

WORKING PAPER



The Need for Adequate Housing for All

Recovery and Development in Maharashtra's Cities Post COVID-19

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Disclaimer

This is to clarify that the document is a working paper for addressing the issues of housing in urban areas. It is not a final document and therefore is open to discussion, suggestions and further changes.

Please note that the contributors to this document have no vested interest in the suggestions of the report and ideas presented herewith are only for initiating discussions and further action on the issue of housing in urban Maharashtra.

Introduction: The Current Scenario

The need for affordable and liveable housing for all has become more crucial in the current situation of the COVID-19 pandemic. Health is invariably linked to density especially in the case of communicable diseases, which is why the need to address the problem of housing and density becomes essential in highly populated cities such as Mumbai, which has the second highest urban density in the world.¹(Refer Annexure 1, Table 1) Further, the area wise densities are not uniform and differ especially based on the kind and quality of housing. Slums in Mumbai occupy around 10% of the total land area but house 42% of the city's population.² The adverse impact of this inequity in housing is reflected in the spread of the pandemic in which highly dense areas have been COVID-19 hotspots.

Housing in the context of health is also deeply linked to two major aspects- habitability i.e. the quality of housing, and access to basic services such as water, sanitation and solid waste management. While various government policies have focussed on providing housing that is 'affordable' we need to recognise that the current dominant approach adopted in housing policy³ such as the slum rehabilitation schemes, has not addressed these aspects. Further, slum rehabilitation schemes have led to increase in density, in what are already some of the densest areas of the city.

The current situation points out clearly to the holistic nature of housing that includes not just four walls and a roof but a good quality living. Housing is of course much more important than just for disease control. Housing is a basic human need. While the current recommendations are developed in the immediate context of response to the COVID-19 pandemic, they reflect a larger vision for adequate housing for all. Without adequate housing for all, it is difficult to imagine humane living conditions for all. It is not possible to move towards Sustainable Development Goals such as 'good health and well-being' and 'clean water and sanitation' for all without housing as a pre-requisite. 'Quality education' too will be furthered significantly by decent housing, as giving students a safe and quiet place to live and better electrification, will allow them to absorb knowledge much more effectively. We need to make direct strategies for providing housing, especially as urbanisation increases, and housing needs to be provided despite constraints in supply of land.

¹<https://www.timesnownews.com/india/article/where-world-most-dense-populated-cities-mumbai/61774>

²Census 2011

³ Analysis of current housing policies is detailed in Praja's Handbook on Housing https://praja.org/praja_docs/praja_downloads/HANDBOOK%20ON%20URBAN%20LAWS%20AND%20POLICIES%20THAT%20IMPACT%20HOUSING%20VOL-%20II.pdf

Vision

In our vision for providing ‘adequate housing for all’ we derive from the UN Habitat definition of adequate housing⁴ the following key points:

1. **Affordability:** Reasonable cost of housing, but not free housing
2. **Location:** Includes availability of livelihood opportunities, transport infrastructure and facilities, and various social and economic services such as health, education, open spaces, markets, etc.
3. **Availability of Amenities:** Facilities and infrastructure such as basic services of water, sanitation, solid waste management, electricity, cooking gas etc.
4. **Habitability:** Physical safety, adequate space, protection from structural hazards, proper building design, thermal comfort, resource efficiency⁵, ventilation⁶ and protection from other threats to health and safety.

Recommendations

Our recommendations are broad guidelines which include urgent short term strategies to be taken to reduce density, and medium and long term strategies that aim to address inequity in housing and provide planning solutions for adequate housing for all.

1. *Government-led rehousing in existing unsold ready stock to reduce slum density*
2. *Relocation of labour-intensive businesses to reduce slum density*
3. *New adequate housing on government owned land through community land reserves*
4. *New adequate housing in peripheral areas around the city starting with improved connectivity through a strengthened public transport network*

⁴https://www.ohchr.org/documents/publications/fs21_rev_1_housing_en.pdf

⁵<https://www.cseindia.org/beyond-the-four-walls-of-pmay-10049>

⁶http://www.mmreis.org.in/images/research/TB_research_Final_submission_report_DFY.pdf This Doctors For You report highlights that building design has a direct link with public health and argues for removal of the building width relaxations for slum rehabilitation buildings under the Development Control and Promotion Regulations (DCPR) for Greater Mumbai, which lead to higher incidence of tuberculosis due to poor light and ventilation.

A. Strategies

1. Government-Led Rehousing in Existing Unsold Ready Stock to Reduce Slum Density

A strategy can be put in place to reduce density especially in big slum clusters such as Dharavi, Govandi, Malwani, Sonapur and other areas with high-density slums, which have been major COVID-19 hotspots. Slum areas currently have mixed land use with residential, commercial and industrial units. Residents typically include families staying in the slum since a long time with ownership/leave and licence including owners of small businesses and commercial units; recently moved families, both working within and outside the slum areas; and individual workers/labourers employed in the businesses living on leave and licence or in the workspace. Redevelopment therefore needs to take varied residents and occupations within the slum into consideration through a consultative process.

Existing Unsold Ready Stock

Out of the total housing stock ready and unsold in and around Mumbai and Pune, 34% of the units are affordable housing.⁷ Due to the COVID-19 pandemic, preference for safer and less dense housing could increase, but affordability would be a major hindrance. If we calculate the average price per unit of the existing affordable stock (Refer Annexure 1, Table 2) it is much higher than what even a median income (Refer Annexure 1, Table 3) household in Mumbai can afford, let alone half of the population who earns less than that amount.

Government Buy out of Existing Unsold Stock

The government will therefore need to intervene to provide truly affordable housing and can do so by utilising the existing housing stock. A survey of slum areas would need to be conducted to understand the housing needs of slum residents. Accordingly households which are settled/want to remain settled in and around the city for a longer period of time and those who want a secure tenure (ownership) house and are willing to relocate within a certain period (say 6 to 8 months) can be potential beneficiaries offered the unsold ready affordable housing stock in lieu of their current residence/house/land they occupy in slums.

Subsidised Construction Cost to Beneficiaries

The sale price for beneficiaries will be based purely on the construction cost. To further subsidise the construction cost, beneficiaries who cannot afford to pay even the construction cost can also avail of a government concession such that they pay overall only 20% to 25% of the total cost of the unit, or even lower depending on the proportion of construction cost to the total cost. Considering the cost of construction for a 15 storey building was estimated to be Rs. 3,125 per sq. ft.⁸ for a 7 to 8 storey building it would be Rs. 1,563 per sq. ft. This comes to Rs. 9,30,229 for construction cost and Rs. 4,65,115 with additional subsidy (Refer Annexure 1, Table 4) on an average for the current unsold stock.

⁷Out of the total unsold and ready housing stock of 39,789 units in Navi Mumbai, Thane and Pune, 13,562 are affordable housing, 16,821 are mid-income while 9,406 are luxury housing- according to HDFC Database.

⁸http://naredco.in/notification/pdfs/India%20Report_Variance%20in%20Construction%20Costs%20-%20Then%20and%20Now_Sep%202018.pdf

Although beneficiaries have to pay for the cost of construction, this scheme is beneficial for them since the amount they pay is like a deposit, which will be returned to them with interest, if they decide to vacate the flat. Where the beneficiary is unable to pay the cost of construction, financial institutions can provide loans, and the community land reserve (CLR) acts as a guarantor.

The remainder cost of the unit borne by the government, can be compensated to the builder either directly or through other subsidy/benefits. Based upon the average price per square feet, the cost to government would be Rs. 2,337 crores, however since the government is purchasing unsold ready stock in the current situation in bulk, it can negotiate a discounted price. (Refer Annexure 1, Table 4)

Management of Community Land Reserves

To ensure that the said properties are continued to be used by the beneficiaries, all such apartments within a building can be managed under the CLR. The CLR is a non-profit (proposed to be a company under Section 8 of the Companies Act, 2013), vested with management of a property and premises where land is owned by the CLR. It is implanted on land which is initially under the ownership/management of the government. The Company is proposed to be run by a Board consisting of one-third elected by resident members, one-third elected by neighbouring Societies or CLR's and one-third consisting of government and outside experts. This means that although a secure tenure (ownership) household can stay as long as they want to and enjoy all other ownership rights, in case of vacating the flat they cannot sell it by choice- the cost of the flat (based on construction cost at the time of purchase and necessary inflation or interest rates added) will be paid by the CLR to the vacating owner and the CLR will accordingly lease (under leave and licence) or sell the flat further to those beneficiaries who are currently living in inadequate housing such as slums. Other functions such as maintenance of property, collection of lease, etc. will be done by the CLR, similar to the functions of a housing society. Although in this case property is not developed by the CLR, its management can be done by the CLR.

This scheme will help in boosting the real estate sector and financial institutions by reducing the problem of unsold flats, reduce the density and health risk of the targeted areas, and provide better housing for beneficiary households, thus improving the overall quality of living.

For the scheme to be successful the existing challenges under this short term measure will need to be effectively addressed. These include resistance to shift due to existing social networks and livelihood opportunities, quality of services in the place of relocation. Awareness and dissemination of the scheme components will need to take into consideration existing social networks, stress on the importance of relocation for improved health and safety and ensure livelihood opportunities. The slum residents will need to be consulted and included in the scheme process to address their housing needs and relocation concerns.

The need for proper provisioning of services that would entail adequate housing (availability, accessibility, location as enlisted in the vision) will therefore need to be ensured.

2. Relocation of Labour-Intensive Businesses to Reduce Slum Density

Redevelopment of slum areas needs to be done recognising that many such areas also house livelihood opportunities such as small scale industries and commercial units. This is also one factor for increase in density of these areas, since they attract employment. The residents, who are owners of such businesses and those who are employed in such businesses, would be hesitant to relocate due to loss of livelihood.

The rehousing scheme can therefore include relocation of businesses as well. However, businesses in current slum areas work as an entire commercial ecosystem, it will be important to consider all essential factors while relocating businesses. One, only those businesses which are not location inelastic in terms of business networks and clientele will be able to shift. Therefore bigger businesses and units can be targeted for this scheme, for example, a garment unit but not a kirana shopkeeper. Further, businesses earlier preferred to be set up within the corporation limits to not attract Octroi charges, however now with the coming of a Goods and Services Tax (GST) no additional cost will have to be borne by businesses which shift outside city limits.

Second, only shifting businesses will not reduce density if its employees/workers do not also shift. For example, workers in small scale businesses in slums would be more likely to relocate with the business as their reason for residing in expensive yet poor living conditions, is proximity to their workplace. Businesses may also be reluctant to shift due to un-surety of available skilled workers in the place of relocation.

Relocation of Businesses

Taking this into consideration the scheme for relocation of businesses can be designed as follows. The business owner can be offered a commercial space in areas such as the Maharashtra Industrial Development Corporation (MIDC) in the metropolitan region at a concessional rate along with the scheme of unsold existing ready stock offered at cost of construction, in the vicinity. This will enable businesses to shift into better, more workable spaces with improved infrastructure, better pollution treatment and waste management facilities, logistics support, improved working conditions, institutionalisation of business and therefore better access to finance.

Housing for Employees and Workers

Employees who are able to afford the cost of construction can avail of a housing unit from the unsold existing ready stock, just like the employers can. For those employees who cannot afford such a price, a certain amount of the unsold existing stock can be kept aside for leave and licence done through the CLR. Further, for employees who are casual workers or labourers and cannot afford buying or leasing a house from the unsold stock, the government can develop dormitories/hostels for them within that area. In fact as a policy, the government can construct such dormitories around MIDC areas to ensure proper housing for casual workers. This will ensure security of livelihood for those relocating, provide better workable spaces with improved working conditions and also provide proper housing for casual labour, many of whom currently reside within the workspace.

This scheme will also help in providing better infrastructure and working conditions for businesses and also de-congest existing high density slum areas.

3. New Adequate Housing on Government Owned Land through Community Land Reserves

This strategy involves new construction within the city on government land through the community land reserve method which can address issues of habitability and density, along with affordability and availability of amenities.

Model for New Affordable Housing on Existing Government Land

This involves new construction of affordable housing on government land within the city. This can either be done through redevelopment of the existing slum areas, or on the sites of abandoned under construction and unoccupied old buildings, to house part of the existing residents and/or by utilisation of unused spaces in the city such as the eastern waterfront. Construction on government land will be done through normal design contracts and construction contracts and the selling price to the occupants will be determined by cost of construction, excluding the cost of land. Such housing complexes will be developed and managed through a CLR, with representation on its board of government or outside experts, members of neighbouring societies and resident members which owns and manages the property, including leave and licence and sale to ensure that it continues to be used for affordable housing.

Since this is new construction it will be able to take into consideration habitability aspects. Further, since the areas will be within the city with assured availability of transit, socio-economic facilities and livelihood opportunities would not be a challenge.

Cost of Land Excluded from Price of Housing Unit

To ensure affordability, a model where the land is owned by the government and construction is through normal construction contracts can be implemented. Since the land belongs to the government, the cost of land is not included in the final price. A CLR is created which overlooks the design and construction/redevelopment through design agencies or construction companies supervising a contractor; and the building complex before, during and after construction is managed through the CLR. For the buildings constructed in this manner, only the construction cost and not the cost of the land are included in the final price of the house. This will drastically reduce the price of the housing unit. Considering the cost of construction for a 15 storey building was estimated to be Rs. 3,125 per sq. ft.⁹, for a 7 to 8 storey building it would be Rs. 1,563 per sq. ft. Adding a further 20% to this cost, the price would be Rs. 1,876 per sq. ft. which is Rs. 9,38,000 for 500 sq. ft., well within the affordable limit. (Refer Annexure 1, Table 3 and Table 6) The CLR can then set a part for affordable secure tenure and part for affordable leave and licence.

Community Land Reserves

The development and management of the property and premises on which affordable housing is constructed can be done through a CLR as a non-profit (proposed to be a company under Section 8 of the Companies Act, 2013), vested with the development and management of a property and premises where land is owned by the CLR. This means (as explained earlier) that although a secure tenure (ownership) household can stay as long as they want to and enjoy all other ownership rights,

⁹http://naredco.in/notification/pdfs/India%20Report_Variance%20in%20Construction%20Costs%20-%20Then%20and%20Now_Sep%202018.pdf

in case of vacating the flat they cannot sell it by choice- the cost of the flat (based on construction cost at the time of purchase and necessary inflation or interest rates added) will be paid by the CLR to the vacating owner and the CLR will accordingly sell or provide through lease and licence the flat further to those beneficiaries who are currently living in inadequate housing such as slums. This will ensure that the property is continued to be used for affordable housing. Other functions such as maintenance of property, collection of lease, etc. will be carried out by the CLR, similar to the functioning of a housing society.

The model can be tested and if successful can be replicated in other parts of the city to reduce the proliferation of slums by providing safer, affordable and adequate housing.

4. New Adequate Housing in Peripheral Areas around the City Starting with Improved Connectivity through a Strengthened Public Transport Network

Model for New Adequate Housing and Overall Development around the City

For the long term the city can be expanded further to areas in and around it, such as the Mumbai Metropolitan Region (MMR). This will include not just affordable housing but setting up of social and economic infrastructure along with it. For making this possible, transport networks will need to be strengthened and extended into these areas. Development of affordable housing and transport in the city peripheries will therefore increase the land value of the surrounding areas, making it attractive for the real estate. This will lead to construction of mid-income and luxury housing units as well, that will ensure these periphery areas develop with a mixed-income residential housing. This will also attract commercial enterprises, businesses and small scale industries to these areas, leading to better livelihood opportunities. Transport networks can be developed in the first 3 to 4 years, the layout, zoning and development of multimodal transit being government's responsibility, similar to City and Industrial Development Corporation (CIDCO) development. While development of affordable residential and commercial hubs through community land reserves can be done through regular design and construction contracts, builders can be given concessions for further development in the same or nearby areas.

Strengthened Public Transport Network

To ensure development of peripheral areas in and around the city, it will be essential to strengthen and extend the existing transport networks and develop newer transport networks for last mile connectivity. To develop areas in and around Mumbai for example, faster transport systems will need to be developed, such as the fast-track harbour line and rail trans-harbour link which can open up more development in and around Navi Mumbai.

Rapid Transit Systems (the most practical implementations especially in new areas being Bus Rapid Transit Systems (BRTS)) for para transit which act as a feeder to the main transport networks also need to be developed to make interior lands viable for residential and commercial development.¹⁰

Community Land Reserves

Affordable housing in the long term can follow the same pattern as in the previous models. This would mean setting up of the CLR on land provided by government and price of the unit derived from the construction cost, excluding the land cost. The CLR can set a part for affordable secure tenure and part for affordable lease and licence. Building design can be based accordingly taking into account habitability, sustainability and liveability aspects, as mentioned in the vision. The residential complex after being occupied can be run collectively through the CLR mechanism mentioned above, to ensure that it is continued to be always used for affordable housing.

¹⁰<https://journals.sagepub.com/doi/full/10.1177/0956247817738188>

B. Case Studies

Dharavi

The recommendations especially relocation of slum residents to unsold ready stock and relocation of businesses (in the short term) and new housing through CLR for in-situ rehabilitation (in the medium term) can be piloted in Dharavi in Mumbai.

The model can also be piloted in other areas with high-density slums and those which are currently major COVID-19 hotspots. Here we elaborate on the example of Dharavi since several redevelopment plans have been floated over the years and a survey was also conducted in 2009 by an NGO Maharashtra Social Housing and Action League (MASHAL) for mapping the households. The survey documents 57,000 households spread across the total 239 hectares of land in Dharavi.¹¹ With a total of 1,700 businesses such as garments, recycling, pottery, leather, food, and various others Dharavi is a teeming commercial hub¹². Almost 70% of the residents work within Dharavi while 30% are employed outside Dharavi. Dharavi attracts a high amount of individual labour which works in the different units and lives within the factory/unit. Majority of Dharavi's residents live in leased spaces or in the workspace, while 30% to 40% have an owned space. Given these characteristics the above schemes can be implemented in Dharavi.

Residents can be given the option to shift out immediately (within 6 to 8 months) to unsold ready flats in the metropolitan region with a larger area than their current dwelling, at Rs. 9,30,229 for construction cost or at Rs. 4,65,115 with additional subsidy per unit. (Refer Annexure 1, Table 4)

If the unsold affordable units in MMR region (10,078) are offered to households in Dharavi; around 18% of the population can be relocated. (Refer Annexure 1, Table 5).

Businesses can be given the option of relocation (within one year) to areas in the metropolitan region, with much better infrastructure and work space for their commercial units to be bought at concessional rates, in addition to a residential flat for the employers at cost of construction. In addition residential accommodation will also be developed for the casual labour employed in these industries. Since 70% of the population in Dharavi is employed within the slum, shifting of businesses along with better working and living conditions offered to workers will de-densify the existing area. This will also offer security of livelihood and better quality of living for those employed in these businesses.

While shifting a proportion of the residents to the unsold existing affordable stock will decongest the existing slum area, it will be important to ensure that these now slightly less congested areas do not get congested again with newer residents. Therefore a redevelopment strategy for the remainder residents needs to be devised keeping in mind the need for reduction in density. This can be done as a 2 to 3 year plan by dividing the existing slum colony into clusters (in most areas there are already such existing demarcated clusters) and redevelopment of each can be done through the community land reserve method where only the cost of construction will be borne by the buyer. (Refer Annexure 1, Table 6) The CLR will manage the development of the properties and also its future use and management after construction. Redevelopment will be done based on mixed use planning so

¹¹<https://mashal.org.in/slum-mapping-and-data/>

¹²<https://knowyourcity.info/wp-content/uploads/2015/04/ReDharavi1.pdf>

that the area has commercial opportunities as well as residential pockets, with improved basic amenities. Government and private bodies can be involved in the development of commercial areas and basic amenities. This will not only de-densify the area but also redevelop it keeping in mind its essence as a commercial hub of the city.

Eastern Waterfront

For the new housing through CLR on unused government land, the eastern waterfront can be used as a pilot and can be developed in a period of 2 to 3 years.

The eastern waterfront is a Port Trust area on the eastern coast of the city and this area can be used as a pilot for new development under the medium term recommendations. According to the Mumbai Port Trust (MPT) draft proposal for redevelopment of the eastern waterfront land for residential purpose was 49.93 ha (5.17%) while the planned area after redevelopment is 103.94 ha (10.76%).¹³ (Refer Annexure 2, Figure 1) The plan for eastern waterfront development can be revised to accommodate more land for residential purposes.

Even if 10% is used for affordable housing, with a density of around 110 to 120 households per hectare, 11,000 to 12,000 households can be built. A CLR will need to be set up within a given time frame after which the CLR can manage the planning and development of the residential complex and set aside a part for sale at construction cost and a part for affordable leave and licence both of which on vacating will return to the CLR. Beneficiaries will be people residing currently in inadequate housing within the city, such as slums. Additional land in the eastern waterfront may be earmarked for private developers for mid-income and luxury housing to ensure a mixed-income residence in the area. Other land use plans for amenities and services like health and education can be done as proposed.

Since the eastern waterfront area is within the main city there will be no problem of access to services, amenities, and transport and livelihood opportunities.

Mira Road (West)

For long term recommendations (new housing in periphery areas), various areas in the periphery of the main city can be piloted within the next 5 years, one such location is Mira Road (West) in MMR.

The site west of Mira Road Station has been left untouched as it was reserved for a future electronic city. This area can be used as a pilot under the long term recommendations. Since transit facilities (railways) are already available, the government will first have to develop para transit affordable transport such as BRTS. The 1,028-hectare area with a 10-kilometre BRTS loop, could house about 4,61,000 people and 1,84,000 jobs.¹⁴ Once the BRTS is developed part of the residential plan area can be used for affordable housing developed and managed by the CLR while part can be for mid-income and luxury housing to ensure a mixed-income population. This will also attract commercial enterprises, businesses and small scale industries to these areas, which can be housed in land allotted for commercial purpose close to the BRTS, leading to better livelihood opportunities.

¹³<http://mumbaiport.gov.in/writereaddata/linkimages/spareport.pdf>

¹⁴<https://journals.sagepub.com/doi/full/10.1177/0956247817738188>

C. Impact on Key Stakeholders

It is important that the above recommendations have a positive impact for each of the main stakeholders- the residents of current inadequate housing (target beneficiaries), government and private institutions (businesses, real estate and financial institutions). The following table summarises the costs borne by each stakeholder and the benefits thereof, under each recommendation.

Stakeholder: Government				
Criteria	Government-led rehousing in existing unsold ready stock to reduce slum density	Relocation of Labour-Intensive Businesses to reduce slum density	New adequate housing on government owned land through community land reserves	New adequate housing in peripheral areas around the city starting with improved connectivity through a strengthened public transport network
Financial Costs	<ol style="list-style-type: none"> 1. Bears the cost of subsidy and existing stock purchase (Rs. 2337 crores for entire stock). 2. Bears the cost of other scheme related expenditures. 	<ol style="list-style-type: none"> 1. Bears the cost of subsidy and existing stock purchase. 2. Bears the cost of other scheme related expenditures. 	<ol style="list-style-type: none"> 1. Government has to use its land for affordable housing. 2. Bears the cost of other scheme related expenditures. 	<ol style="list-style-type: none"> 1. Government bears cost of developing transport networks. 2. Government has to use its land for affordable housing. 3. Bears the cost of other scheme related expenditures.
Other Challenges	<ol style="list-style-type: none"> 1. May face opposition from some quarters for relocating people outside the main city. 2. May face opposition from residents already residing in the buildings where beneficiaries will now be relocated at a much lesser price than paid by them. 	May face opposition from some quarters for relocating businesses outside the main city.		May face opposition from some quarters for relocating people outside the main city.
Financial Benefits	<ol style="list-style-type: none"> 1. Can use part of freed up land after rehousing for commercial purpose. 2. Is able to lay off burden of existing unsold stock from real estate and financial institutions to revive the economy. 	Gains long term income by developing enterprises in the existing land and MIDC region.	<ol style="list-style-type: none"> 1. Can use part of redevelopment land for commercial purpose. 2. Government will be better equipped to deal with crises/calamities in the future. 	<ol style="list-style-type: none"> 1. Development of periphery areas around the city for all kinds of housing will lead to revenues from new units, not under affordable segment. 2. Development of commercial centres in periphery areas will lead to revenues from new units.
Other Benefits	<ol style="list-style-type: none"> 1. Gains goodwill by rehabilitating and reducing density of some of the biggest slums. 2. Serves as an example for other states/cities regarding unsold stock. 	<ol style="list-style-type: none"> 1. Gains goodwill by rehabilitating and reducing density of some of the biggest slums. 2. Serves as an example for other states/cities regarding relocation of businesses. 	<ol style="list-style-type: none"> 1. Government will be able to solve the problem of high-density slums in a systematic manner, improve quality of life and earn goodwill. 2. Serves as an example for other states/cities for creating adequate housing with people's involvement. 3. Government will earn public trust by involving people in management of housing. 	<ol style="list-style-type: none"> 1. Government will be able to solve the problem of high-density slums in a systematic manner, improve quality of life and earn goodwill. 2. Serves as an example for other states/cities for creating adequate housing with people's involvement. 3. Government will earn public trust by involving people in management of housing.

Stakeholder: Residents (Target Beneficiaries)				
Criteria	Government-led rehousing in existing unsold ready stock to reduce slum density	Relocation of Labour-Intensive Businesses to reduce slum density	New adequate housing on government owned land through community land reserves	New adequate housing in peripheral areas around the city starting with improved connectivity through a strengthened public transport network
Location	Social networks may be affected due to relocation outside the main city.	Social networks may be affected due to relocation outside the main city.	1. Relocation within the city. 2. Social networks may be affected because of relocation for beneficiaries who shift out to other areas.	Social networks may be affected due to relocation outside the main city.
Affordability/ Costing	1. Ownership house at cost of construction (Rs. 9,30,229 for construction cost and Rs. 4,65,115 with additional subsidy) with larger area than current dwelling. 2. Beneficiaries can sell the house only to the CLR according to a predetermined formula.	1. Business space at a concessional cost and ownership house at cost of construction (Rs. 9,30,229) for business owners. 2. Affordable dormitories/hostels for casual workers of businesses. 3. Beneficiaries can sell the house only to the CLR according to a predetermined formula.	1. Ownership house of around 500 sq. ft. at cost of construction (Rs. 9,38,000) or affordable leave and licence. 2. Beneficiaries can sell the house only to the CLR according to a predetermined formula. 3. Due to CLR, stock of affordable housing for ownership/ leave and licence will be easily available in the future.	1. Ownership house of around 500 sq. ft. at cost of construction (Rs. 9,38,000) or affordable leave and licence. 2. Beneficiaries can sell the house only to the CLR. 3. Due to CLR, the stock of affordable housing for ownership/ leave and licence will be easily available in the future.
Availability of Amenities and Access to Services	1. Availability of amenities and services such as water, sanitation, solid waste management, etc. in the housing complex. 2. There may be issues of access to services such as health, education, affordable para transit in the immediate term if such infrastructure is not yet developed.	1. Availability of amenities and services such as water, sanitation, solid waste management, etc. in the housing complex and dormitories. 2. There may be issues of access to services such as health, education, affordable para transit in the immediate term if such infrastructure is not yet developed.	1. Availability of amenities and services such as water, sanitation, solid waste management, etc. in the housing complex. 2. Access to services such as health, education, and transport near the place of residence.	1. Availability of amenities and services such as water, sanitation, solid waste management, etc. in the housing complex. 2. Since adequate transit and para transit networks will be developed, transport will not be a problem. 3. There may be issues of access to services such as health and education in the immediate term if such infrastructure is not yet developed.
Habitability	1. Safety in terms of relocation from high density areas. 2. Building design, quality of construction, thermal comfort, ventilation may vary depending on the type of existing unsold stock.	1. Safety in terms of relocation from high density areas. 2. Building design, quality of construction, thermal comfort, and ventilation may vary depending on the type of existing unsold stock for employer and employee beneficiaries. 3. Building design, thermal comfort, ventilation and other sustainability aspects will be taken into consideration during construction of dormitories/hostel for workers of businesses.	1. Safety in terms of relocation from high density areas. 2. Building design, thermal comfort, ventilation and other sustainability aspects will be taken into consideration during construction.	1. Safety in terms of relocation from high density areas. 2. Building design, thermal comfort, ventilation and other sustainability aspects will be taken into consideration during construction.
Livelihood	1. Development of those areas with sale of unsold flats will give impetus to commercial and other occupations. 2. Livelihood opportunities for those shifting without business ownership/employment may face a problem in the immediate term until such infrastructure is developed.	1. Relocation of employees/employers of businesses will ensure security of livelihood. 2. Development of those areas with shifting of businesses and sale of unsold flats will give impetus to commercial and other occupations.	Since relocation is within the city, negative impact on livelihood opportunities will be minimal to nil.	1. Transportation networks will attract real estate and businesses offering livelihood opportunities. 2. Livelihood opportunities may face a problem in the immediate term until such infrastructure is developed.
Participation and Consultation	1. Needs assessment survey to be conducted for relocation. 2. Beneficiaries will be able to manage their complex through the CLR board.	Needs assessment survey to be conducted for relocation.	Beneficiaries will be able to develop and manage their complex through the CLR board.	Beneficiaries will be able to develop and manage their complex through the CLR board.

Stakeholders: Businesses, Real Estate and Financial Institutions				
Criteria	Government-led rehousing in existing unsold ready stock to reduce slum density	Relocation of Labour-Intensive Businesses to reduce slum density	New adequate housing on government owned land through community land reserves	New adequate housing in peripheral areas around the city starting with improved connectivity through a strengthened public transport network
Financial Costs	Real estate developers to provide the existing unsold stock to the government at a discounted rate.	Businesses that are relocating will pay a reasonable amount for their commercial units.		
Other Challenges		Some businesses that relocate may have a few teething problems in terms of networks in the new areas.		
Financial Benefits	<ol style="list-style-type: none"> 1. Reduce glut in real estate by providing liquidity through buying of existing unsold stock. 2. Reduces financial burden of developers. 3. Reduce bad loans of financial institutions by sale of unsold stock. 	Businesses that relocate have the opportunity for institutionalisation and better access to finances.	<ol style="list-style-type: none"> 1. Real estate and construction sector can benefit by undertaking construction projects for CLRs. 2. Construction companies will deal directly with the CLR and earn profit on cost of construction. 3. Real estate developers can contribute in building commercial spaces and part of the spaces within the government land such as MPT that will be still reserved for them. 4. Opening up of existing unused government land for housing will also give impetus to businesses and commercial enterprises in the vicinity. 	<ol style="list-style-type: none"> 1. Real estate and construction sector can benefit by undertaking construction projects for CLRs. 2. Construction companies will deal directly with the CLR and earn profit on cost of construction. 3. Companies can tie up with government for developing transport networks. 4. Opening up of periphery areas for residential and commercial development due to improved transport will benefit real estate and businesses. 5. The same model can be replicated by developers without using government land.
Other Benefits		<ol style="list-style-type: none"> 1. Businesses that relocate have the opportunity for better and larger work space, better work environment and improved facilities. 2. Any pollution or waste generated by the business can be better managed/recycled. 	In redevelopment areas commercial units will now have larger work space and better work environment.	

Conclusion

The above recommendations aim to provide a directional plan to the state government for addressing the problems of high density, over-crowding in cities, inadequate housing, slum rehabilitation, etc.

While many of the examples presented in the above recommendations are specific to MMR, since this is the most populated region in Maharashtra, the above recommendations can be first applied here and if successful can be scaled to other cities in Maharashtra, with the ultimate vision of having adequate housing for all.

Annexure 1: Tables

Table 1: Population Density of Major Cities¹⁵ compared to Mumbai

City	Country	Population Density (sq. km.)
Mumbai (Slum) ¹⁶	India	86,306
Mumbai (Non-Slum)	India	13,322
Mumbai (Overall)	India	31,700
Dhaka	Bangladesh	44,500
Medellin	Columbia	19,700
Seoul ¹⁷	South Korea	16,364
Manila	Philippines	14,800
Casablanca	Morocco	14,200
Lagos	Nigeria	13,300
New York City ¹⁸	United States of America	10,908
Singapore	Singapore	10,200
Jakarta	Indonesia	9,600
Honk Kong ¹⁹	China	6,690
Tokyo ²⁰	Japan	6,158
Mexico City ²¹	Mexico	6,000
London ²²	United Kingdom	5,729
Shanghai ²³	China	3,809

Table 2: Existing Stock of Ready and Unsold Affordable Units and Calculated Price per Unit²⁴

Region	Units	Area (million sq. ft.)	Value (in Rs. crores)	Price (in Rs. per sq. ft.)	Average sq. ft. per unit	Average price per unit (based on average area) in Rs.	Price on Rs. for 500 sq. ft.
Pune	3,484	2.14	804.63	3,760	614	23,09,501	18,79,977
Thane	7,725	4.55	1,724.24	3,790	589	22,32,026	18,94,769
Navi Mumbai	2,353	1.37	477.27	3,484	582	20,28,347	17,41,861
Total/Average	13,562	8.06	3,006.14	3,678	595	21,88,829	18,38,869

¹⁵Top Cities by density by UN Habitat <https://www.timesnownews.com/india/article/where-world-most-dense-populated-cities-mumbai/61774>

¹⁶Slum population from Census 2011, area occupied by slums as 10% of total area of Mumbai

¹⁷<http://kostat.go.kr/portal/eng/pressReleases/8/7/>

¹⁸https://www.health.ny.gov/statistics/vital_statistics/2015/table02.htm

¹⁹<https://www.gov.hk/en/about/about/hk/factsheets/docs/population.pdf>

²⁰<https://www.metro.tokyo.lg.jp/ENGLISH/ABOUT/HISTORY/history03.htm#:~:text=At%20%2C191%20square%20kilometers%2C%20the,%2C%20and%20the%20Islands%2C%2026%2C000.>

²¹<https://worldpopulationreview.com/world-cities/mexico-city-population/>

²²<https://data.london.gov.uk/dataset/land-area-and-population-density-ward-and-borough>

²³<http://tjj.sh.gov.cn/tjnj/nje18.htm?d1=2018tjnj/E0201.htm>

²⁴Source: HDFC Bank Database

Table 3: Calculation of Median Income and Cost of Affordable Homes (Mumbai)

Heads	Amount
Median monthly income in 2008 in Rs.	20,000
Median annual income in 2008 in Rs.	2,40,000
Average CPI 2008-2019 ²⁵ (%)	7.85
Household income appreciation per annum	5.85
Estimated median monthly income in 2020 ²⁶ in Rs.	39,566
Estimated median annual income in 2020 in Rs.	4,74,790
Cost of "Affordable" home (4 times the annual income) for median income household ²⁷ in Rs.	18,99,160
Monthly lease (40% of monthly income) for median income household in Rs.	15,826

Table 4: Estimated Cost to Beneficiaries and Government for Relocation to Affordable Unsold and Ready Stock

Particulars	Amount
Estimated cost of construction for a 15 storey building ²⁸ in Rs./sq. ft.	3,125
Estimated cost of construction for a 7-8 storey building in Rs./sq. ft.	1,563
Cost of existing unsold ready stock in Rs./ sq. ft.	3,678
Average area in sq. ft. of unsold ready stock	595
Average per unit cost of unsold ready stock in Rs.	21,88,829
Estimated construction cost of unsold ready stock in Rs.	9,30,229
50% Subsidised construction cost to be paid by beneficiary in Rs.	4,65,115
Proportion in % to be paid by beneficiary compared to total cost	21%
Unsold ready affordable stock units	13,562
Amount borne by government for subsidising all the ready affordable unsold stock (in Rs. crores)	630
Amount borne by government for buy out of ready affordable unsold stock (in Rs. crores)	1,706
Total cost to government (in Rs. crores)	2,337

²⁵<http://www.inflation.eu/inflation-rates/india/historicinflation/cpi-inflation-india.aspx>.

²⁶ Calculated based on the World Bank Working Paper, Working with the Market, Approach to Reducing Urban Slums in India, November (2010) median income of Rs. 20,000 in 2008 incremented per annum in 2 percentage points lower than the average Consumer Price Index from 2008-2019. The Average CPI from 2008-2019 was 7.85. Monthly income of Rs. 20,000 has been accordingly incremented by 5.85% per annum which amounts to Rs. 39,566 at the start of 2020.

²⁷ According to the Report of the High Level Task Force on Affordable Housing for All (2008), Ministry of Housing & Urban Poverty Alleviation an affordable house for Economically Weaker Sections (EWS) is 4 times the annual income. <http://www.naredco.in/pdfs/report-high-level-task.pdf>

²⁸ http://naredco.in/notification/pdfs/India%20Report_Variance%20in%20Construction%20Costs%20-%20Then%20and%20Now_Sep%202018.pdf

Table 5: Impact of Relocation of Dharavi Residents to Existing Unsold Affordable Units

Major Parameters for Dharavi	Amount
Estimated population ²⁹	8,00,000
Area (ha) ³⁰	239
Area (sq. km.)	2.39
Number of households ³¹	57,000
Estimated population per household	14
Number of households offered relocation	10,078
Estimated population offered relocation	1,41,446
Estimated % of population offered relocation	18
Estimated density (population/sq. km.)	3,34,728
Estimated reduction in density after relocation (population/ sq. km.)	2,75,546
Estimated difference in density due to relocation	59,182

Table 6: Estimated Cost to Beneficiaries for Redevelopment of Dharavi under Community Land Reserves

Particulars	Amount
Estimated cost of construction for a 15 storey building ³² in Rs./sq. ft.	3,125
Estimated cost of construction for a 7-8 storey building in Rs./sq. ft.	1,563
Estimated cost for a 7-8 storey building in Rs./sq. ft. with 20% added to cost of construction	1,876
Average area in sq. ft. of new construction per unit	500
Estimated cost of unit as cost of construction to be borne by redevelopment beneficiary in Rs.	9,38,000

²⁹ <https://www.indiatoday.in/magazine/the-big-story/story/20200504-mumbai-rsquo-s-ticking-time-bomb-1670507-2020-04-25>

³⁰ <https://mashal.org.in/slum-mapping-and-data/>

³¹ <https://mashal.org.in/slum-mapping-and-data/>

³² http://naredco.in/notification/pdfs/India%20Report_Variance%20in%20Construction%20Costs%20-%20Then%20and%20Now_Sep%202018.pdf

Annexure 2: Figures

Figure 1: Proposed Land Use for Eastern Seafront in Mumbai³³

Sr. No.	Zones	Area(Sq.mt.)	Percentage	Code
1	Port Operational Zone	15,38,962.12	15.93%	POZ
2	Port Allied Activities	19,55,868.05	20.24%	PA
3	Port Eco-Tourism	22,47,639.10	23.26%	PT
4	Health Care	70,272.52	0.73%	HC
5	Transport	2,89,684.04	3.00%	T
6	Natural Area	44,644.77	0.46%	NA
7	Commercial	24,76,554.67	25.63%	C
8	Residential	10,39,404.91	10.76%	R
Total		96,63,030.18	100.00%	

³³<http://mumbaiport.gov.in/writereaddata/linkimages/spareport.pdf>