

08.20



DISCUSSION PAPER

URBAN LAND REDEVELOPMENT IN INDIA: THE NEED FOR A REASSESSMENT OF POLICY

SHUBHANGI RAMAN



TABLE OF CONTENTS

1. ABSTRACT	1
2. INTRODUCTION: URBANISATION IN INDIA AND ITS CHALLENGES	1
3. FLOOR AREA RATIO AND TRANSFERABLE DEVELOPMENT RIGHTS	2
4. ROLE OF FAR AND TDR IN URBAN PLANNING	3
5. POLICY AND REGULATORY CONTEXT OF URBAN PLANNING	5
6. URBAN REDEVELOPMENT CASE STUDIES: LESSONS TO LEARN	8
7. CONCLUSION	11
8. BIBLIOGRAPHY	12

Cover Photograph by A. Savin

In picture: Dharavi settlement near Mahim Junction in Mumbai, India

About the Author

Shubhangi Raman is a recent Public Policy graduate from National Law School of India University, Bengaluru. Her broad research interests lie in sustainable resource management, social inequalities and education.

If you have any suggestions, or would like to contribute, please write to us at contact@sprf.in

© Social and Political Research Foundation™

ABSTRACT

Rapid increase in urbanisation has seen challenges emerging in the planning and management of land. This issue brief seeks to explore the market-based financing tools for land management and analyses whether it can be an alternative for efficiently using urban space. Using case studies from Mumbai and Ahmedabad, this issue brief further assesses the need to leverage transferable development rights (TDR) and floor area ratios (FAR) incentives.

INTRODUCTION: URBANISATION IN INDIA AND ITS CHALLENGES

According to the 2011 Census, 31% of the Indian population live in urban areas, which is predicted to increase to 46% by 2025 (TERI n.d.). Moreover, the UN report on world cities predicts that, by the end of this decade, New Delhi will become the most populated city in the world, surpassing Tokyo (United Nations 2019). However, land is a limited resource and thus, an increase in urban population leads to an increase in the urban density. With a rapidly growing urban population in developing countries like India, there is a need for governments, planners and policymakers to focus on sustainable land- use policies.

However, in India, only 25% of all towns and cities have master plans or development plans (DPs) (Jha and Mankikar 2019). Urban Local Bodies (ULBs) have limited budgets, inadequate infrastructure and a paucity of skilled manpower, leading to improper implementation of development plans. With no devolution of funds, the total revenue collected by all the ULBs in India is approximately INR 1.5 lakh crores, which comprises less than 1% of India's GDP (National Institute of Public Finance and Policy 2011). As a consequence, with the implementation of the 74th Constitutional Amendment¹, ULBs almost always have to look to a higher tier of government for monetary support.

One of the traditional methods in land-use planning is acquisition of land². The process majorly involves the government taking possession of private land while compensating and resettling the displaced population. This process has proven to be a failure in the scenario of rising urban density because of two reasons:

- **Land Acquisition Legislation:** The Right to Fair Compensation and Transparency in Land Acquisition and Rehabilitation and Resettlement Act has limited scope. While it provides the required guidelines for acquiring private lands and compensating the affected populations, this land management process does not help ULBs earn revenue. Moreover, with the increasing costs of urban land and stagnation of ULB budgets, managing acquired land has become a challenge for the government. This has made “land-centric planning and its implementation (on acquired lands) an impossibility through ULB revenues” (Jha and Mankikar 2019).
- **Land Rights:** Displaced individuals are often either inadequately compensated or face delays in compensation for the acquired share of land, violating their basic rights. For instance, the construction of the Sardar Sarovar dam on the Narmada river displaced around 2 lakh people in Gujarat, Madhya Pradesh and Maharashtra, and a majority of them have still not received any compensation (Thakkar 1999).

¹ The 74th constitutional amendment mandated that devolution of power to the lowest tier of government (ULBs, panchayats) will help in more efficient planning, provision and delivery of services.

² Land Acquisition is a process by which the central or state government acquires private land in order to use it for various purposes, mainly setting up industries or for urbanisation. Moreover, under this process the owners of land and people living on that land are compensated and rehabilitated to other places.

Evidently, the process of land acquisition does not solve complex spatial urban issues. Thus, other market-based land instruments such as Floor Area Ratio (FAR) and Transferable Development Rights (TDR) are often used as an alternative to maximise the utility of urban spaces. This brief explores the concepts of FAR incentives and TDRs as an alternative instrument for land management in urban areas. Further, the paper also analyses the various legislations that deal with urban planning in India.

FLOOR AREA RATIO AND TRANSFERABLE DEVELOPMENT RIGHTS

Floor Area Ratio is defined as the ratio of the total floor area of a building (BUA) to the plot area (total land) (Menon 2020). It is calculated by dividing the total area covered by the building, including all floors, by the total plot area. FAR is regulated by the development authority of the particular city or place, and it varies according to the type of zoning of the area. FAR is deemed necessary for the calculation of development credits³.

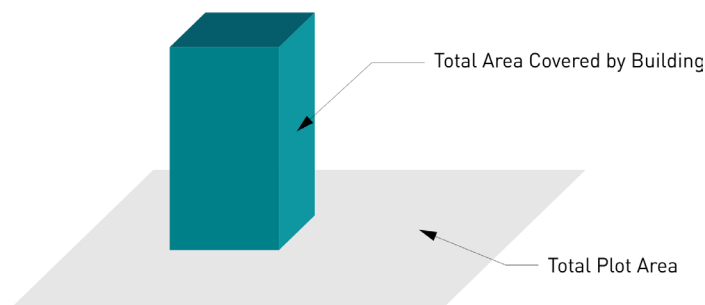


Figure 1: Floor Area Ratio

For instance, if there is a plot of 5,000 sq. ft. in Delhi, and one wants to construct a residential building on it, then the Delhi Development Authority (DDA) would prescribe FAR according to the type of building (different for residential, commercial, etc.). If the FAR is 1.5, according to the equation given below,

$$\begin{aligned} \text{Built Up Area (BUA)} &= \text{Floor Area Ratio (FAR)} * \text{Total Plot Area} \\ \text{BUA} &= 1.5 * 5,000 \text{ Sq.ft} \\ \text{BUA} &= 7500 \text{ sq. ft.} \end{aligned}$$

7,500 sq. ft. is the built up area that could be used to construct a building. Now, suppose the government wants to widen the road of the area. They want 200 sq. ft. of the plot, so they have two options: either they can directly acquire the land and compensate through monetary or they can give development credits (as mentioned below). FAR is used to decide how much development credits to give, since they want 200 sq. ft. and FAR of the area is 1.5. Hence,

$$\text{BUA} = 1.5 * 200 = 300 \text{ sq. ft.}$$

So the owner of the plot gets a development credit of 300 sq. ft., on a plot or somewhere in the city that is saleable in the market, either they can use it on their own to develop or sell it to a developer.



Figure 2: Calculation of Development Credits using FAR

³ Development Credits means the area that the landowner gets after trading land through TDR program. The area is equal to the area that they have given to the 'developer' or government.

The fundamental principle of Transferable Development Rights or TDR lies in the use of market-based mechanisms and tools in the management of natural resources like land (Linkous 2017). TDR programmes are gaining momentum in countries like India, where urbanisation is rapid, unplanned and haphazard in nature. There has been a gradual shift in the approach of urban policymaking from using regulatory tools and rigid planning such as land acquisition as a means of land control to market-based planning, and use of resource-based incentives as a means of land control (Ahluwalia 2013).

TDR takes into account two aspects: sending area and receiving area. Sending area refers to those areas where the government wants to acquire land for development projects whereas receiving areas are those where land is sold using development credit, followed by the government issuing a Development Right Certificate (DRC) (Linkous 2017). The owners of sending areas, therefore, sell all or part of their land (which is calculated using FAR), and in return they receive development credits/rights on another land. The development credit received is equal to the area that they sold (again, calculated using FAR) that can be used in receiving areas. These rights are tradable at market prices and hence they are referred to as Transferable Development Rights (TDRs). The revenue received from selling of TDRs compensates the owners in the sending area for the land they have sold or the restrictions they have placed in their property. Further, they are also permitted to sell these developing rights to developers. An ideal and successful development right (DR) transfer takes place only when all the three actors: landowner, developer, and community, consent to the development (Ibid). The development of the island side of Mumbai, i.e., Navi Mumbai, in India is one good example of usage of TDR in land use planning (as explained in detail in later). Indian cities, as of now, have used TDR in slum redevelopment.

ROLE OF FAR AND TDR IN URBAN PLANNING

Over the years, the exponentially high population growth rates⁴ in urban India has led to a shortage of land, which in turn has increased the demand for floor space in urban areas. Thus, FAR has become an important land management tool to regulate urban spaces in order to

accommodate the population in urban areas. Moreover, FAR has served as 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 (Ahluwalia 2013: 7). This further facilitates better management and usage of urban land by concentrating a part of the population in smaller areas, thereby increasing the density of the total area (Ibid.).

Different countries have different FARs according to the zone it is situated in. Usually, FARs are highest in the Central Business District (CBD), as it is the central node of urban agglomeration. It decreases as we move farther away from the CBD, and it is moderately high around sub-centres, very low in suburban areas or the hinterlands of urban cities. Hence, FAR values in central nodes of cities range from 5 to 15 and it comes to 0.5 or less in the suburbs (Ibid).

⁴ Urban areas have witnessed high population growth rates due to two main reasons: natural population growth in urban areas and high migration influx.

Different countries have different FARs according to the zone it is situated in. Usually, FARs are highest in the Central Business District (CBD), as it is the central node of urban agglomeration. It decreases as we move farther away from the CBD, and it is moderately high around sub-centres, very low in suburban areas or the hinterlands of urban cities.



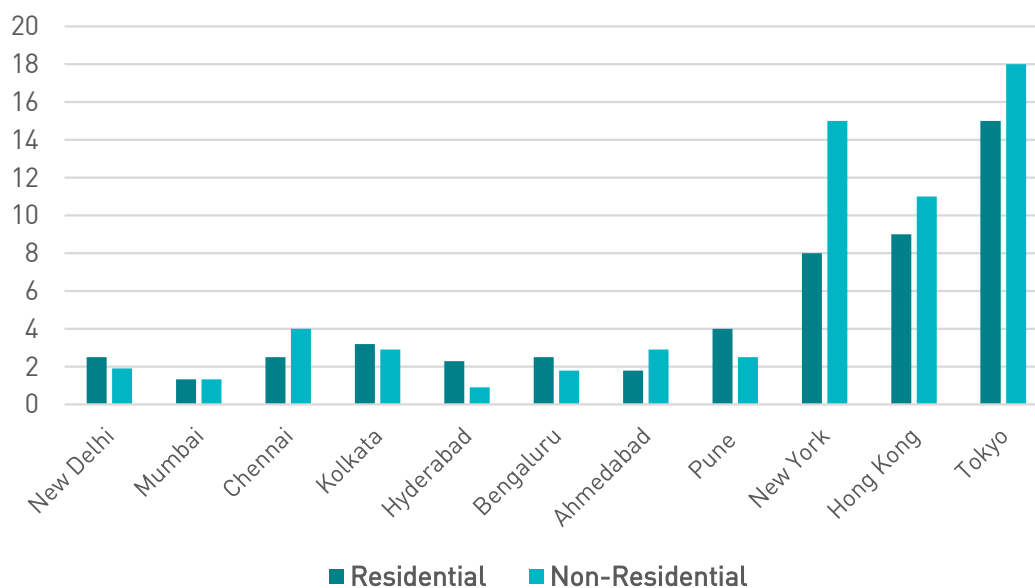


Figure 3: Comparison of FAR in Indian Cities to Cities in the World
Source: Ahluwalia 2013; Phadke 2018; Shenvi and Salgen 2018; Singh 2019; Sridhar 2010

Urban redevelopment in Indian cities is limited to decongesting central nodes of the cities and slum rehabilitation rather than regenerating the urban lands (Ahluwalia 2013). Consequently, FARs in Indian cities are lower as compared to international standards (Figure 3). It is also important to point out that metropolitan cities like New Delhi and Mumbai have relatively low FARs as compared to other fast-growing urban centres. The rapid horizontal growth of metropolitan cities like Delhi and Mumbai has put an immense amount of pressure on central nodes of the city, hence the planning is done to spread out the cities in the suburban areas and hinterlands. However, on the other hand, given the scarce ULB budgets, developing suburban areas becomes an expensive project. In this scenario, FAR could be viewed as an incentive-based tool to ensure effective utilisation of urban spaces (Ibid.).

POLICY AND REGULATORY CONTEXT OF URBAN PLANNING

Several policies introduced in the post-independence period significantly impacted urban planning in India. The Urban Land (Ceiling and Regulation) Act, 1976, and Rent Control Act were two main legislations introduced post Independence. Stating lack of infrastructure and increasing population density as motives, urbanisation in India has been strictly regularised by the government. However, such policies resulted in lowering of municipal finances due to low assessed value of lands (Shenvi and Slangen 2018). Over the years, these policies have shaped the spatial growth patterns of urban areas. This section discusses the impact of these legislations on urban planning in India.

The Urban Land (Ceiling and Regulation) Act, 1976 (ULCRA): The primary objective of the Act was to acquire the vacated urban lands to ensure equitable distribution of land in urban agglomerations. A ceiling was imposed on the vacated urban lands, with the idea being that urban lands should not be in the hands of a 'few', distributed equitably. While the objective was to make cities accessible and affordable to the population, the Act in itself had certain loopholes. The compensation given to landowners in return for acquiring land was not adequate, which de-incentivised them from giving up the land. Over 65,000

hectares of land around all urban agglomerations of India were acquired, which was inadequate as compared to the urban land available in India (Sridhar 2010). The outcome of this legislation reflected the ineffectiveness of the traditional method of land acquisition. Therefore, in order to use urban lands more efficiently, this act was again repealed by Jawaharlal Nehru National Urban Renewal Mission (JNNURM).

Rent Control Act: The Rent Control Act regulates rent prices of urban houses in order to increase their affordability in urban areas. According to the Act, rent should not exceed the cost of construction and market value of the property (Shenvi and Slangen 2018). But strict regulation of rent has proven to be a liability for landlords as the property maintenance cost has increased over the years. Moreover, this has also led to negligence in building maintenance, leading to the deterioration of thousands of buildings in urban areas. Due to these rent control regulations, the supply of affordable housing in urban areas has decreased⁵. This has also affected the ULBs' property tax collection since a majority of the ULBs collect the property tax based on the rent collected from the property. However, rent control discourages landlords from renting out property which in turn decreases tax revenues of ULBs (ibid). In 2011, the Ministry of Housing and Urban Poverty Alleviation came up with the Draft Residential Tenancy Act, 2011 which revised the rent control regulations and tried to strike a balance between tenants and property owners. The ministry has estimated a shortage of approximately 25 million 'affordable houses' in urban areas of the country (Ministry of Housing and Urban Poverty Alleviation 2018). Hence, the objective of the Act is to increase housing in urban areas.

Jawaharlal Nehru National Urban Renewal Mission (JNNURM): Post-independence, there were few urban development policies operating at the state level. In 2005, the JNNURM was introduced as a national urban development programme. It disbursed INR 20 billion as grants to qualifying cities⁶ so that they can revamp their urban development (NITI Aayog and National Institute of Urban Affairs 2015). The framework was designed keeping in mind the 74th constitutional amendment, which focused on devolution of powers and funds to ULBs. The aim was to make ULBs autonomous and efficient. But some cities such as Patna and Varanasi were not able to perform due to lack of technical expertise and capacity to carry out the required reforms (Sridhar 2010).

Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and

the Smart Cities Mission: In 2014, several urban redevelopment schemes were announced by the central government. These included the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), and the Smart Cities Mission⁷. The objective of the AMRUT is to provide essential services such as power, water, and sewerage to every household in around 500 cities of India (Smart Cities Mission n.d.). AMRUT was essentially a modified version of JNNURM, but while JNNURM's primary focus was to develop a project-based approach, AMRUT focused on developing a capacity-building approach by boosting the technical and administrative capacities of ULBs.

⁵ Since there was negligence in building maintenance, the number of "rentable" houses in urban areas was decreasing. While due to the influx of immigration, demand for these houses were on the rise. This led to an increase in the slum population in urban areas.

⁶ Cities could qualify based on the population (according to the 2001 Census) and also historic importance. In order to qualify, a city had to have (i) population of at least 4 million; (ii) population between 1-4 million; and (iii) state capitals/historic cities with tourist attractions.

⁷ More details available at: www.smartcities.gov.in

The Smart Cities Mission focuses on inclusive and sustainable development policies, mainly in Tier 2⁸ cities in India. The objective of the program is to develop around 100 cities, improve the quality of urban life and promote sustainable living using information and communication technology (ICT). The 100 selected districts are required to come up with a Smart Plan which includes ICT-based development initiative and an area-based development proposal (Aijaz 2020). The area-based development under this policy is to transform urban areas using mixed-use, transit-accessible neighbourhoods, with open spaces that help in overall urban redevelopment. Urban redevelopment in Mumbai using FAR incentives was one of the approaches that were recommended by the Smart Cities Mission (Shenvi and Slangen, 2018).

⁸ Tier-2 cities are cities whose population is 1 million according to the 2011 Census.

URBAN REDEVELOPMENT CASE STUDIES: LESSONS TO LEARN

Mumbai was the first city in India to implement TDR and FAR to combat the issues of urban spaces (Dharmavaram 2013). Other than Mumbai, Ahmedabad used TDR in its riverfront development project and also in its local planning. Delhi's Master Plan 2021 also mentions the usage of FAR in transit-oriented development of the central areas of the city (Alvi 2012). FAR and TDR incentives in India are used with the aim of developing suburban and hinterland areas.

MUMBAI: SLUM REDEVELOPMENT

In the wake of deregulation and neoliberalism in the 1990s, urban planning became the centre of attention in Mumbai. In 1991, the Maharashtra Regional Town Planning Act, 1966 was amended and became one of the first legislations in India to mention TDR and FAR incentives as a land management option (Bertaud 2011). With the rapidly increasing urban population in Mumbai, the idea was to curb the growth of slums and regenerate urban land more efficiently, and to create safer and alternative housing for slum dwellers. The sending area of the TDR was the Central Business District and suburban areas were the receiving areas. The government used the Floor Space Index (FSI)⁹ as an incentive to meet the construction and infrastructural costs along with generating developer profits. However, the TDR programme violated the guidelines laid down by the Ministry of Environment and Forest about the Coast Regulation Zone (CRZ). Higher FSI in CRZ incentivised developers and builders to build houses. It offered cheaper but unsafe housing to the vulnerable population of slum dwellers and urban poor among many others, in lands along the coastline of Mumbai which according to environmentalists was deemed unfit for development (Dharmavaram 2013).

Different FSI differentials were allotted to different regions of Mumbai, and the idea was to decongest central nodes of the city. Table 1 depicts the FSI differentials, where it can be noted that there is not much difference in the FSI differentials. These values were set by the government. When TDR programs began in the city, CRZ's FSI was 4.0 which was then reduced to 0.5, because of the region being environmentally sensitive (Bertaud 2011). Other than that, FSI differentials have remained constant throughout. This was criticised by Bertaud (2011), who stressed that there is a need for the government to increase FAR in order to attract more investors.

Table 1: FSI DIFFERENTIALS (in different regions of Mumbai)

Coastal Regulation Zone	0.5
Sub-urban areas	1.0
Island City	1.33
Slum Areas	4.0
Central Business Districts	1.50
Hinterlands	0.75-1.0

Source: Bertaud, 2011

⁹ Floor Space Index or FSI means the same as FAR, the only difference being that FSI depicts the index while FAR shows the ratio.

There are two opposing views regarding the use of TDR programs in Mumbai. According to Dharamvaram (2013), the TDR programme was introduced in Mumbai to resettle and rehabilitate large numbers of slum dwellers towards CRZ. But Bertaud argues that TDR was used to earn revenues for the government under the garb of slum redevelopment. Both the scholars criticised the government for making an irresponsible choice of sending areas. It was also noticed in many cases that the receiving area was allotted for the TDR programme without checking its proper infrastructural capacity. Moreover, developing houses in CRZ using TDR also received a lot of backlash. Dharamvaram (2013) wrote, “Environmentalists, as well as proponents of slum redevelopment, considered the development in CRZ environmentally and socially irresponsible” (10). No proper Social or Environmental Impact Assessment was carried out before commencing the project (Bertaud 2011). The satellite town, Navi Mumbai was developed by removing mangrove vegetation, which was a rampant violation of coastal regulations guidelines. While the rationale was to increase urban space and decongest the central nodes of the city, the social and environmental costs cannot be ignored. Vulnerable populations were shifted to corners of the city where land does not hold proper infrastructural capacity and increases the risk to life. In-situ slum redevelopment should have been pursued instead of pushing slums in the city's periphery. In situ redevelopment will help in transforming informal urban settlements (slums) into formal urban settlements. In fact, the Pradhan Mantri Awas Yojana (Urban) - Housing for All scheme has also focused on turning slums into formal settlements rather than pushing slums into the hinterlands of the city.

AHMEDABAD: REJUVENATING RIVERFRONT

While most Indian cities experimented with TDR in urban projects, Sabarmati Riverfront Development (SRFD), situated on the banks of Sabarmati River, is one riverfront development project constructed using the TDR programme. Rapid industrialisation in Ahmedabad has resulted in environmental degradation of the Sabarmati river (Orloff et. al 2016). Due to this, in the last few years, the river started running dry for 9-10 months of the year. Dry beds and banks of the river were then used for farming and marketing which led to an increase in the number of informal settlements along the banks. Moreover, these informal settlements also affected the flood-carrying capacity of the river. The encroachment of riverbanks by informal settlements reduced its direct public access, hence SRFD was envisioned to regenerate the riverfront and make it directly accessible to all the citizens.

To revitalise the riverfront the Sabarmati Riverfront Development Corporation Limited (SRFDCL) was constituted as an independent body to work on SRFD, under the jurisdiction of Ahmedabad Municipal Corporation (AMC) (Orloff et al. 2016). Being a complex project, it was decided that SRFDCL will consist of representatives of all the stakeholders and will not be carried out by AMC alone. A key goal of this project was to construct a walkway along the banks of the river to ensure direct access for the inhabitants of Ahmedabad (TNN 2015). The planning committee outsourced the development management services (Orloff et al. 2016). But, with the first stage of the project's implementation, it received backlash from civil society and interest groups. The case was taken to court and households demanded a proper resettling and adequate compensation. After legal proceedings, the court paused the eviction and asked the government to properly plan the rehabilitation. Hence, to acquire land, planners adopted the method of land readjustment called Melavni² (in the local language). After processing the final layout of the project, it was realised that the biggest challenge was to compensate the displaced population. SRFDCL and AMC jointly

¹⁰ Melavni is a method to consolidate land into small parcels according to the layout of the project.

decided that the compensation will be through TDR program instead of using the traditional method under the land acquisition legislation. Applying methods of Land Readjustment (for acquiring land) and TDR (for compensation) was a new and innovative approach towards land use planning. It was considered a win-win situation for all the major stakeholders on the grounds that: (i) Landowners were financially compensated (according to the market price of the land) or they become holder of development rights (according to their preference); (ii) ULBs could earn more revenues by selling development rights to developers; (iii) the riverfront was designed into a tourist attraction, thereby attracting more revenues for the government altogether. The approach is more efficient as opposed to conventional land management technique. Resettlements and compensation are often inadequate under land acquisition methods. Moreover, the process of rehabilitation and compensation also becomes long and tiresome.

CONCLUSION AND POLICY RECOMMENDATIONS

Since 2005, urban development has taken centre stage in the policy landscape of India. The approaches to it have also evolved; while earlier the policies were focused around building infrastructure of urban areas such as roads, high rise buildings etc., they have now adopted a holistic approach to develop urban spaces (such as AMRUT, Smart Cities Mission etc.). From revamping infrastructure to working on building

the administrative and technical capacities of ULBs, cities are being planned more efficiently. There is a need for planners to reassess urban development using land-based instruments (also advocated for in the Smart Cities policy document), replacing the rigid methods of land acquisitions in order to promote sustainable and inclusive urban development in the country. Based on the discussion above, following are some of the recommendations that can be incorporated for planning cities more efficiently as well as earning more revenues (focusing on TDR and FAR incentives):

- **Capacity Building of ULBs:** Urban areas are dynamic in nature, hence there is a need to build capacity of ULBs in order to adapt to the required changes. Capacity building refers to the strengthening of human resources by upgrading the knowledge and skills required by ULBs to function efficiently. Since ULBs are the lowest tier of the government, it is the need of the hour for them to come forward and take the responsibility of urban development.
- **Revising Property Tax collection Rules:** The average property tax collected in the 36 largest municipal corporations of India is only 37% due to strict regulation of rent (Jha and Mankikar 2019). Majority of the revenue for ULBs come from property tax collection, hence, there is a need to revise and overhaul the system of rent control so that there is proper balance between tenants and landowners.
- **Increasing the usage of Land-based instruments:** While we know that land is a limited and immobile resource, there is a need to adopt land-based instruments in order to use land more sustainably. TDR and FAR incentives can be leveraged in managing land more efficiently. While these land-based instruments are successfully implemented in Mumbai, it should be adopted pan-India. It will not only manage land efficiently but help ULBs earn more revenue as well

Developing countries like India need to envision a holistic approach while formulating policies pertaining to limited natural resources such as land. TDRs and FAR incentives, if formulated and implemented efficiently, is an important and innovative market-based mechanism that could facilitate better regeneration and management of urban lands. But the case studies also highlight that the process of FARs and TDRs do not take into account the social and environmental costs of this kind of development. FAR and TDR are market-based instruments and they are often criticised on the grounds that they tend to focus more on economic implications of a project, ignoring the social and environmental costs. Thus, there is a need for the government to adopt Social and Environmental Impact Assessment to address the social costs of such projects and to ensure that it does not affect vulnerable sections of the society negatively. Moreover, these development projects should also ensure that they do not promote development in environmentally sensitive zones. The aim of TDR and FAR incentives should not limit itself in only decongesting urban agglomerations but also contribute to legitimising the housing and basic needs of the urban poor.

BIBLIOGRAPHY

- Ahluwalia, Isher J. (2013) "Planning for Urban Development in India" *Icrier.Org*. (http://icrier.org/Urbanisation/pdf/Ahluwalia_Planning_for_Urban_%20Development.pdf).
- Aijaz, Rumi, (2020). "The Smart Cities Mission in Delhi, 2015-2019: An Evaluation". *ORF Special Report 98*. https://www.orfonline.org/wp-content/uploads/2020/01/ORF_Special_Report_98_Smart_Cities.pdf.
- Alvi, Naziya, (2012). "Give your land for development to earn FAR". *Times of India* June 11, 2012. <https://timesofindia.indiatimes.com/city/delhi/Give-your-land-for-development-to-earn-FAR/articleshow/14025666.cms>.
- Bertaud, Alain, (2011). "Mumbai FAR/FSI Conundrum: The Perfect Storm – the four factors restricting the construction of new floor space in Mumbai". http://alainbertaud.com/AB_Files/AB_Mumbai_FSI_Conundrum_Revised_sept_2011.pdf
- Chaubey, P. K., (2003). "Urban Local Bodies in India: Quest for making them Self Reliant". *Indian Institute of Public Administration, New Delhi*.
- Dharmavaram, S., (2013) "Land Value Capture in Urban DRM Programs". *Disaster Risk Management in East Asia and the Pacific*. Working paper series no 26, 80583, Washington DC: World Bank.
- Grover, R. J., Z Galić, A Corsi and A Kindap, (2018). *Transfer of Development Rights: Technical Note (English)*. Washington DC.: World Bank Group.
- Jha, Ramanath and Sayli Mankikar, (2019). "India's Urban Challenges: Recommendations for the New Government (2019-2024)". *ORF Special Report*. https://www.orfonline.org/wp-content/uploads/2019/06/ORF_Special_Report_90_Recommendations-Urban.pdf
- Linkous, E. R, (2017). "Transfer of Development Rights and Urban Land Markets". *Environment And Planning A* 49 (5): 1122-1145.
- Menon, Vinita, (2020). "All you need to know about Floor Area Ratio". *housing.com* July 25, 2020. <https://housing.com/news/real-estate-basics-floor-area-ratio/>.
- Ministry of Finance, (2018). *The Financing of Urban Infrastructure Issues and Challenges*. Ahmedabad, India: Ministry of Finance and ASSOCHAM. <http://ris.org.in/pdf/aiib/19April2018/Urban%20Development%20Background%20Note.pdf>
- Ministry of Housing and Urban Poverty Alleviation, (2018). *Annual Report 2017-18*. New Delhi: Ministry of Housing and Urban Poverty Alleviation.
- Mohanty, P. K., (2003). "Financing Urban Infrastructure: Some Innovative Practices of Local Resource Mobilization". *CGG Working Paper*.
- National Institute of Public Finance and Policy, (2011). "Municipal Finance Matters: Indian Municipal Finance Report". New Delhi: National Institute of Public Finance and Policy.
- NITI Aayog and NIUI, (2015). *A Study to Qualitatively Assess the Capacity Building Needs of Urban Local Bodies (ULBs)*. New Delhi: NITI Aayog and National Institute of Urban Affairs.
- Orloff, Marianna, Rana Amirtahmasebi, Sameh Wahba, and Andrew Altman. (2016). *Regenerating Urban Land : A Practitioner's Guide to Leveraging Private Investment*. World Bank Group. <https://openknowledge.worldbank.org/handle/10986/24377>

- Phadke, Mansi, (2018). "Mumbai wants to go as high as Tokyo & New York but where's the infrastructure on the ground?" *The Print*, April 26, 2018. <https://theprint.in/india/governance/fadnaviss-new-plan-for-mumbai-higher-construction-limit-housing-on-eco-sensitive-land/52765/>.
- Saha, Shovan K., (n.d.). "Urban Planning and Development: The India Challenge." *Athena Infonomics*. <https://www.athenainfonomics.com/urban-planning-india/>.
- Shanu, S, (2016). "Transferable Development Rights in India and Its Importance." *Proptiger.com* January 10, 2016. <https://www.proptiger.com/guide/post/how-efficient-are-transferable-development-rights>.
- Shenvi Apoorva and Ron H. Slangen, (2018). "Enabling Smart Urban Redevelopment in India through Floor Area Ratio Incentives." *ADB South Asia Working Paper Series No. 58*. <https://www.adb.org/publications/smart-urban-redevelopment-india>
- Singh, Prahlad, (2019). "FAR/FSI 2019 Updates: Floor Space Index in India's Top Cities". *Commonfloor.com* November 15, 2019. <https://www.commonfloor.com/guide/farfsi-2019-updates-floor-space-index-in-indias-top-cities-55546.html>. Accessed on March 10, 2020.
- Smart Cities Mission, (n.d.). "Smart Cities Mission". Accessed June 4, 2020. www.smartcities.gov.in.
- Sridhar, Kala Seetharam, (2010). "Impact of Land Use Regulations: Evidence from India's Cities." *Urban Studies* 47(7): 1541–1569.
- TERI, (n.d.). "Urbanisation". Accessed July 19, 2020. <https://www.teriin.org/resilient-cities/urbanisation.php#:~:text=In%20India%2C%20as%20per%20the,more%20than%201%20million%20people>.
- Thakkar, Himanshu, (1999). "Displacement and Development: Construction of the Sardar Dam". *Cultural Survival Quarterly Magazine*. <https://www.culturalsurvival.org/publications/cultural-survival-quarterly/displacement-and-development-construction-sardar-dam>.
- TNN, (2015). "New Policy To Quicken Riverfront Land Acquisition." *The Times of India*, March 18, 2015. <https://timesofindia.indiatimes.com/city/ahmedabad/New-policy-to-quicken-riverfront-land-acquisition/articleshow/46603587.cms>.
- World Bank, (2013). *Urbanization beyond Municipal Boundaries: Nurturing Metropolitan Economies and Connecting Peri-Urban Areas in India*, World Bank Publications.
- United Nations, (2019). *The World's Cities in 2018*. UN. https://www.un.org/en/events/citiesday/assets/pdf/the_worlds_cities_in_2018_data_booklet.pdf

