps to identify final constraints.
- Identifying the possible impact, including financial, of change on all actors
- Not paying excessive attention to small changes to achieve easy implementation as it may shift focus from policy changes which may be the crux of the problem
- Demonstrating that recommendations can have tangible benefits to those in authority and to the city, to make them priority for implementation
- Including the regulatory authorities in research to augment the capacity, time, and resources of the researchers in implementing the recommendations
- Laying as much emphasis on regulations for plan implementation as on plan making. An argument that delay in implementation of development plans is a constraint is finding favour in India and this aspect should be taken into consideration in future discussion on the subject. The delays could be on account of several failures, but a major factor is also seen as the endless and unqualified debates on the legitimate processes of plan making rather than ensuring implementation of the plan.
- Political will brings change overnight in regulations while struggle through this kind of research takes ages to be accepted and implemented
- Intermediate reviews of the project focus, if agreements permit, will greatly help in taking stock of local realities on the ground.

Another point for consideration in future research on planning regulations is measuring the effectiveness of the recommendations that could be implemented. Since implementation of regulatory change takes time tangible benefits of the same can only be measured after a long time.

The present research used regulatory audit (in the form of matrix) as a tool to identify regulatory constraints and further to make recommendations to minimise the constraints. The experience showed that though audit was a good mechanism to update regulations in a periodic and participatory manner, it might not be able to bring all housing actors (such as real estate developers who are not playing a role in housing the poor at present) to a

²² In India, guidelines for planning regulations, standards and procedures are adapted by local authorities to reflect local conditions and then sanctioned or approved by state governments. However, in some other countries the regulations are formulated more at national level. In the Indian context, the state and national level regulations and their impact in general terms could only be touched upon but could not be included in the regulatory audit as the layering of regulations at various levels could not be fitted in to the common format for other case study countries.

focused discussion on the changes to benefit the poor. Therefore a Regulatory Audit should not be aimed at benefiting the poor alone, but its impact on the poor can be assessed separately.

Although the regulatory matrix as applied in the present research addressed the key constraints imposed by locally based procedures and regulations, there are a number of exogenous factors at state level which are also significant but were not considered in this research for operational reasons. This simply reinforces a general conclusion that no matter how carefully prepared a matrix is, it cannot deal with every relevant aspect and a view needs to be taken on other relevant factors. Secondly, the degree of constraint identified against each of them was as perceived by one actor or a group of actors and hence will require careful overlapping of constraints and objectives, and the role of the overall judgement by the researcher in synthesising diverse views into one calculation. This does not mean the instrument is weak, however.

The project came to a conclusion at the end of March 2004. The Indian researchers are optimistic that even though some of the recommendations have not been initiated during the project period, progress will follow subsequently.

BIBLIOGRAPHY AND FURTHER REFERENCES

Websites

1. www.indiahousing.com
2. www.apgovernment.com
3. www.helpline.law.com
4. www.reachouthyderabad.com
5. www.ourmch.com
6. www.cidcoindia.com

Newspaper articles

1. Joseph, D.T. (1990), "We need a more rational FSI policy", in an interview to the newspaper 'Indian Express' on 6th August 1990, Mumbai, India
2. Ramaswamy, Ranjani (2002), "Unreal estate" newspaper article in the Mumbai Newline, 'Indian Express' dated 19th May 2002, Mumbai, India
3. Shafi, Sayed S. (1987), "Towards the new urban India" article in the newspaper 'Indian Express', Hyderabad, India
4. The Indian Express (2001), "State government amends co-op societies Act" article in the newspaper dated 29th July 2001, Mumbai, India
5. The Indian Express (2000), The United Nations Population Fund as reported in The Indian Express, 30th December 2000, Mumbai, India

Articles/papers

1. Jayapal, P (2001) "Efficient urban land management-an imperative for sustainable urban development" in the journal of Institute of Town Planners (India), December 2001, New Delhi, India
2. Municipal News (2002), a monthly journal dated June 2002, Andhra Pradesh, India
3. Tuts, Rafael (199.) "Cost Modelling for Appropriate Building and Planning Standards in Kenya", United Nations Centre for Human Settlements, Nairobi, Kenya and Catholic University, Leuven, Belgium
4. Verma, Gita Dewan (1996) "Land for the urban poor : The path to where we stand" in Shelter (special issue on land), journal of Housing and Urban Development Corporation, New Delhi, India
5. Verma, Gita Dewan (2000), "Observations on the (Draft) National Slum Policy", letter to the Deputy Secretary, Ministry of Urban Affairs and Employment, Government of India, 27th January 2000, New Delhi, India
6. Vishwanatha Rao, S (1993), "Zoning and layout regulations/building bye-laws" paper presented at a Seminar on 'Development Control in urban areas' conducted by Andhra Pradesh regional chapter of Institute of Towns planners (India), June 1993, Hyderabad, India

Government publications

1. CIDCO (1975), New Bombay Disposal of Lands Regulations
2. Government of Andhra Pradesh, Government Order on rationalisation of floor area ratio (FAR) and other standards of Building Requirements for Municipal Corporations, Municipalities and other areas falling in urban development authority areas in Andhra Pradesh, G.O.Ms.No. 423.M.A. dated 31.7.1998
3. CIDCO (1994), General Development Control Regulations for Navi Mumbai, as amended up to 1994
4. HUDA (1981), Hyderabad Urban Development Authority (HUDA), Zoning regulations 1981 and multi-storeyed building regulations 1981, by Hyderabad Urban Development Authority
5. Delhi Development Authority (DDA), various guidebooks, New Delhi, India

6. Government of Maharashtra (1966), Maharashtra Regional and Town Planning Act (MRTP), 1966 as modified up to 2001

Technical Reports

1. Adusumilli, Uma (2003), "Housing Development Type and Low Income Group Housing : Public Housing by CIDCO in Navi Mumbai, India", thesis report for the Masters course in Urban Housing Management, UHM-4, Institute for Housing and Urban Development Studies, Rotterdam, The Netherlands
2. CIDCO (1995), "Socio economic survey of population in various nodes of Navi Mumbai, Navi Mumbai, India
3. HSMI (1998), "Conclusions and guidelines – report on design feedback from JJR. Janata and EWS housing" by Human Settlements Management Institute (HSMI), October 1998, New Delhi, India
4. Nayani, Padmaja and Adusumilli, Uma (1989), "Land sharing in Hyderabad", working paper by Indian Human Settlements Programme (IHSP), Human Settlements Management Institute, New Delhi, India
5. NBO (1990), "Housing conditions and social infrastructure in slum-problems and policy issues (a case study)" by the ministry of urban development and poverty alleviation, National Buildings Organisation, New Delhi, India
6. Planning Committee (1996), Report of the technical group on urban planning system, Planning Committee, Government of India, May 1996, New Delhi, India
7. TISS (1996), "Census of slums in Navi Mumbai", study commissioned by CIDCO, conducted by Tata Institute of Social Sciences, Mumbai, India
8. TISS (2000), "Socio economic survey of households in various nodes of Navi Mumbai", study commissioned by CIDCO, conducted by Tata Institute of Social Sciences, Mumbai, India

Books

1. Banerjee Banashree (1996), "Urban Land: Is there hope for the poor?" in 'Urban India in Crisis' ed. Singh, Kulwant & Steinberg, Florian, New Age International Limited, New Delhi, India
2. Banerjee, Banashree (2002), "Security of tenure in Indian cities-an overview of policy and practice" in 'Holding their Ground: Secure Land Tenure for the Urban Poor in Developing Countries', ed. Alain Durand-Lasserve and Lauren Royston, Intermediate Technologies Development Group, UK
3. Wadhva, Kiran (1996), "Urban market failure and government intervention" in 'Urban India in Crisis' ed. Singh, Kulwant & Steinberg, Florian, New Age International Limited, New Delhi, India

ANNEXES

Annex 1: Formal and non-formal housing systems in India

Housing Delivery Sub-system		Availability in	
		Navi Mumbai	Hyderabad
Formal sector			
1	Individual households building dwelling units for self-occupation and or for part renting	Available	Available
2	Housing co-operatives building for a group of at least 10 households	Available	Available
3	Private developers building apartments for any no. of households depending upon the plot size and the market demand, both low-rise and high-rise	Available	Available
4	Employer housing (staff housing) where large companies in public and private sectors construct housing and provide the same on rental to their staff. This type also includes rental stock created by the central government and the various state governments and municipalities for their employees	Available	Available
5	Public housing, which is generally provided by the state level agencies like the housing boards or the urban development authorities, municipalities or any other such state level authority. The biggest being the Housing Development Boards established in all states, which construct housing in all the districts of the state in the form of mixed-income group housing or weaker section housing or for any special target groups such as socially backward classes.	Available with CIDCO being the sole provider of this form of housing	Available where different institutions play this role for different income groups. State Housing Board constructs houses, State Housing Corporation provides new sites/houses and upgradation of slums for the urban poor and the Hyderabad Urban Development Authority develops serviced sites and dwelling units
6	Urban villages where the structures are legal but do not conform to the new regulations imposed after they become part of urban areas. These settlements become islands of congestion with poor services, throw up political leadership, and hold surrounding developments to ransom.	Exist	Exist mainly at the peripheries that are getting newly urbanised. The city is 400 years old and the original villages within are assimilated much earlier.
Non-formal sector			
1	Squatter settlements where land ownership as well construction of structures are illegal, but where consolidated settlements are provided with various degrees of tenure security under the slum acts.	Exist	Exist
2	Illegal land sub-divisions where a parcel of land owned by govt. or private individuals is divided into smaller plots without any statutory approval and sold illegally to households. The individual households in turn develop housing on these plots without further permissions and later form pressure groups to get the developments regularised and to get access to all services. People in illegally sub-divided layouts are less poor than those in the slums and have means to make initial investments on the plots and lobby for formalisation. In the initial stages these colonies provide some level of services at their own cost but later demand connection to city trunk lines.	Do not exist directly but the areas around the villagers are illegally encroached and rented/sol	Exist in large scale

		d by the original landlords	
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Annex 2: The differential level of standards and regulations in Navi Mumbai

No	The standard	General developments	Low-income housing schemes	Land returned to villagers
1	Land-use norms	residential	residential	resid + commercial mixed
2	Floor Space Index	1.0	1.0	1.5
Infrastructure standards				
3	Social amenities	as per general norms	as per general norms	reduced
4	Road widths	as per general norms	reduced	reduced
5	Road specifications	asphalted surface	asphalted surface	only WBM surface
6	Storm water drains	covered drains	covered drains	open drains
7	Water supply	plot level	plot level	public stand posts
8	Underground sewage	plot level	plot level	no provision
9	Solid waste collection	daily	daily	daily
10	Electric connection	plot level	plot level	not provided