



Planning for Urban Development in India

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1 Introduction

The achievement of rapid growth that is both inclusive and sustainable, presents formidable challenges for urban planning in India. New cities will have to be built and additional spaces generated within existing cities and their peripheries so as to facilitate and accommodate rapid urbanisation. Since systems of urban planning practiced in India have not been in sync with the processes of economic growth, they will need to be revitalized to address the challenges of structural transformation of the economy with rising share of non-agricultural sectors in GDP, relocation of people and resources from rural to urban areas, and the associated increase in urbanisation. This paper presents a review of the major aspects of urban planning in India. It makes a case for an integrated approach recognising the interplay of factors which have a bearing on the urban condition for better living as well as better environment for economic growth, which should be inclusive and sustainable. It focuses on reorientation of urban planning to address the challenges of existing cities and emerging towns, which are likely to be very important in India's current stage of development.

Section 2 presents a brief overview of the present approach to urban planning in India. Section 3 discusses the importance of design in urban planning with special emphasis on the role of FSI (Floor Space Index). Section 4 presents an integrated approach to the planning of transportation and land use. Section 5 highlights the challenges of inclusion of low-income households in planning for urban development, and Section 6 concludes.

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2 The Approach to Urban Planning in India

The current urban planning regime in India is rooted in the Town and Country Planning Act of the United Kingdom of 1947, and is primarily focused on detailed land use zoning. This practice was followed by many developed as well as developing countries, but for some years now, there has been a move away from rigid Master Plans in many countries, including the United Kingdom. Cities all over are now exploring more flexible ways to accommodate changes in land use and density patterns over time. The earlier approaches treating urban transportation as the consequence of land use planning are being given up in favour of simultaneous determination of policy, recognising the two way relationship between land use planning and transportation. These changes are especially important for India in its current phase of structural transformation.

A Master Plan in India typically covers a time horizon of about 20 years, presenting a road map from the present state of the city to its ideal end-state with spatial details in the terminal year. In Delhi and Mumbai, it has taken over 10 years to complete the preparation of the Master Plans.¹ The process begins with the projection of population of an urban area and an estimate of an average household size, which together with income levels of different household categories, determine the demand for residential space. The requirements of industry, office, and retail spaces are based on projections of the economic prospects for the cities; the transport patterns follow from the land use pattern and the space requirement for transportation is typically a residual. The space needs for conservation of natural resources and protection of built heritage are also determined residually, unmindful of considerations of sustainability or contextual nuances.

The principal flaw of the master planning approach in India has been that it has not allowed for the play of market forces in determining the scale and location of economic activity and build in these elements through flexibility in the approach to urban planning. Master Plans have not incorporated financial planning particularly, since instruments of unlocking land value can be

¹Mumbai probably holds the record of 17 years, exhausting two thirds of the Master Plan period in its preparation. The Delhi Master Plan 2021 started in the late 1990s as an extensive modification of the earlier 2001 Plan but came into force only in 2007.

used as a major source for financing the development of urban infrastructure. The Plans have also come in for a lot of criticism because either they have not been well-conceived to begin with and have not explicitly and consciously incorporated inclusion of economically weaker sections of society in planning for space, or they were finalized in a top down fashion with little consultation with stakeholders, or once finalized, they have been applied too rigidly when changing circumstances called for flexibility.² A command and control approach to implementing Master Plans was combined with compulsory land acquisition for enforcing the intended land use.

The principal instruments of urban planning such as a progressive land policy, functional land use and zoning regulations, policies of urban design and renewal, and transport and other infrastructure, have worked in India in isolation and sometimes in opposing directions albeit unwittingly, so as to come in the way of an integrated approach to planning. Also, with their stringent land use and density norms, the Master Plans in India are the only ones in the world with uniform or quasi uniform FSI and no allowance for differences between residential and commercial areas.

Being restricted to physical planning of a city and its immediate periphery, Master Plans have not been able to pay attention to the challenges of metropolitan and regional planning. Metropolitan Planning Committees and District Planning Committees which were proposed way back in 1992, have been formed in some states but they have not forged links with city planning authorities or been effective as regional planning agencies. Even in Maharashtra where formal statutory regional plans were adopted as a framework for city level master plans as early as in 1966, large scale unauthorized development in peri-urban areas demonstrate that the master plans were unable to anticipate demand and consequently plan for services where demand for land was high. The Plans have mostly neglected the requirements of low income households for living spaces as well as workplaces, perhaps because of a normative approach rather than an approach based on affordable consumption of floor space by low income groups.

² In its application, the Master Planning approach has varied across the states of India

Heavy dependence on public acquisition of land has been a major feature of India's urban planning. Land owned and/or acquired by the state, which is then developed for urban use with public funds or private, provides an opportunity to speculators to appropriate the value generated in the process of development. With public acquisition of land becoming politically very contentious and serious conflicts emerging between farmers, private developers and governments' Development Authorities, it is extremely important to develop a workable and transparent framework to guide the development of land in urban areas. The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 tried to address these issues. However, the issue has been reopened by the newly elected government in India and legislative resolution is awaited.

Indian cities have been greatly hampered by the lack of a properly functioning land market, based on clear property rights, ease in transacting the purchase or sale of land, effective enforcement of contracts to buy and sell developed properties, and transparent rules and regulations for redeveloping land and/or property. As a result, market transactions in land and property in India are highly opaque. As changes in land use are notified or FSI regulations are made in a piece-meal fashion without a clear spatial policy framework, or a transport infrastructure is put in place, these changes enhance land values. This becomes a breeding ground for speculation and corruption through insider trading.

Land markets are also distorted by legislations in respect of urban land ceiling and rent control, and these have led to large areas in central cities being withheld from coming into the market for redevelopment.³ The Urban Land Ceiling & Regulation Act (ULCRA) of 1976 with its controls on landholding, made it impossible to develop large contiguous areas in a planned fashion. Most states have now abolished this Act, but the repeal was prospective and all cases already in court continue to be governed by the earlier Act. While 25,000 acres of land is estimated to have been freed by the repeal, only about 10,000 acres are in developable zones, i.e., in other than forest lands or coastal areas.⁴

³ The presence of outdated rent control legislations in many states also dampened the incentives of landowners to build low income housing for rental purposes.

⁴ For an analysis of the impact of land use regulation on urban growth and affordable housing in Indian cities, see Sridhar (2010).

Jawaharlal Nehru National Urban Renewal Mission (JNNURM) made it mandatory for cities to prepare a City Development Plan (CDP) and make their demands for specific projects against the backdrop of the CDP. But the hastily prepared CDPs for JNNURM were typically reduced to a list of projects for the city instead of a strategy document. For urban planning to work, District and Metropolitan Development Plans as well as CDPs will have to become legal as well as spatial documents, and CDPs will have to be integrated with master plans and/or development plans as well as financial plans.

An important challenge for urban planning is of capacity both at the local government level to envision and prepare a city development plan, a master plan and a financial plan, and at the level of the state government to provide legislative and administrative support and an enabling environment for facilitating the process of planning at local and regional level. This requires setting up and strengthening municipal cadres in the states which provide the basis for training and building human resource capability. Information Technology is playing an important role in urban planning through the use of GIS, remote sensing, GPS, geo-informatics, etc. The scope for innovation has to be expanded by building the necessary infrastructure and also human resource capabilities at the local government level. There is need to focus on business process re-engineering to realise the potential of IT for better planning and governance.

3 Role of flexible FSI in Urban Design and Planning

Urban design is the discipline that forms the interface among multiple disciplines related to planning of cities including architecture, engineering, transport, and environmental planning. There is increasing recognition that density and design both play an important role in shaping cities. Singapore is well known for its ‘smart’ densification with limited land at its disposal. A number of studies have shown that design intervention through planning leads to an enhancement of economic and social value of a city.⁵ However, urban design has been an area of darkness in India’s Master Plans.

⁵ The Value of Urban Design by CABE (Commission for Architecture and the Built Environment) and DETR (Department of Environment Transport and Regions), London

Demand for urban land is essentially a demand for floor space. FSI (total permissible built-up area divided by plot area), sometimes referred to as FAR (Floor Area Ratio) is an instrument for regulating as well as enhancing urban form especially for high activity nodes and areas with proximity to high frequency intra-city public transit systems. The higher the FSI, the more the floor area available that can be built on a plot of land. But higher FSI requires higher concentration of infrastructure investments in some places. It does not increase the population of a city, but concentrates the population in a smaller area.

Urban planning regulations in most countries prescribe differential FSIs within a city with very high FSI around the central business district which is the node of agglomeration, moderately high FSI around sub-centres, and very low FSI in areas further away.⁶ Thus, in cities across the world, FSI ranges from 5 to 15 in central business districts and 0.5 or less in the suburbs. Admittedly, efficient mass transit systems play an important role in making this work. For example, in Seoul, FSI of 10 in central business district and 8 in sub-centres is supported by its highly used mass rapid transit network. In Hong Kong and Bangkok, the FSIs in central business districts of 9 and 8, respectively, are several times higher than in their suburbs. It is worth noting that historical cities around which new development has taken place, adopt FSI strategies which focus on heritage conservation. They adapt their development controls and building regulations to assist in the regeneration of the area and in preserving its historicity. Since there are many cities in India with abundance of built heritage and historic inner cores, this aspect is important when considering modification of FSIs within such cities.

Average FSIs in Indian cities are low by any standards. While Mumbai is an extreme example of low FSI, the permissible limit being 1.33 for the island city and 1 for suburban areas (with additional 0.33 as incentive on fulfilling certain conditions), other metropolitan cities of India also allow only relatively low FSIs. For example, Chennai allows FSI of 1.5, and Delhi permits FSI in the range of 1.2 to 3.5. In designing new FSI values for Mumbai, for example, Bertaud calls for identifying high accessibility nodes and designing a spatial land use strategy based on current land values and future investments in transport, e.g., highways, metro, and BRTS.

⁶ See Andrew Lainton (2011) for international comparisons

Furthermore, in India FSI varies much less within a city compared to international standards, suggesting that FSI does not reflect differential accessibility on account of proximity to public transportation or other city level assets. As Bertaud (2002) points out, FSI regulations in India have been dominantly guided by the principle of reducing central city congestion such that the regulated FSI is often lower in the city than in the periphery.⁷ Bertaud found that in Bangalore, the permitted FSI for residential areas was 60 per cent higher in the suburban areas than in downtown, while for commercial areas the permissible FSI was 33 per cent higher in the suburbs than in the center. Pointing out that such a policy discourages the redevelopment of the best accessible land in the city and encourages the development of dense suburbs, Bertaud concludes that such policies are economically and environmentally expensive as they require large investments in infrastructure in suburban areas, increase the length of vehicular trips and decrease the financial viability of public transport. FSI is generally seen to increase in the course of development partly to allow households and firms to consume more floor space as their incomes increase without having to move to suburbs and partly for the city planners to keep a check on transport costs which would otherwise increase with spatial expansion. If FSI is regulated at a higher level than that of the existing buildings, it encourages redevelopment of older buildings. This has also not happened in Indian cities. For example, FSI in Mumbai has come down from 4.5 in 1964 to its present low levels mentioned above. Urban planners have generally not used higher FSI with strategic vacant land and dilapidated buildings within the cities for managing the high population densities of these cities.

One consequence of the low FSI policies in Indian cities has been the urban sprawl. Since available land within the city cannot be developed to its highest and best use due to the limiting regulations of FSI and land use, an increase in rents and prices within the city drives people out of the city in search of lower land prices.⁸ At the same time, there is political resistance to acknowledging and/or developing these peri-urban areas into “urban”. While the number of areas defined by the census as “towns” has increased from 1362 in 2001 to 3894 in 2011, the number of towns with statutory urban local bodies increased by less than 250 over the same period. This means that the census of 2011 added over 2000 such urban areas to its list of towns that do not have statutory urban local bodies. Urban economic activity is growing rapidly in these towns but

⁷ Bertaud A (2002)

⁸ See Bertaud, A (2011)

there is no local government responsible and accountable for urban infrastructure development or urban service delivery. The real estate interests in the vicinity of metropolitan cities try to extract rents by delaying the change in land use from rural to urban. The result is that there is no urban planning for these areas which are desperately in need of planning.

In recent years Mumbai and a few other cities in Maharashtra have been using Transferable Development Rights (TDRs) to ease the FSI constraint on development, and also help generate revenue for the Municipal Corporation. TDRs separate the right of ownership of the land from the right of its development. TDRs are given to developers who surrender land for public amenities in specified locations in exchange for getting higher FSI in other specified locations. There is an implicit price attached to the transfer. The challenge in such cases is to ensure that TDRs are priced correctly and that the grant of TDRs is within the overall framework of building regulations with respect to density, land use, public transport and financing. The Government of Madhya Pradesh has also notified a policy on TDRs within the framework of a maximum height of a building which has been increased from 18 meters to 30 meters. However, in all such cases, additional FSI bought by builders through TDR should be allowed in areas that have been selected in advance as part of a city spatial plan or development policy. The current policy tends to disperse the use of TDR rather than concentrating in a few selected areas.

Bertaud offers a step by step approach in using TDRs for raising FSI. A new FSI plan can be prepared and approved for 2 or 3 main streets and high density areas around new transit nodes of a city like Mumbai. New TDRs that are issued can then be used in the areas already mapped for FSI increase. More and more areas can be cleared for FSI increase every year until a comprehensive plan is ready and approved for the entire city. The success of using FSI as an instrument for managing the high density of population in Indian cities would depend crucially on providing good quality public infrastructure, ease of access to public transport and last mile connectivity. While highlighting the role of varying FSI in urban planning, it is extremely important to stress that the price of additional FSI must be determined by the market in a transparent manner and that free ridership on FSI must be avoided at all costs.

A danger with flexible FSI is that developers tend to lobby for more and more floor area without paying due attention to either urban design or carrying capacity of the environment or

preservation of historical and cultural resources of a city. As environmentally sensitive areas get built upon, they lead to multiple vulnerabilities of health and create environmental hazards to people and buildings. They also put pressure on the existing infrastructure in the area. This leads to quick degeneration of the infrastructure and amenities, reducing the attraction of the area to investors, thus defeating the very purpose for which high FSIs were sanctioned.

There is growing recognition on the part of some cities for the need for transit-oriented planning, i.e., that higher FSI in and around transit nodes will improve intra-city access and connectivity of people's places of residence, work and recreation. For example, in Indore, in an attempt at more compact development in the Master Plan, recognising that there is higher demand around these nodes, the Floor-Area-Ratio along the Bus Rapid Transit (BRTS) Super Corridor has been increased from 1.25 to 3. There are similar proposals for increasing FARs along other BRTS corridors in the state. Gujarat has also been moving towards a flexible FSI regime, and FSI pricing and zone changes are being determined according to a specified set of rules and regulations. The state government, anticipating high demand for floor space in newly created BRTS corridors, has increased FSI along these corridors in Ahmedabad, Surat and Rajkot. Hyderabad has done away with FSI/FAR restrictions but the city collects city-level impact fee for high-rise buildings of 15 meter height or 5 storeys or above.

4 Transportation and Land Use Integration

A good network of roads, coupled with an efficient public transportation system, contributes to the “working efficiency” of cities through reduction in commuting cost, travel time, traffic congestion, and air and noise pollution. Public transportation projects lead to changes in land use and help intensify development. Similarly, changes in zoning lead to changes in the demand for transportation.⁹ Integrated transportation-land use planning is the most important tool available to urban planners to create agglomeration-augmenting, congestion-minimizing and resource-generating cities. As transportation costs decline, a firm in an existing urban location gains larger market access. This attracts other firms. As more firms agglomerate, the location becomes more

⁹Knight and Trygg (1977), Huang (1996), Cervero and Landis (1997), Gospodini (2005)

attractive to successive firms. Geography and history thus create a cumulative causation process.¹⁰

The critical importance of land use policies for the effectiveness of public transportation systems can be seen from the experience of a number of countries where planning for rapid transit systems has gone hand in hand with land use planning. Transit oriented development was successfully pioneered by Copenhagen in Denmark. Copenhagen was planned with the vision of putting in place public transit that would channel the development of the city and with the aim of making it a bike and pedestrian friendly.¹¹ Singapore facilitated “highest and best” use of land by increasing the land use density around transit stations, subsidizing public transport ridership and adopting congestion pricing.¹² In Hong Kong, integration of transport and land use policies has promoted high-density development around transit stations, generating in the process significant revenues which help finance mass public transit as well as ridership.¹³ Similarly, Bus Rapid Transit System (BRTS) has proved to be an effective public transportation system in the service of integrated land use and transportation planning in a number of cities world over. The BRTS flagship project of Curitiba in 1974 is a pioneering example. The most recent example is the BRTS Corridor of Guangzhou, China, with one of the highest ridership of rapid transit systems in the continent with 805,000 daily boardings.¹⁴ These forms of transit oriented development are sustainable because of the focus on high capacity mass transit, high densities, and lowering reliance on private automobiles. They are also financially viable due to the scope for financing mass transport projects through tools of land value capture.

In India, however, transit-oriented development has scarcely been on the agenda of urban planning. There is no statutory authority either in the Government of India or in state governments which has the responsibility for urban transport. The issues of enhancing mobility while minimizing time and distance on road and of redesigning transport networks, have not been addressed in urban planning. Land use plans have by and large been independent of transport plans. Mumbai is perhaps the only city where urban transport was a major factor in

¹⁰See Venables (2007)

¹¹ Suzuki, Cervero, and Iuchi (2013)

¹²Yang and Lew (2009)

¹³See Lo, Tang and Wang (2008); Cervero and Murakami (2009)

¹⁴ Hughes, C and Zhu Xianyuan (2011), ITDP

shaping the development of the city, mainly due to the geographical compulsions arising from the linear shape of the city. These metro systems will most certainly have an impact on the development and land use in cities and the fact that land use planning has not been integrated with the metro project plans is a missed opportunity for transit oriented development. However,

Kolkata was the first city in India to build a rail based Mass Rapid Transit System (MRTS) in 1986. Subsequently, Delhi Metro was completed in two phases (65 km in 1996 and 125 km in 2012), with a total investment of Rs 25,000 crore. The second phase has connected Delhi to NOIDA and Gurgaon in the National Capital Region. Most recently, Phase III has been sanctioned to cover 103 km at a cost of Rs 35,000 crore, to be completed by 2016. Altogether, it will have a total network of 312 kilometres and the ridership is projected to double in 2016 from its level of 2 million passengers per day in 2012. Metro transit projects have also been taken up in Bangalore and Chennai covering lengths of 42 km, and 45 km, respectively, and Kolkata is also planning a metro line along the East-West corridor. These metro systems will most certainly have an impact on the development and land use in cities and the fact that land use planning has not been integrated with the metro project plans is a missed opportunity for transit oriented development. However, the Hyderabad metro rail project (71 km) is being implemented under public-private-partnership, not as a simple mass transit system, but as an urban redesign concept with emphasis on last-mile connectivity and using an innovative financial design so as to require very little public funds.

The Working Group on Urban Transport for the Twelfth Five Year Plan has suggested specific guidelines and criteria for undertaking metro rail projects. By these criteria, more than 20 Indian cities qualify for metro rail projects in the country as per their total population and the percentage of population dependent on public transport. A number of Bus Rapid Transport System (BRTS) projects have also been approved in Indian cities under the Jawaharlal Nehru National Urban Renewal Mission. These include Vijayawada and Visakhapatnam in Andhra Pradesh; Ahmedabad, Rajkot, and Surat in Gujarat; Bhopal and Indore in Madhya Pradesh; Pune in Maharashtra; Jaipur in Rajasthan; and Kolkata in West Bengal. Together, the sanctioned projects cover a distance of 467 km at a project cost of Rs 5211 crore.

Indore and Bhopal have prepared Comprehensive Mobility Plans including traffic control and traffic management. In Bhopal, a transport plan is being integrated with the Master Plan. The challenge lies in expanding the scope of integrated transport planning and land use to more cities and regions in the country, and strengthening institutions and building capacities to facilitate effective implementation of these plans. The Municipal Corporation of Greater Mumbai is currently integrating its transport and mobility plan in its revamping exercise for the revised Development Plan which is due in 2014.¹⁵ Delhi Development Authority has committed to identifying development corridors for transit-oriented development.

Besides enhancing intra-city mobility, transportation planning plays a major role in ensuring sustainable and balanced regional development through inter-city connectivity, as can be seen from a number of international examples. Greater Copenhagen's "finger plan" directs development along the railway corridors and radial expressways and locates large/tall office buildings within 600 metres of train stations. Metropolitan Seoul has created 5 new towns – Bundang, Hsan, Pyungchon, Joondong and Sanbon- strategically positioned within 20-25 km radius from the central business district and connected by expressways and rapid transit stations. In Shanghai, rail is being used as a "magnet" that attracts new development and urban expansion, facilitated through change of land use.

In India, integrated land use planning and transport planning is emerging in major highway projects in a number of cities. As major roads for connectivity are being built in some states in India, these are being supported by land use changes and associated provisions for partial financing of such large infrastructure projects through targeted levies. An example is the Outer Ring Road (169 km long, 8 lane expressway) in the Hyderabad metropolitan region. A stretch of 1 km each on the two sides of the Outer Ring Road is designated as a Growth Corridor and is classified as mixed use zone. Satellite townships are planned at major transportation nodes along the corridor, with provision for a green belt and a metro corridor in the growth corridor. A special impact fee will be levied on any development which takes place inside the corridor, to be collected at the time of granting building permissions.

¹⁵ The terms, Development Plan and Master Plans are often used interchangeably

Transport-led land use planning is also being carried out along the corridor of the Sardar Patel Outer Ring Road of Ahmedabad. The Indore Super Corridor (12.5 km long) is another example of a transport plan leading urban development. Four town development schemes are being planned along the corridor such that 30 per cent of the space will be used for commercial purposes and 23 per cent for public facilities.

Opportunities for urban planning with integrated transport and land use on a much larger scale are emerging in the planned highway expansion in the country with the Golden Quadrilateral, freight corridors, and other networks. This offers very large scope for planning new cities at the nodes of the major transport systems, ensuring inter-city connectivity. The Delhi-Mumbai Industrial Corridor (DMIC) spanning over six states of India, envisages the development of a number of hubs for manufacturing and commerce and self-contained, state-of-the-art townships with world-class infrastructure. Along the corridor, 24 investment nodes and 11 Investment Regions covering about 200 square kilometres each, and 13 Industrial Areas covering about 100 square kilometres each have been identified. Townships are being planned for these areas. Similarly, the Eastern Dedicated Freight Traffic Corridor passes through 6 states, bypassing densely populated towns in these states, thereby offering new opportunities for planned urban and regional development.

5 Challenges of Inclusion

A major criticism of the current urban planning model in India is that the requirement of low-income population with respect to space, infrastructure and service delivery has been given a short shrift. The master planning and zoning regulations of Indian cities have neglected the need of low-income segments of population for space. It is worth emphasizing that inclusionary zoning works better where housing markets are not distorted nor suffer from regulatory scarcities.

Mumbai's high density housing or exemption under Urban Land Ceiling & Regulation Act (ULCRA), are failed examples of inclusionary zoning in the face of distortions in the housing market and poor regulation. The 1964 Plan of Mumbai had designated large tracts of land for public housing, and housing for the "dis-housed" assuming that these lands will be acquired by

the public housing agencies for building houses for low income households. By the mid-1980s, it became clear that acquiring those lands was becoming impossible, and in 1991 they were converted to high density housing with prescribed minimum density and a dwelling area of 30 square meters. Most of these units were subsequently combined and sold as larger apartments. The same was the fate of low income housing in lands exempted under ULCRA. Such examples of gentrification can be found in many Indian cities, and one notable reason for this as well as for the emergence of illegal squatter settlements is the lack of accessible and affordable rental housing in Indian cities.

Many countries have adopted a two-pronged approach to overcome their housing shortages by providing affordable housing units for ‘ownership’ as well as for ‘rent’.¹⁶ In the United States, for example, many states have devised specific strategies for inclusion and have driven the strategy with incentives. Montgomery County of Maryland set an early example with its Moderately Priced Dwelling Unit Program launched in 1973. In New Jersey, “exclusive neighborhoods” were declared unconstitutional by a Supreme Court ruling in the famous Mount Laurel case in 1975. Developers in many cities in the United States are given incentives by way of fast track permissions, density bonus, reduction in street width or setback, etc. Some cities mandate the developers to construct affordable homes; others allow them to contribute in-lieu-fees to an affordable housing fund.

The United Kingdom and some other European countries started with inclusionary zoning only in the 1990s. Planning Obligation System in the United Kingdom typically requires new housing developments to provide a pre-determined proportion of housing as affordable housing. By 2005, about 40 percent of the affordable housing units created in the United Kingdom were under these agreements. The Unitary Development Plan (2002) of the city of London stipulates that 25 per cent of the new residential developments should be affordable, if provided on-site and 33 per cent if off-site. In Belgium, a national law requires that all cities make 20 per cent of their housing affordable.¹⁷ In Spain, Land Act (2007) prescribes that a minimum of 30 per cent of the newly built housing units in the country must be affordable.

¹⁶Calavita and Mallach (2010) describe the inclusionary housing practices in a number of countries

¹⁷See *Overview of Inclusionary Zoning Policy for Affordable Housing*, Metro Vancouver Policy and Planning Department, 2007 for international practices in inclusionary zoning, including Belgium.

In India, the National Urban Housing and Habitat Policy (NUHHP) (2007) highlights the importance of *'adequate housing stock both on rental and ownership basis with special emphasis on improving the affordability of the vulnerable and economically weaker sections of society through appropriate capital or interest subsidies.'* The inclusion of the poor in city planning and development has also been emphasized in the reform agenda of the JNNURM (Jawaharlal Nehru National Urban Renewal Mission). One of the key reforms envisaged by the Mission stipulates earmarking 20-25 per cent of developed land in all housing projects (public and private) for economically weaker sections and low income households, with a system of cross-subsidies. The success of this reform will depend on the creation of suitable legal frameworks and structuring of appropriate incentive zoning mechanisms for developers.

The Government of India launched a new flagship programme called Rajiv Awas Yojana (RAY) in 2011, with the aim of incentivising states to assign property rights by way of land or built-up space to slum-dwellers. The central grant for a project under this Scheme is to the tune of 50 per cent of the cost of slum development/improvement. RAY also stipulates that a specified percentage of land be reserved for Economically Weaker Sections and Low Income Groups in every project of land development or housing. A precondition for eligibility is to prepare a Slum-free City Plan to address the challenges posed by existing slums and also indicate measures to prevent the rise of slums in future by facilitating affordable housing, including rental housing. RAY has endorsed certain approaches to overcome the housing shortage by making provision for 'rental' or 'ownership' or 'rental to ownership' type of housing stock and has encouraged private sector participation. Affordable Housing in Partnership, a scheme of the Ministry of Housing and Poverty Alleviation (MHUPA) has been dovetailed with RAY in 2011 for affordable housing projects to be taken up under various kinds of partnerships. The concurrent revision of the Rent Control Act by many states should act as a positive catalyst in this effort. However, the expected finance from commercial banks has been slow to come because of difficulties that banks are facing in lending without credit records of borrowers and their inability to prepare documentation in the absence of regular income. This is in spite of a Credit Risk Guarantee Fund to guarantee lending by banks to the urban poor. Innovative solutions will have to be found

to the challenges of bank recovery and moral hazard, if banks are to be incentivised to come on board.

6 Conclusion

The central message of this paper is that Indian urban planning needs major overhaul—it is overly top down and controlling where it should not be, and does not provide much needed guidance, coordination and integration where it should. Inappropriate FSI limits, in levels as well as in their patterns within a city, are leading to urban sprawl and long commutes and traffic problems. For all the talk of planning however, land use and transportation are not coordinated in Indian cities. Inadequate development of transparent land markets, combined with a mentality of public allocation of land, is leading to opaqueness in transactions and high levels of corruption. Governments have failed to preserve land for environmental and heritage reasons. There is also problem in making land available for development of housing and facilities for low-income households. This paper has presented a framework of urban planning which emphasizes the importance of integrating spatial and economic planning at a time when the Indian economy is passing through a phase of significant structural transformation. Using actual examples of innovation in Indian cities and cities globally, the paper makes a case for integrated planning of land use and transportation. It explains why considerations of overall urban design with due space for green areas and of regeneration and renewal of neglected historic districts and derelict inner city areas, must be respected while planning for infrastructure, connectivity and inclusion. It draws attention to the requirement of connectivity which calls for regional planning with a view to linking cities and towns as well as linking urban areas to rural areas. New cities along growth corridors must also be developed within a framework of transit-orientation, related land use planning, and inclusion as an important criterion.

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