

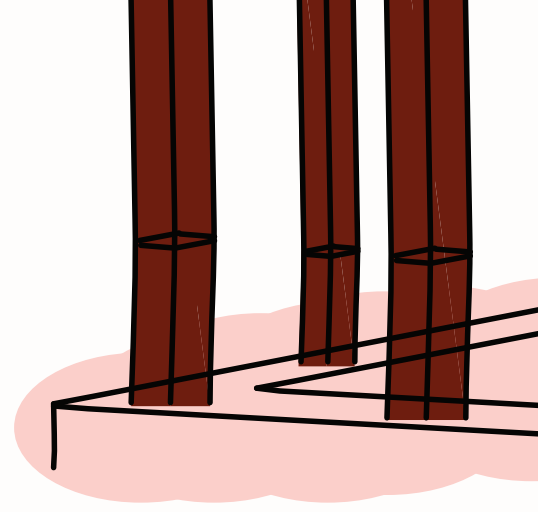


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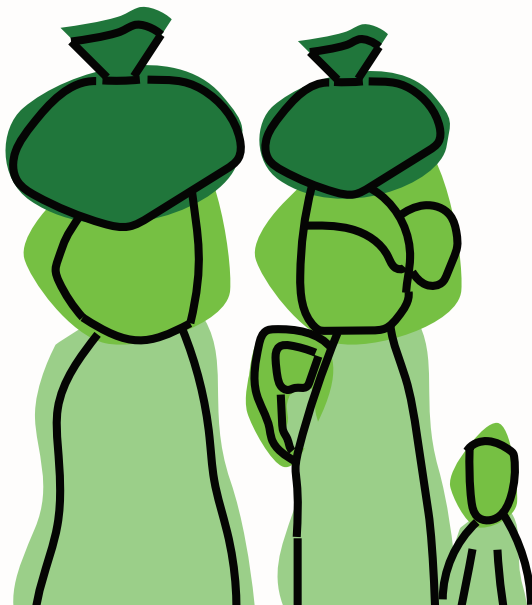
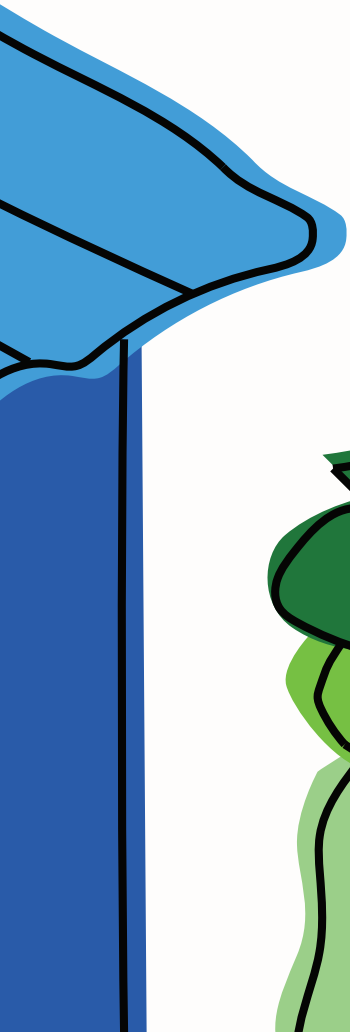


Terwilliger Center for
Innovation in Shelter



Shelter Solutions for Migrant Construction Workers

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September 2022

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Preface

The Anant Centre for Sustainability at Anant National University is at the forefront of investigating, running large scale survey based research, and providing solutions to critical contemporary problems related to housing that affect the most vulnerable sections of our society. The report on “Shelter Solutions for Migrant Construction Workers” published by the Anant Centre for Sustainability and the Terwilliger Center for Innovation in Shelter is on a watershed research, lest we forget the plight of the millions of migrant workers who made their way back from the cities to rural hometowns at the break of the COVID-19 pandemic in India from the spring of 2020.

The report investigates the challenges faced with housing, which was one of the prime reasons assumed for the departure of migrants from the cities during the pandemic.

Focusing on migrant workers in the construction industry, the investigation was carried out for 10 months via large scale surveys in districts where the migrant construction workers came from as well as cities where migrant construction workers went to work. We adopted innovative techniques for carrying out the survey in 3 home districts of migrant construction workers in the states of Odisha, Bihar and Uttar Pradesh. In each district we identified a local ‘agent’ who would then go door to door asking if the resident had returned from working in the construction sector in the city, and send us back the phone numbers of those responding positively to him. At the Anant Centre for Sustainability, we always involve our students in the surveys and research that we conduct. Here too, our students spoke to the migrant workers, surveying them for details about their flee from the city. Informed by the results, we then spoke to migrant construction workers living in Mumbai, Navi Mumbai, Panvel, Vasai, Pune and Pimpri-Chinchwad.

The findings of this primary data driven research informs policymakers and private companies in the construction sector of the aspects related to social infrastructure and housing that are critical to migrant workers of 3 home districts. We hope that these aspects are minded while designing policy and construction sites. Further, some of our assumptions about how migrants workers arrive in the city or the reasons for which they leave, are shockingly broken in the report findings. The comparisons across 3 migrant source districts and 6 migrant host cities offers interesting granular detail about the choices migrants make regarding their work and shelter.

Finally, the report also provides practical solutions for migrant workers in the construction sector. These include short term accommodation options, rental accommodation, co-living

accommodation, as well as on site portable shelters. On the latter, we used left over tarpaulin from the emergency response auto rickshaws built by the Anant Centre for Sustainability during the pandemic, to create cross laminated and insulated tarpaulin units as prototypes. We found they were easy to assemble and disassemble, easy to transfer between sites and easy to transport to hard-to-reach areas.

Since the outbreak of COVID-19, the Anant Centre for Sustainability has been actively engaged in innovating with implementing practical solutions to serve the most disadvantaged sections of the society who were hit the hardest by the pandemic. In the past 24 months, we have established 28 COVID care quarantine centres and temporary hospitals equipped with medical devices across 5 states. We also transformed the humble autorickshaw to design, create, and put on the road emergency oxygen response vehicles and mobile COVID testing facilities in 2 states.

In the same pioneering spirit and for the same socio-economic objectives, I am truly delighted and very proud to present the Anant Centre for Sustainability team's research and suggested solutions in this report on "Shelter Solutions for Migrant Construction Workers".

For those professionally engaged with the housing sector and also those who are not, I am sure this report will offer you a compelling read. Do share with us your impressions and further suggestions. We would love your feedback.



Dr. Miniya Chatterji
Founding Director, Anant School for Climate Action &
Director, Anant Centre for Sustainability, Anant National University
CEO, Sustain Labs Paris

Summary

The housing situation in India presents a unique paradox; on one hand there is a massive housing shortage and on the other, over 10.07% (11,093,630) of the census houses lie vacant in urban India. The problem is especially acute in urban areas of Gujarat where 14.93% houses are vacant, Maharashtra where 13.16% houses are vacant, and the National Capital Region where 10.94% houses are vacant.

With the COVID-19 related lockdowns and mass exodus of migrants from cities during the pandemic, the focus shifted to housing of migrants and on identifying measures to discourage similar mass return of migrants from urban areas to their villages under a pandemic like situation in the future.

One of the reasons assumed for the departure of migrants from the cities was problems with housing, specifically, the unwillingness of house owners to let tenants continue occupying the rental accommodation without the due rental payments (arising due to absence of any income at the renters' end). Post the lockdowns, the GoI floated the Affordable Rental Housing Complex (ARHC) scheme under the Pradhan Mantri Awas Yojana-Urban (PMAY-U) with the dual intent of tackling the challenge of vacant houses constructed under Government schemes and increasing the stock of affordable rental housing for migrants and the poor. The Anant Centre for Sustainability (ACfS) at Anant National University and Habitat for

Humanity's Terwilliger Center for Innovation in Shelter (TCIS) collaborated to look at the housing challenge of migrant construction workers who make-up about 41.6% of short-term and 5.3% of long-term migrants of rural origin across India (NSS 2007-08; MoHUPA, 2017). In order to study this, the ACfS and TCIS decided to focus on western India, specifically Maharashtra, which attracts the maximum number of inter-state migrants.

The aim of the study was to develop an overall understanding of the housing issues of the migrant construction workers and map the challenges with reference to the 24 March to 31 May 2020 lockdown period in India that resulted in the complete shutdown of the construction sector. The study focused on the journey of migrant construction workers from the village to the city in terms of:

- How/with whom did the migrants come to the cities for the first time?
- What accommodation did they look for and with whom did they share it?
- What are the challenges they face in the context of their housing?
- What were the reasons for their decision to go back to the villages after the COVID-19 related lockdown was announced?
- How has life changed for them on return to the city after the COVID-19 lockdowns?
- Moving forward, what housing solutions would work for them.

Considering the COVID-19 related restrictions, the methodology adopted for the study was to work with individuals and organisations that were already working with migrant construction workers in the selected study areas. In the villages of origin, 70 migrant construction workers were interviewed. The most significant findings from this survey are as listed below:

- 74% of the respondents went to the city when 'recruited'/ invited by labour contractors. Consequently, they lived in or rented formal houses that the contractors identified.
- The preferred monthly rent for a room that they would like to rent is INR 2001 to 3000.
- When labour contractors provide accommodation in areas near the work sites, the room rent is recovered from the workers through deductions from their monthly pay.
- The minimum monthly income amongst the respondents was INR 12,000 and the maximum was INR 25,000.

In **Mumbai-Navi Mumbai-Panvel-Vasai (MNM-PV)**, Youth for Unity and Voluntary Action (YUVA) facilitated this process with field-workers of YUVA and the Habitat and Livelihood Welfare Association (HALWA). In **Pune and Pimpri Chinchwad Municipal Corporation (Pune-PCMC)**, the study was conducted under the aegis of the Kranti Kashtkari Sangharsh Mahasangh at Pimpri-Chinchwad which has a membership of migrant construction workers, many of whom are from within the State as well as the District. The sample size from the different cities were determined based on the ratio of urban residents to slum residents in each city.

A draft questionnaire was prepared and discussed with the selected surveyors,

and subsequently modified to incorporate changes based on the observations of the surveyors and context of the settlements. The questionnaire was finalised and a pilot survey was undertaken. The experience of the pilot further contributed to refining the questionnaire. On the ground, the interviewers identified the respondents in a way that neither neighbours nor people from the same cluster were interviewed. Overall, 730 migrant construction workers were interviewed in the host cities. Overall, a majority of the respondents were from Uttar Pradesh, Bihar, Maharashtra, Karnataka and West Bengal.

The key findings from the surveys in the host cities are as listed below:

- 69.2% of the respondents from **MNM-PV** are inter-state migrants of whom 16% were recruited in their villages by a contractor and 29% came on their own. Further, around 55% of the respondents accompanied a relative or known person when they first came to the city. In **Pune-PCMC**, 88.2% of the respondents are intra-state migrants who came to the city on their own to look for work during the lean farming period.
- 29% of the respondents in **MNM-PV** found their house independently, 19% found their house through people from their village or state, 15% found it through co-workers and 18% found their accommodation through an agent/ *dalal*. In **Pune-PCMC**, 95% of respondents found their house independently whereas 5% found it through people from their village or state.
- Despite the push for *pucca* houses under PMAY-U, 37.3% of the respondents in Mumbai live in *kutcha* accommodation and 34.8% live in semi-*pucca* accommodation, whereas

- in Panvel and Navi Mumbai, 15% and 5.2% of the respondents live in *kutcha* accommodation respectively. In Vasai, 69.1% of the respondents live in semi-*pucca* accommodation and 5.2% live in *kutcha* accommodation. In Panvel, 31.3% respondents live in porta cabins, 15% live in *kutcha* accommodation and 13.8% live in semi-*pucca* accommodation. In contrast, 80% of the respondents in **Pune-PCMC** live in *kutcha* accommodation and 20% live in semi-*pucca* accommodation.
- While identifying the day to day challenges faced in their settlements, 36% of the respondents in **MNM-PV** identified poor condition of toilets and wash facilities, and limited timing and quantity of water availability. The other challenges identified were increase in rent (30% respondents), water leakage in the room during the rainy season (26% respondents), flooding outside the house during rains (23%), and affordable deposit and rent for a house (36%). 22% of the respondents expressed concerns about security. In **Pune-PCMC**, 99% of respondents identified affordable deposit and rent for a house as a major challenge followed by rent increase (73%) and water leakage in the room during rains (34%) as significant challenges.
 - In response to the query on the top two reasons for returning to their villages following the first Covid-19 lockdown in March 2020, the respondents in **MNV-PV** cited “no opportunities to earn an income” (31% of the respondents) and “closure of construction site” (about 28%). Nearly 18% identified “safety from Covid-19 pandemic” while 16% cited “lack of basic necessities and a fear of shortage of essentials”. Only 10% of the respondents stated “their landlord asked them to vacate the rented house”. In **Pune-PCMC**, 96% of the respondents preferred to stay on in Pune-PCMC since they were getting cooked meals and other essentials regularly.
 - In **MNM-PV**, 63% respondents stated that they experienced a lot of change in their work situation after the COVID-19 lockdowns. 82% respondents found it difficult to get work after the pandemic and 49% cited “pay being lesser than before” as the major changes in their work situation. In **Pune-PCMC**, 92% of the respondents find it more difficult to get work after the pandemic and 46% are getting paid less than before.
 - If the respondents had a choice, 50% of the respondents in **MNM-PV** would prefer to be near places where they can get work easily, 31% would prefer to be near health facilities and commercial areas of the city, and 29% of would prefer to reside near a local bus-stop or train station. Besides this, 15% would prefer locations near markets, 14% would prefer to stay near primary/ secondary schools, and 7% would prefer to stay on construction sites. In **Pune-PCMC**, 99% of respondents indicated proximity to the workplace as a first choice, while 56% would prefer a place where their spouse/ adult children can get work.
 - In **MNM-PV**, 32% of the respondents’ ideal house in the city is a house with a kitchen *otta* and attached toilet, 26% would choose a house with a kitchen *otta* and common toilet, and 10% were okay with a single room with a common toilet. Only 6% of respondents would opt for a shared room or house with a common toilet. In **Pune-PCMC**, 77.4% respondents’ ideal choice of house is a single room with a common toilet, 20% would prefer a house with kitchen *otta* and attached toilet, and 2.1% were okay with a single room with attached toilet.

- In terms of rents, 25% respondents in **MNM-PV** would be willing to pay a monthly rent of INR 2001 to 3000, 18% are willing to pay INR 3001 to 4000, 11% are willing to pay INR 1001 to 2000, and 12% would be comfortable to pay INR 5001 to 6000 per month.

Thus, interestingly, the respondents' decision to return to their villages was not a compulsion to leave their rental accommodation. In fact, since the landlords have been paid a *pagadi*, they were already holding the tenant's money. Further, in contrast to the respondents in the selected places of origin stating that they went to the city when hired by a contractor, the majority of respondents in the host cities had come to the city with other members from their village or family. Further, older secondary data and our research found that the rents for one-room houses that the migrant construction workers rent has remained in the range of INR 1000 to INR 3000 – the same amounts that the respondents said they are willing to pay for their preferred house.

Based on the research findings and the need for exploring alternative affordable housing options for the migrants, some temporary, rental and co-living housing options have been recommended.

1. Short-term accommodation: with flexible tenure and access to services that the migrants can opt for on arrival in the cities can reduce the urgency for renting a house immediately. This is especially important for those who do not have family or know people in the city. The migrants can look for an affordable house closer to their place of work after getting a "secure job" and becoming more familiar with the city. The Night Shelters and Shelter Homes that are operated

by local governments, not-for-profits or charitable trusts can become transit accommodation for migrants on arrival. These shelters, when managed well, could also serve as the first point of contact and can facilitate access to local services and welfare schemes.

2. On site portable shelters: that are easy to set up, maintain and repair, are well ventilated and give reasonable insulation. The solutions can include cross laminated and insulated tarpaulin units that are easy to assemble and disassemble, easy to transfer between sites and easy to transport to hard-to-reach areas. Another option is to use bamboo panels, which are eco-friendly, lightweight, cost effective and easy to assemble, and can be partially reused on other sites.

3. Rental Accommodation: Innovative approaches are required to address issues of deposits, tenure, cost, location and access to finance in addition to social and personal requirements. The options can include accommodation of varied tenures close to transportation hubs. Another option is to introduce a coupon-based system where beneficiaries can augment the cost of the house with their own money.

4. Co-Living Accommodation and Hostels: have become a trend among college students and young professionals belonging to higher income families. Currently, the private sector provides single room accommodation that is shared by a number of migrants even in formal residential areas. Thus, the option of hostels or dormitory accommodation with shared kitchen facilities can also be explored.

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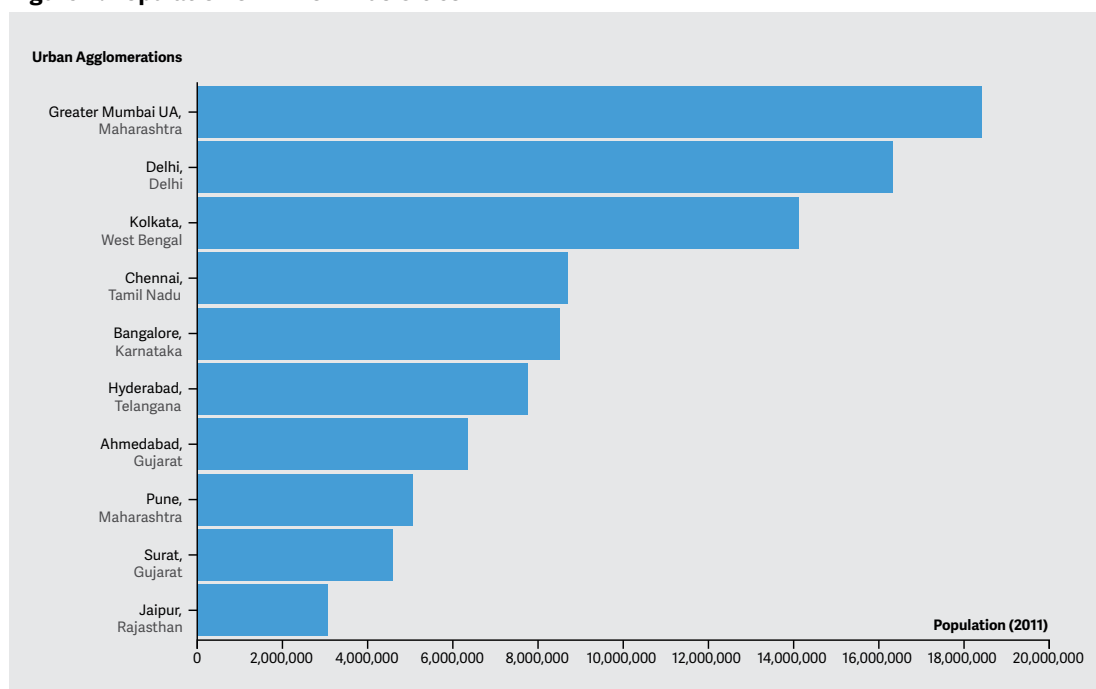
1 Urbanisation and the Challenge of Affordable Housing

Urban centres are recognized as engines of economic growth that offer access to secondary and tertiary employment opportunities, which are more stable compared to primary sector work opportunities (Bhagat, 2014). These urban centres attract people of all economic groups and skill levels for the wide range of economic opportunities and for better access to higher levels of educational and health services (Bhagwati 1972, Korra, 2011). Some of the other reasons for which people migrate are employment and marriage.

31.2% of India’s population, and the level of urbanisation increased from 27.82% in 2001 to 31.14% in 2011 (NBO-MoHUPA., 2013). More than 75% of the urban population lives in 10 States, with Tamil Nadu, Kerala, Maharashtra and Gujarat having attained over 40% urbanisation (Census 2011a). 42.6% of the urban population (or 160.7 million people), live in 53 urban agglomerations (UAs) that have a population of more than one million. Three of these UAs with a population of more than 10 million persons are Greater Mumbai (18.4 million), Delhi (16.3 million) and Kolkata (14.1 million) (Census 2011b).

According to the 2011 Census of India, the urban population was 377.2 million or

Figure 1 : Population of Million-Plus Cities



Source: Census 2011.

1.1 Urbanisation and Migration

About 59% of the growth in the urban population is due to natural increase and 21% of the increase is contributed

by migration (Government of India, 2011). Some of the key benefits associated with migration are filling-up of the gap in demand

and supply of skilled and unskilled labour, as well as remittances or transfer of money by the migrants to their places of origin. The remittances result in reduction of financial risks and investment in asset formation as well as in health and education. The benefits of migration for the individual migrants include informal development of work-related and social skills, and greater exposure to varied cultures and ways of life. When these migrants return to their place of origin, they bring to the rural areas their new skills and knowledge (Bhagat, 2014).

Migration includes internal migration that is within the country and international migration that happens across international boundaries (Bhende & Kanitkar, 2006). Internal migration refers to a change of residence to a different state, district, cities or municipalities or to rural areas within national boundaries.

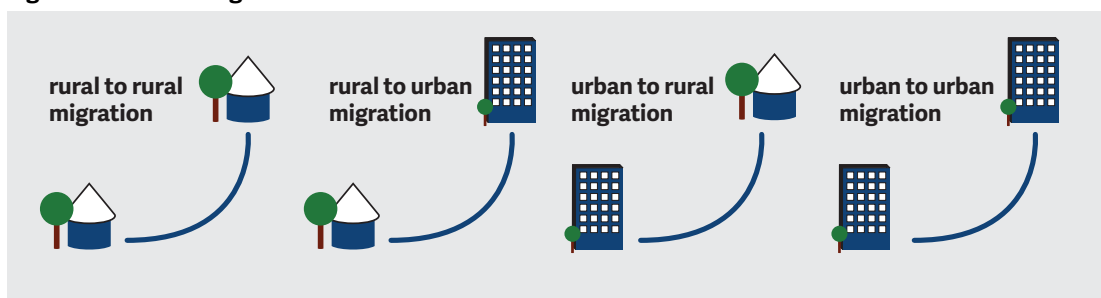
Internal migration is either long term, that is, it results in the relocation of an individual or household or it is short term and involves back and forth movement between a source

and destination. Short-term migrants as per the NSS 64th round (2007-08) were "persons who had stayed away from the village/ town for a period of 1 month or more but less than 6 months during the previous 365 days for employment or in search of employment (NSSO 2010).

Of the 13.6 million short-term migrants in India, 12.6 million were of rural origin and 1.04 million were of urban origin. Only 1.9 million of the short-term and rural origin migrants were female while 0.88 million of the short-term and urban origin migrants were male (NSS 2007-08).

Based on direction of movement, internal migration is within and between rural and urban areas, that is, a) Rural to Rural migration; b) Rural to Urban migration; c) Urban to Rural migration and d) Urban to Urban migration. Of these streams, rural to urban migration is the most significant because it is directly linked to urbanisation and contributes to the transfer of labour from the primary/ agricultural sector to the urbanised industrial sector.

Figure 2 : Internal Migration Movements

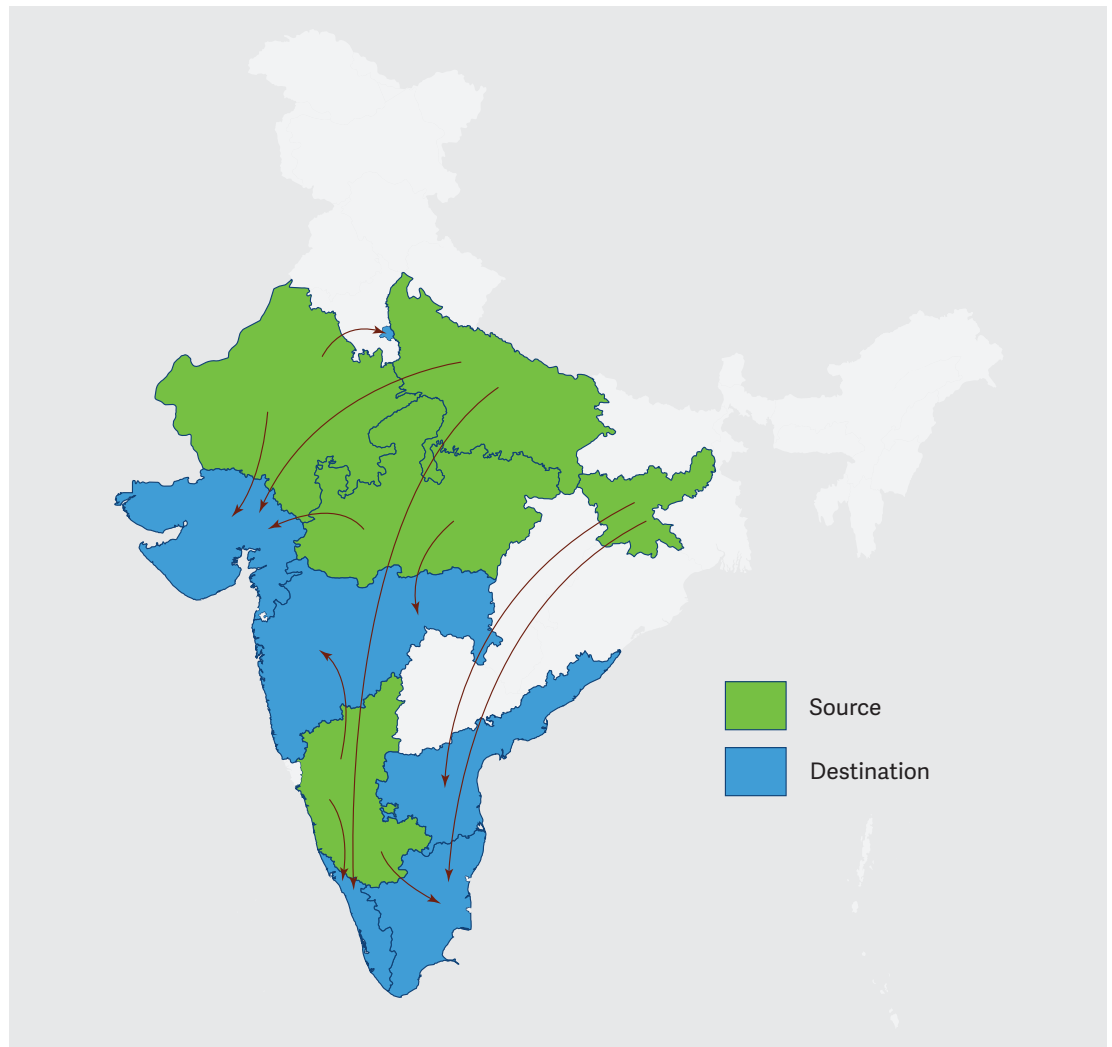


Of the 1.21 billion population in India, 37.4% or 456 million are internal migrants (Census 2011); that is, people migrating from one part of the country to other due to various reasons. Of these, 62% were intra-district migrants, 26% were inter-district migrants and only 12% were inter-state migrants (Census 2011). The destination of 71.6% of the rural male migrants was urban, and of these the destination of 40.3% was another

state. Among the women, of the 41.7% who went to urban areas, 17.1% migrated to another state (NSS 2007-08).

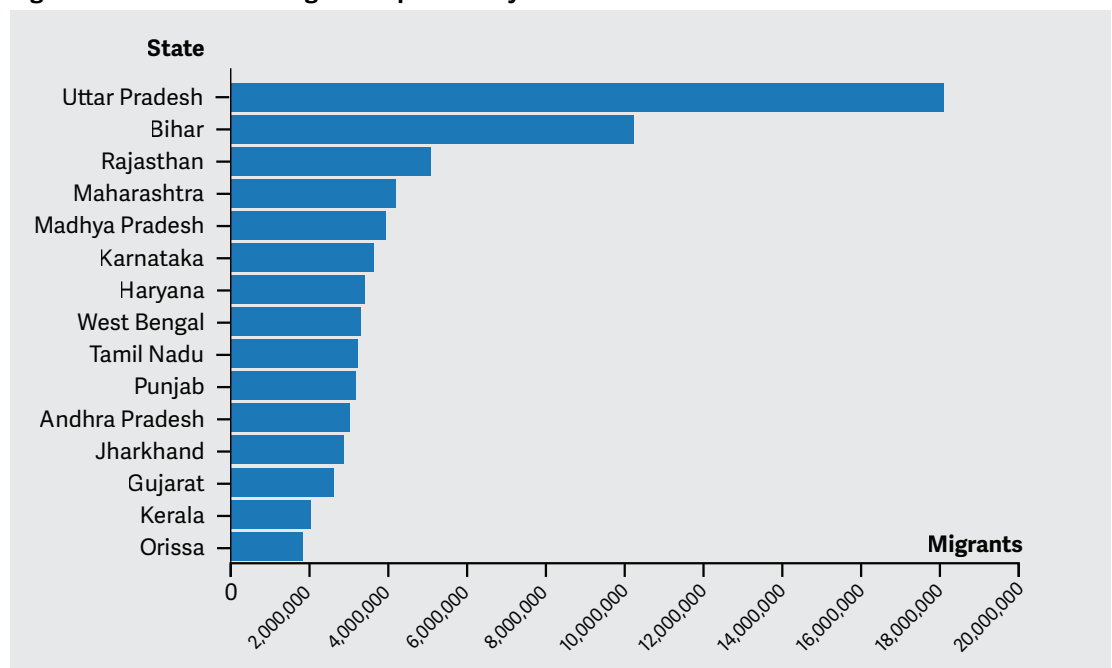
Uttar Pradesh, Bihar, Rajasthan, Madhya Pradesh and Karnataka were identified as the biggest source states and Delhi, Maharashtra, Tamil Nadu, Gujarat, Andhra Pradesh and Kerala as the major destination States for migrants.

Figure 3 : India Internal Migration - Source and Destination States



Source: Census, 2011

Figure 4 : India: Share of Migrant Population by State



Source: Census, 2011

1.2 Migrants and their Work

Many migrants in urban areas are engaged in informal activities as casual workers or are self-employed in seasonal and temporary jobs. They are engaged as construction workers, plumbers, masons, vendors, hawkers, domestic servants, cooks, electricians, drivers etc. (Bhagat, 2014). Another estimate based on the 2011 Census, NSS surveys and economic survey, estimated that 33 per cent of inter-state migrants are casual workers while 30% work in the informal sector.

As per the estimates of the NSS 2011-12, there are about 50 million workers in India

who are engaged in building and other construction works. 32% of male migrants and 67% of female migrants in urban areas work in the construction sector (MoHUPA, 2017).

The occupational composition of short-term and long-term migrants is also very different as given in Table 1. The share of construction work amongst short-term migrants of rural origin was very high at 41.6% compared to 25.2% among the urban origin migrants (MoHUPA, 2017). 5.3% of the long-term migrants are also involved in construction work.

Table 1 : Occupation of Short and Long term Male Migrants

Occupation	Rural Origin		Urban Origin	
	Short term	Long term	Short term	Long term
Primary including agriculture, hunting, forestry, fishing, mining and quarrying	24.90%	59.50%	13.20%	14.70%
Manufacturing	16.80%	13.10%	26.00%	19.90%
Construction	41.60%	5.30%	25.20%	5.30%
Traditional Services including wholesale and retail trade, hotels and restaurants, transport, storage and communications	13.00%	11.30%	23.00%	25.00%
Others	3.70%	10.70%	12.60%	35.10%
	100%	100%	100%	100%

Source: NSS 2007-08; MoHUPA, 2017

The study was taken up to understand the housing of migrant construction workers. This study is divided into two sections as given below:

- The housing that migrant construction workers opt for, including what they are willing to spend on it, and
- Solutions to shelter migrant construction workers.

¹ The entire population is classified into three main categories of workers, namely i) Main workers who have worked for the major part of the year preceding the date of enumeration i.e., those who were engaged in any economically productive activity for six months or more during the year. ii) Marginal workers are those who worked any time at all in the year preceding the enumeration but did not work for a major part of the year, i.e., those who worked for less than six months; and iii) Non-workers who are those who have not worked any time at all in the year preceding the date of enumeration.

2 Slums and Migrant Housing

Rapid urbanisation has brought several challenges in terms of demand for infrastructure, basic services, and affordable housing for the urban poor. This has led to the problem of housing, growth of slums and informal settlements, and severe strain on the infrastructure and services in urban areas.

One of the biggest challenges for migrants in the cities is the non-availability of affordable housing. In the absence of formal affordable housing, a majority of the poor, including migrants in urban areas opt for affordable rental housing in informal settlements, that is, in notified and un-notified slums. Some live on construction sites while those working on road, bridges and metro related projects may live along the roadsides.

Box 1 : Slum Types According to Census 2011

According to the Census 2011, slums are:

- All notified areas in a town or city notified as 'Slum' by State, UT Administration or Local Government under any Act including a 'Slum Act'
- All areas recognised as 'Slum' by State, UT Administration or Local Government, Housing and Slum Boards, which may have not been formally notified as slum under any Act, and
- A compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in an unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities. (Identified)

2.1 Slums and Housing

According to the 2011 Census of India, about 65.49 million people live in slums. As given in the Table 2, the top twelve States account for 75% of the slum population, and 90% of the slum households. Maharashtra and Andhra Pradesh are home to over 35.43% of slum households and 16.27% of the slum population in the country (Census 2011).

Since the 1950s, Government of India (GoI) policies focussed on constructing formal housing for the urban poor. However, as experienced in other parts of the world, Government constructed housing could not meet the actual demand for housing.

Since the 1970s, Governments in South Asia recognised the challenge of providing housing for the poor and introduced initiatives for improving the environmental conditions of informal settlements. GoI has also introduced several schemes for upgrading slum infrastructure, and for redevelopment of slums and relocation of slum households. Starting with the launch of the Scheme for Environmental Improvement of Urban Slums (EIUS) in 1972 for improving physical conditions of slums as a national programme. This was followed by interventions for increasing access to serviced plots in sites and services projects

² A compact settlement with poorly built tenements that are crowded together and are mostly temporary in nature, and that usually has unhygienic conditions because of inadequate sanitary and water facilities is considered a slum in the study. Such a settlement in a town/ city is often notified as a slum by the state government or the local government. Such an area with a minimum of 20 households that is not notified is considered a non-notified slum (Government of India, 2010).

where people could build their own homes incrementally, followed by support for in-situ slum upgrading. Although the schemes have contributed to significant improvements

in the physical conditions of slums since the 1970s, the number of slums and slum population have continued to increase.

Table 2 : State Share of Slum Population to Total Slum Population of India (2011)

	State	Slum HH	% of total slum HHs	Cumulative Total of Slum HHs	Slum Population	Total Population	Slum population as % of Total Population	Cumulative Total of Slum Population
	India	13,920,191	100		65,494,604	1,210,854,977	5.41	
1	Maharashtra	2,499,948	17.96	17.96	11,848,423	112,374,333	9.28	9.28
2	Andhra Pradesh	2,431,474	17.47	35.43	10,186,93	84,580,777	6.99	16.27
3	Tamil Nadu	1,463,689	10.51	45.94	5,798,459	72,147,030	5.96	22.22
4	West Bengal	1,391,756	10	55.94	6,418,594	91,276,115	7.54	29.76
5	Madhya Pradesh	1,117,764	8.03	63.97	5,688,993	72,626,809	6	35.76
6	Uttar Pradesh	1,066,363	7.66	71.63	6,239,965	199,812,341	16.5	52.26
7	Karnataka	707,662	5.08	76.71	3,291,434	61,095,297	5.05	57.31
8	Chhattisgarh	413,831	2.97	79.69	1,898,931	25,545,198	2.11	59.42
9	Rajasthan	394,391	2.83	82.52	2,068,000	68,548,437	5.66	65.08
10	Delhi	367,893	2.64	85.16	1,785,390	16,787,941	1.39	66.46
11	Orissa	350,032	2.51	87.68	1,560,303	41,974,218	3.47	69.93
12	Gujarat	345,998	2.49	90.16	1,680,095	60,439,692	4.99	74.92

Source: Census 2011

Towards 1990s, first generation of reforms were initiated in the housing sector by facilitating more housing finance and private sector participation with emphasis on ownership housing. The Gol and State Governments have over the years, been providing incentives for house ownership through various schemes, including the Basic Services for the Urban Poor (BSUP) sub-Mission of the Jawaharlal Nehru National Urban Renewal Mission from 2005 onwards and Rajiv Awas Yojana from 2013 (Mahadevia, 2012).

The BSUP (from 2007 onwards) sought to address the needs of most vulnerable and the lowest-income urban dwellers in 63 Mission cities by addressing the need for access to basic infrastructure and services. However, in practice, limited numbers of houses were completed under the BSUP through three or four storied apartment blocks either through in-situ upgrading or redevelopment. In some locations, in-situ upgrading for improving dwellings on existing plots was undertaken.

As given in the Table below, at the national level, 90% (710,618) of the houses sanctioned (788,953) were completed and 16.6% of the completed houses were not occupied by 4 July 2018. West Bengal and Gujarat, where more than 100,000 houses were built under BSUP, only 0.48% and 1.7% houses were unoccupied. In Maharashtra, Andhra

Pradesh and Karnataka, 17% to 18% of the houses completed were unoccupied. In Telangana, 26% of the completed houses were unoccupied. In Delhi, over 94% of the 38,824 houses were unoccupied while in Rajasthan and Haryana, around 88% of the completed houses were unoccupied. (MoHUA, 2018)

Table 3 : BSUP State wise Progress as of 4 July 2018

	BSUP projects by State	Physical Progress (Nos of Houses)						
		Sanctioned	Non Starter	Completed	% of sanctioned units completed	Occupied	Unoccupied	% Unoccupied
	India: Total of BSUP for 477 projects including 111 completed projects	788,953	24,282	710,618	90.07	592,730	118,104	16.62
1	West Bengal for 107 projects including 40 completed projects	122,870	68	115,868	94.3	115,316	552	0.48
2	Gujarat for 27 projects including 21 completed projects	111,104	808	110,296	99.27	108,419	1,877	1.7
3	Maharashtra for 53 projects including 4 completed projects	97,147	3,176	82,155	84.57	66,994	15,161	18.45
4	Tamil Nadu for 51 projects including 13 completed projects	89,720	8,381	78,451	87.44	71,585	7,048	8.98
5	Telangana for 17 projects including 5 completed projects	72,390	0	68,168	94.17	50,370	17,798	26.11
6	Delhi for 16 projects	55,424	0	38,824	70.05	2,201	36,623	94.33
7	Andhra Pradesh for 22 projects including 12 completed projects	51,132	3,869	45,583	89.15	37,822	7,761	17.03
8	Uttar Pradesh for 67 projects including 5 completed projects	45,599	0	42,645	93.52	38,285	4,360	10.22
9	Karnataka for 18 projects	27,925	0	27,856	99.75	22,878	4,978	17.87
10	Madhya Pradesh for 21 projects	24,728	12	24,716	99.95	24,202	514	2.08

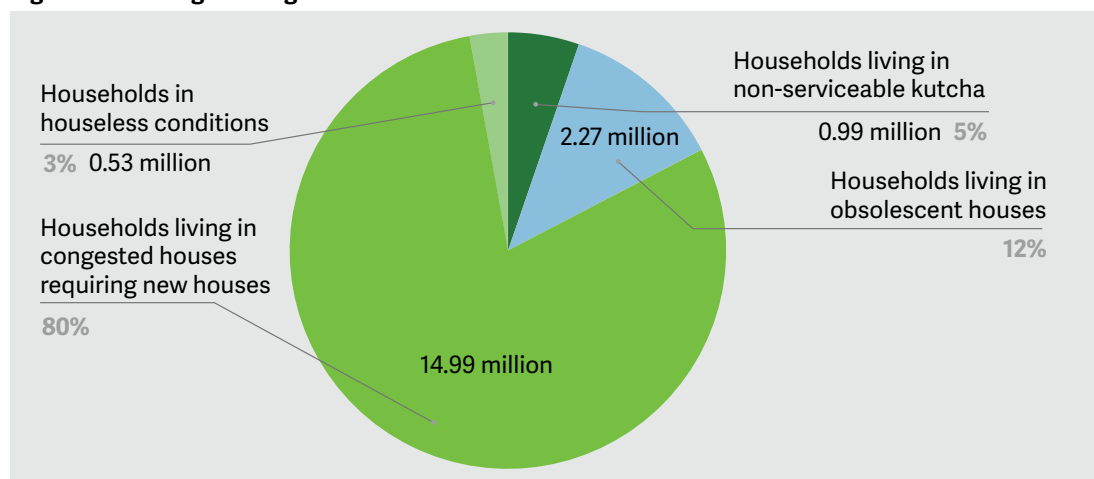
Source: MoHUA, 2018

2.1.1 Housing Shortage and Informal Settlements

In 2012, a Technical Group on Urban Housing Shortage estimated a shortage of 10.55 million units for the Economically Weaker Section (EWS) category and 7.41 million units for the Low-Income Group (LIG) category

(MoHUPA, 2012). Among other factors, the Task-Group considered the number of households living in unacceptable dwelling units and in unacceptable physical and social conditions for this estimation.

Figure 5 : Housing Shortage in Urban India in 2012



Source: MoHUPA, 2012

Figure 6 : Housing Shortage in Urban India in 2012



Source: MoHUPA, 2012

With the formulation of the National Urban Housing & Habitat Policy 2007, the GoI sought to achieve its goal of “Affordable Housing for All”, especially the poor, through various types of public-private partnerships.

For this, the GoI launched the “Pradhan Mantri Awas Yojana—Urban” (PMAY-U) scheme in June 2015. The same year in (October 2015), the GoI launched the Draft

National Urban Rental Housing Policy (NURHP) for creating a vibrant, sustainable and inclusive rental housing market in India. The broad policy objectives of the NURHP were to promote social and market driven rental housing and promote Need Based Rental Housing for specific target groups such as migrant labour, single women, single men, and students who have the ability to pay a limited amount of monthly rent.

2.1.2 Pradhan Mantri Awas Yojana – Urban

With a vision of ‘Housing for All by 2022’, the Pradhan Mantri Awas Yojana – Urban (PMAY-U) addresses the urban housing shortage among the EWS, LIG and MIG categories, including slum dwellers. The aim is to ensure that all eligible urban households have a *pucca* house by 2022 – the year India completes 75 years of Independence. The PMAY-U provides the following verticals for a multi-pronged approach for increasing house ownership:

- In-Situ Slum Rehabilitation (ISSR) vertical aimed to provide housing free of cost to the marginalised by using land as a resource
- Credit-Linked Subsidy Scheme (CLSS) through Interest subvention subsidy for a new house or incremental housing for EWS and LIG
- Affordable Housing in Partnership (AHP) with private sector or public sector, including parastatal agencies, and
- Beneficiary-led individual house construction or enhancement for EWS category households.

Initially, 305 towns and cities in nine states were chosen for implementing the PMAY-U. By January 2021, 4427 cities across 35 States and Union Territories were covered under the scheme.

2.1.3 Affordable Rental Housing

Affordable rental housing has been quite successful in Europe and the U.S. for decades due to their effective rental models. The authors of the paper ‘Decline of Rental Housing in India’ explain how New York has been a prominent rental market through its model protecting both tenant and landlord

In July 2020, following the challenges faced by migrants while returning to their State and villages of origin, the GoI launched a scheme for Affordable Rental Housing Complexes (ARHCs) for urban migrants/poor as a sub-scheme under (PMAY-U). The objective is to increase access of urban migrants and the poor to decent accommodation with all basic amenities at affordable rent near their place of work through Concession Agreements for 25 years. The ARHCs are to be implemented in all Statutory towns, Notified Planning Areas, and areas of Development/ Special Area Development/ Industrial Development Authorities through the following two models:

Model-1: Converting existing schemes of the Central and State Governments, Union Territories, parastatals and private entities with vacant houses into ARHCs through Private and Public agencies as Concessionaire/ Entity.

Model-2: Construction, Operation and Maintenance of ARHCs by Private/ Public Entities on their own vacant land.

The concessionaire will make the complexes liveable by repair/ retrofit and maintenance of rooms and filling up infrastructure gaps.’

(Tandel et.al., 2016). The model provides evidence that a “fixed rent rate lease” model never invites the owner into the rental market as the operational cost grows from time to time. A rental model turns effective when the increasing O&M cost is countered by the continuous increase in rent, without

extending into the housing market inflation. New York City is the perfect example where 68% of the units in the market are rental. A Maximum Base Rent (MBR) has been formed through factors that include “real estate taxes, water and sewerage charges, operating and maintenance costs, return on capital value, and vacancy and collection loss allowances”. MBR helps stabilise the rental market through an upper ceiling for rent and rents below MBR, the lower ceiling is fixed at a growth rate of 7.5% per annum. Thus, the New York rental market evolved with continuous policy reforms to protect the interest of tenants as well as landlords (Tandel et.al., 2016).

Low rental yields especially in the affordable segment have been a major factor, addressed in the draft National Urban Rental Housing Policy - 2015, preventing investment despite the hike in real estate prices. The rental yield in Mumbai has fallen from around 6% during 2006 to around 3.5% in 2009 and 1.5% in 2011 (Draft NURHP, 2015). Moreover, the lack of resources with the local bodies or Municipalities to maintain and operate post-construction becomes quite a challenge. Understanding this critical fact, PPP has been promoted in ARHCs to lessen the burden of land and capital cost of public agencies.

As identified by the Task Group on Shortage of Housing, the highest requirement for affordable housing is amongst the poorest

2.2 Migrants and Their Housing

Several studies of the housing of migrant workers are available, with some of them being studies specifically on migrant construction workers.

A 2017 study of the living conditions of migrants in thirteen Indian cities showed that 43.4% of the migrant households lived

groups that have been finding affordable rental housing in slums to meet their needs. In contrast, because of the policy environment in the country, home ownership accounted for 62% of the total stock, formal rental housing accounted for 5% of the total stock and 25% comprised informal rental housing stock (NSSO, 2012). Although official data related to rental housing in India is likely to be skewed because of the informal and unregulated rental housing, Harish (2016) highlights the fact that while the census reported a decline in the rental housing market, the National Sample Survey Office (NSSO) reported that the share of rentals was maintained at 32-36% in the overall housing market. The NSS data of 2012 also revealed that 71% of the tenants in urban areas had no written contract with their landlords (NSSO, 2012).

Almost 80% of the rented units are supplied by small landlords who operate informally to earn additional income by renting a space that is either an extension to their house or an additional unit. These individual small landlords bridge the housing gap up to some extent (ADB, 2013).

This indicates that policies are required for creating an enabling environment, and schemes are required to support the creation of affordable ownership and rental housing stock.

in non-notified slums, 32.7% lived in notified slums, and 11.7% lived in contractor/ builder provided shelter at worksites or self-erected temporary shelters near worksites (Babu & Yadlapalli, 2017). Hyderabad was the only metro where a majority of migrants lived in huts in squatter settlements while a majority in Bangalore and Delhi lived in

kutcha houses (dwellings made from mud, thatch, straw, plastic or metallic sheets and other low quality materials). Nearly 36% of households in Delhi and 47.6% households in Kolkata lived in semi-*pucca* houses (dwellings that may have walls made of bricks or stone but roof of materials such as metal sheets or thatch etc. 59%

of the migrant households in Mumbai and 21.3% households in Kolkata lived in *pucca* houses (dwellings that are constructed of *pucca* materials such as bricks, stones and concrete). Only a small number of migrant households in eight cities lived in open spaces including footpaths, market space, under the bridges, etc. and other housings.

Table 4 : Type of Houses where Migrants live

City	Squatter hut	<i>Kutcha</i>	Semi <i>pucca</i>	<i>Pucca</i>	Open space	Other	Total
	%						
Bangalore	25.4	48.6	19.2	2.7	1	3	100
Hyderabad	56.5	12.2	24.2	6.8	0.3	0.1	100
Delhi	2.5	40.9	35.9	16.9	3.3	0.4	100
Mumbai	0.6	29	11	59	0.2	0.3	100
Kolkata	2.4	14	47.6	21.3	10	4.7	100
Total	16.3	25.5	30.6	24.9	1.7	0.8	100

Source: Babu, Bontha et.al. 2017

Single room accommodation was found to be the most frequent. Over 94% of migrants in Hyderabad and Delhi, 83% in Kolkata and 61.7% in Bengaluru lived in a single room. The migrants living on site in Delhi were provided basic accommodation while a majority were living in *kutcha* houses or in slums. Even

though the migrants got low-wages and incurred additional expenditure on housing, transportation and essentials, the skilled as well as the unskilled migrants saved money to remit to their families (Shrivastava and Sutradhar, 2016).

Table 5 : Accommodation of Migrants

City	No rooms	1 room	2 rooms	3 rooms	4 or more rooms	Total
	%					
Bangalore	30.3	61.7	7.2	0.7	0.2	100
Hyderabad	0	94.6	4.7	0.6	0.2	100
Delhi	2.8	94.8	2	0.2	0.2	100
Mumbai	59.8	38.8	1.4	0.1	0	100
Kolkata	16.6	83	0.3	0.1	0	100
Total	18.8	71.45	2.89	0.29	0.12	100

Source: Babu, Bontha et.al. 2017

Another study of 2018 of on-site housing of the construction workers in Ahmedabad found that for medium and large-scale projects, RCC and masonry workers are more likely to be accommodated on-site. Further, large contractors are more likely to make decent living arrangements for the workers (Desai & Sanghvi, 2018).

A study of 970 construction workers at labour nakas (780) and construction sites (190) in Ahmedabad in 2009 provides interesting findings regarding the working and living conditions of construction workers (BSC, 2009).

The study found that 31.3% of the total respondents were local labourers, 60.1% were seasonal migrants and 8.6% were long-term migrants. The local labourers comprised workers from Saurashtra and Uttar Pradesh who had migrated to Ahmedabad 25 years and 20 years before respectively. 47% of the migrant workers were from Rajasthan, Maharashtra, Uttar Pradesh, Madhya Pradesh and Bihar. The seasonal migrants from Gujarat were mainly adivasis from the Panchmahal and Dahod districts. About 25% of these workers were skilled or semi-skilled while the rest were unskilled workers. 47% of the seasonal migrants were inter-state migrants from Rajasthan, Maharashtra, Uttar Pradesh,

Madhya Pradesh and Bihar.

The migrant workers from Uttar Pradesh, Madhya Pradesh and Bihar were involved in colour and plaster-of-paris (PoP) related works. 79% of the naka workers get employment for 10-12 days in a month, 76% of them get employment for 13 to 15 days per month and only 11 % get work for 16 to 20 days per month. 56.5% of the workers were involved in masonry, RCC filling and plaster related work, including 27.6% of the women workers who were largely unskilled.

Out of the total respondents of this study from 2009, 56% of the workers lived in chawls, 80% had drinking water, bathroom/ toilet and electricity facilities in their rooms, and 20% who lived in temporary shelters on worksites only had drinking water and electricity available for them. Bathroom and toilet facilities were available for a smaller number of the migrants. 24% of the workers who lived in open areas and footpaths, collected drinking water from neighbouring residential areas and used open grounds for defecation. Some of the workers living in the open had to pay INR.70 per month for using the space.

The findings of another study of 2019 (Saath) on the housing that urban migrants opted for in Ahmedabad, Jaipur and Varanasi are given in the Table below.

Table 6 : Comparison of Housing Typologies identified in 3 Cities

Migrant Trade and Source	Ahmedabad	Jaipur	Varanasi
<ul style="list-style-type: none"> Unskilled Workers, from nearby, rural/ tribal areas, migrating through contractors 	<ul style="list-style-type: none"> Living on construction worksite in labour colonies of 20 to 30 households Shacks made from plastic/ tent type structures Semi pucca houses found in 1 location 	<ul style="list-style-type: none"> Living on construction worksite in labour colonies of approximately 20-30 households Shacks/ tent type structure made from plastics 	<ul style="list-style-type: none"> Living on construction worksite in labour colonies Smaller colonies than Jaipur/ Ahmedabad approximately 10 households Shacks made from plastic/ tent type structures

Migrant Trade and Source	Ahmedabad	Jaipur	Varanasi
<ul style="list-style-type: none"> Unskilled workers, from nearby tribal, rural areas, migrating without contractors' connections 	<ul style="list-style-type: none"> Temporary shacks in open spaces and roadsides - homeless families) near labour nakas 1 room rental housing in informal areas 	<ul style="list-style-type: none"> Open spaces, roadsides (also included non-migrant urban homeless families) near labour nakas 1 room Rental Housing in informal areas 	<ul style="list-style-type: none"> 1 room rental housing in informal areas and urban villages Homeless hotspots but in closed commercial complexes, other buildings, near labour nakas
<ul style="list-style-type: none"> Skilled workers, informally or self employed 	<ul style="list-style-type: none"> 1 room rental housing in informal areas 	<ul style="list-style-type: none"> 1 room rental housing in informal areas 	<ul style="list-style-type: none"> 1 room rental housing in informal areas and urban villages
<ul style="list-style-type: none"> Long-term migrants-skilled workers, formally employed workers 	<ul style="list-style-type: none"> 1 room rental housing in informal areas Informally owned houses and shacks in informal neighbourhoods 	<ul style="list-style-type: none"> 1 room rental housing in informal areas Informally owned houses and shacks in informal neighbourhoods 	<ul style="list-style-type: none"> 1 room rental housing in informal areas and urban villages Informally owned houses and shacks in informal neighbourhoods

Source: Saath, 2021.

A survey of 37,484 households in informal settlements in Ahmedabad found that on average, 20% households were living on rent, which ranged from a high of INR 4100 to INR 2100. The average rent in informal settlements was INR 2,575 (Saath, 2021).

Another study of 2009 on the housing of 224 migrant naka workers in Ahmedabad identified the nature of the rental housing they opt for as well as the preferred housing

options of the short and long-term migrants (Desai, 2020). 79% of the respondents were from the eastern tribal belt of Gujarat, southern Rajasthan and western Madhya Pradesh. 31% of the had been migrating to the city for 5 years or less, 23% for 6 to 10 years, 16% for 11-15 years; 15% for 16-20 years; and 15% for more than 20 years. The shelter related findings from this study are given in the Table below.

Table 7 : Type of Shelter

Type of Shelter	% of Total	Occupants	
		Single Male Migrants	Family Migrants
Semi-pucca shelters	32%	45%	25%
Kutcha shelters	32%	12%	43%
Pucca shelters	17%	14%	18%
No shelter – belongings put together in a bundle (potla) every morning before going to work.	19%	NA	

Source: BSC, 2009.

According to this study, the four main housing typologies where migrant naka

workers live in Ahmedabad are given in the Table below.

Table 8 : Type of Settlement

	Settlement Type	% of total	Type of Shelter	%
1	Squatters on government and private lands, including those who squat on narrow strips of railway land.	18%	Kutcha shelters	85%
			No shelter – belongings in a potla	15%
2	Squatters in public spaces such as under flyovers, on roadsides and footpaths, and on shop verandas	14%	No shelter – belongings in a potla	90%
			Kutcha shelters	10%

	Settlement Type	% of total	Type of Shelter	%
3	Rental rooms/ units (@ rent of INR 1000-3000 per month) in: <ul style="list-style-type: none"> • Chawls • Landlord's house in a formal or semi-formal housing society, • Farmlands on city periphery, • Flats in public housing, • Flats in private housing. 	48%	<i>Kutch</i> a shelters	7%
			Semi- <i>pucca</i> shelters.	63%
			<i>Pucca</i> shelters	30%
4	Rental spots on lands and building rooftops such as: <ul style="list-style-type: none"> • landowner/ occupier allows a tenant to live in the open or build a <i>kutch</i>a shelter on a plot of land; and • Rooftop of a commercial building or warehouse where rent is charged per family and per adult. The tenants generally live in the open or in a <i>kutch</i>a shelter. 	12%	<i>Kutch</i> a shelters	73%
			No shelter – belongings in a <i>potla</i>	7%

Rents paid per month for the land/ rooftop	
Up to INR 500	58%
INR 501-1000	23%
INR 1001-1500	15%

Source: BSC, 2009

89% of the single male migrants living in rental rooms were sharing a room with 2-6 other male migrants of whom 50% were paying a monthly rent of up to INR 500 and 40% were paying INR 500-1000. Only about 8% of the single male migrants were paying more than INR 1000 per month.

Irrespective of the quality of housing provided, the contractors faced a challenge in providing water and sanitation facilities. Water was provided from on-site bore-wells and tankers for general use, and filtered water was provided for drinking and cooking. The shared toilets built for on-site workers required emptying of soak-pits or illegal connections to municipal sewers.

Mukta Naik, in her paper on informal rental housing typologies and experiences of

low-income migrant renters in Gurgaon identified four typologies of rental accommodation, namely the *jhuggis/ slums* - semi permanent single floor tenements, semi-*pucca* single floor tenements, the *pucca* rooms with shared or separate toilets, and *pucca* tenements in multi-storied buildings constructed by the contractors of a building site (Naik, 2015). Naik's research showed that informal rental housing offers advantages of affordability, flexibility and proximity to livelihoods for migrants. The study also revealed that social networks and household migration strategies strongly influence housing choices in the informal rentals market.

The situation is very different in Mumbai due to the attempts of formalisation. The Rent Control Act highlights how the act meant

to protect the tenants led to pre-existing rental costs for old rental units staying below the market rate and driving away a segment of suppliers that provide smaller rental units in the city. In addition to this, the incentives to renew and restore the existing housing stocks are not sufficient for private developers and investors alike. This situation informs that there is a need to formulate a mechanism to improve the existing housing inventory; making it fit for habitation and garnering investments to enhance the rental appeal. Ease of access to suitable rental/transitory accommodation excluded the marginalised workers from the rental model in the State and forced them into slums, which is the only feasible option for them to inhabit (Tandel, Patel, Gandhi, Pethe, & Agarwal, 2016).

The skewed levels of housing supply in the rental market disrupts the formalisation of the existing stock and also leaves little space for dedicated formal housing investment. Mahadevia, Zhiang and Liu in their paper-based on rental housing of India and China, elaborated on how shelter in the Indian context means incremental housing where the low-income tenants move from rented accommodation or squatting on public land to getting her/ his name on the voter list and then being eligible for house ownership under different schemes (Mahadevia, Yuan, & Liu, 2012). This is evident in the ownership of houses under the PMAY where voter identity cards are a very important document to prove eligibility.

Prevalence of such restrictive conditions where the rental acts do not protect the shelters for urban poor and force them into living in sub-optimal conditions (such as slums) demand for a strengthened system, which would not leave migrants tethered during a crisis. Looking at the

emerging needs of accommodation with urbanisation, Maharashtra on multiple occasions tried to adopt models under Rental schemes through the involvement of private sectors but met with no success. Swastik Harish in his paper explained the causes of failures of the model under Rental Housing Scheme (2008-2013) by Mumbai Metropolitan Region Development Authority meant for low-income labourers despite the incentives, including higher FSI, cross-subsidized free sale land, commercial spaces, and the incentive of Transferable Development Rights (TDR). The scheme was not able to take-off as the desired density of rental units was not feasible (Harish, 2016). This highlighted the general notion of overcrowding on rental sites for informal workers to compensate for the gaps in yields and subsequently devolve the rental models.

The above studies show that:

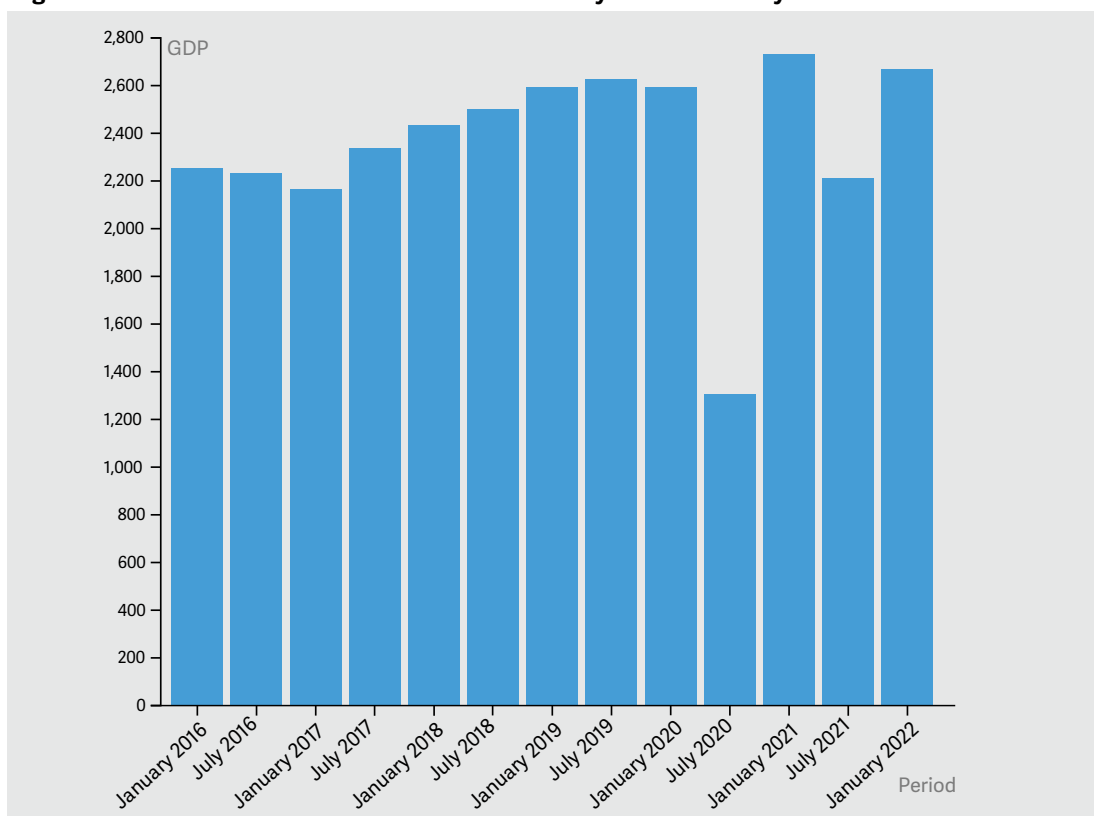
1. Housing targets under Government schemes are rarely met.
2. In Government schemes such as BSUP, where 70 to 90% of the sanctioned houses were completed, on average over 16% of the houses were vacant.
3. Informal rental accommodation in slums provides an affordable housing option for migrants and the poor.
4. In 2009 in Ahmedabad, the rents of units in chawls, semi-formal housing, and flats in public and private housing schemes ranged between INR 1000-3000 per month.
5. The rental models in Europe and the U.S. have been effective. In New York City where 68% of the units in the market are rental, the MBR helps stabilise the rental market through an upper ceiling for rent and rents below MBR, with the lower ceiling fixed at a growth rate of 7.5% per annum.

3 Looking for Solutions for Affordable Rental Housing

Considering the observations regarding the challenges that migrants faced due to the COVID-19 related lockdown, rental housing was identified as an effective solution for addressing their housing needs. Following the launch of the ARHC Scheme in July 2020 to provide viable affordable rental housing units to the urban poor through its different models, the Anant Centre for Sustainability of Anant National University, in collaboration with the Habitat for Humanity’s Terwilliger

Center for Innovation in Shelter (TCIS) investigated the rental housing landscape in India, specifically concentrating on the construction sector. At present, the construction sector accounts for 7.6% of Indian GDP (MoSPI, 2021). It accounts for 21% of all non-agricultural jobs in the country. Importantly, the construction sector employs the largest casual labour workforce - around 84% of those working in construction are casual labour (Lewis, 2021).

Figure 7 : Value of construction to India’s GDP: January 2016 to January 2022



Source: Statista, 2022

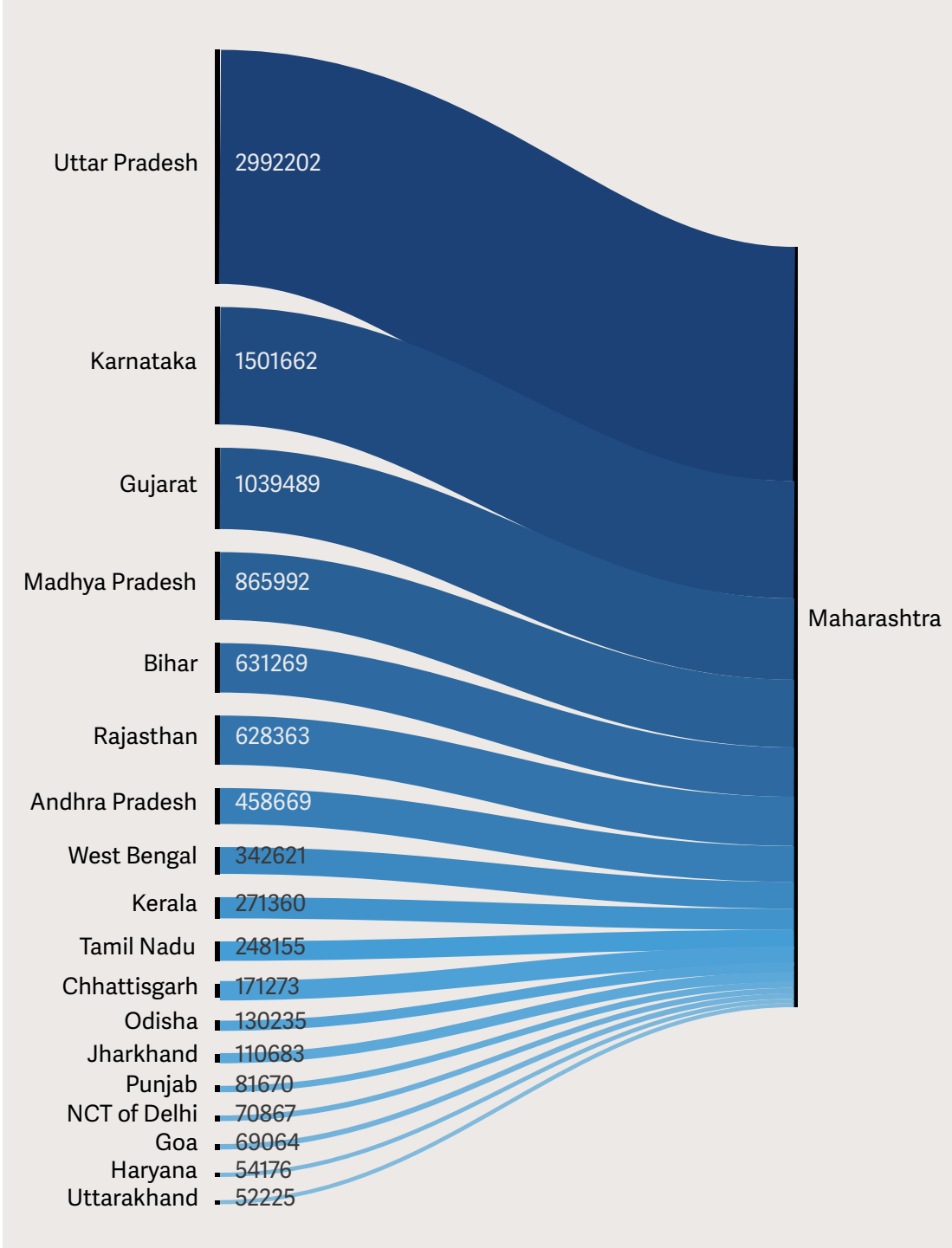
As is evident from Figure 6, the construction sector was one of the worst-hit sectors during the pandemic, and is also one of the key sectors in which India’s migrant

workforce find employment. The NSSO (2016-17) puts the number of construction workers in the country at over 74 million.

Specifically, a decision was made to study the housing conditions of the migrant construction workers in Maharashtra. As per MOSPI 2017-18, Maharashtra is the largest contributor to India's GDP (\$336 billion),

accounting for 13% of the total national GDP. The state reported the largest migrant population at 57,376,776 or 13% of the total migrant population identified in the Census of 2011.

Figure 8 : Maharashtra: Share of Migrant Population by State



Source: Census, 2011

3.1 Research Design

The research study is designed to understand the housing needs, housing choices, affordability, and habitat related challenges of migrant construction workers, by surveying respondents both in locations that source migrants (10 districts in Odisha, Bihar and Uttar Pradesh) as well as locations

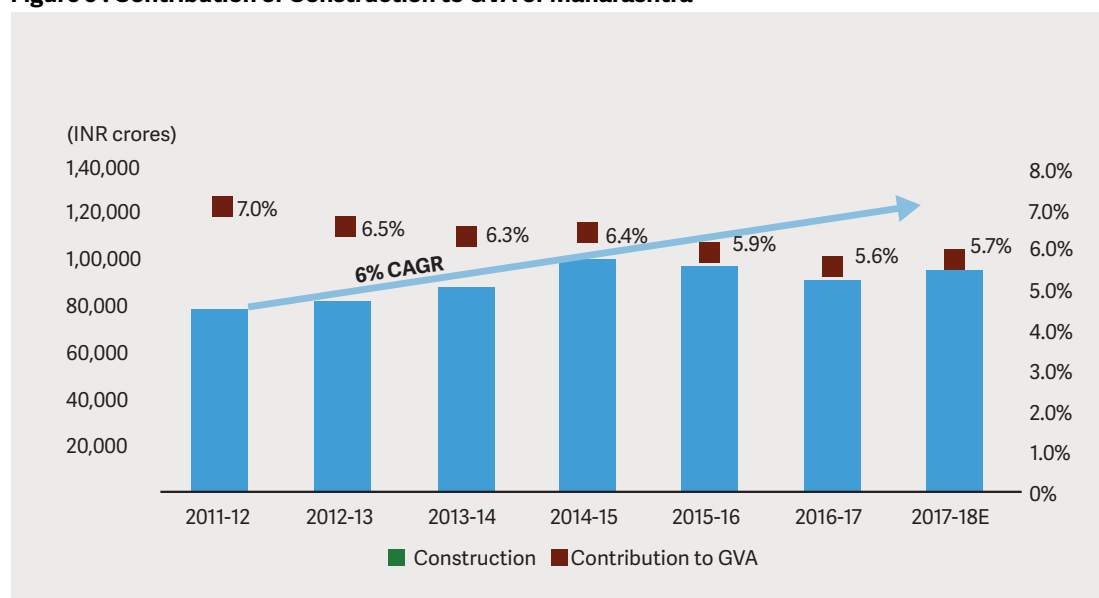
that host migrants (Mumbai, Navi Mumbai, Panvel, Vasai, Pune and Pimpri-Chinchwad), in order to then propose appropriate business models for creating affordable rental housing solutions, both on-site and off-site.

3.1.1 Project Aim

To propose to the Government of India (GoI), ways to implement the Affordable Rental Housing Complex scheme (ARHC scheme) effectively based on a robust survey on migrant workers in the construction industry in Maharashtra. The decision on taking Maharashtra as the study area was based on the fact that the construction and real estate sector is a key contributor to Maharashtra's GSDP accounting for nearly 25% Gross value additions. Construction

sector contributed nearly INR 1090 billion to Maharashtra's GSDP during the year 2016-17, clocking a CAGR of ~6% from INR 806 billion in 2011-12. The rapid development of real estate, the expansion of roads and highways in the city and the upgrading of the Mumbai airport have been the key contributors to the sector during the period. The sector contributes between 5-7% of the overall GVA of Maharashtra.

Figure 9 : Contribution of Construction to GVA of Maharashtra



Source: FICCI-ANAROCK, 2018.

3.1.2 Scope of Work

The scope of the present study includes the following:

- Conduct secondary research on migrant workers in the construction industry.
- Design a research framework and conduct questionnaire-based primary research in the migrants' origin states of Odisha, Bihar and Uttar Pradesh that have the

maximum number of out-migrants, as well as in host cities of Mumbai, Navi Mumbai, Panvel, Vasai, Pune and Pimpri-Chinchwad in Maharashtra. The primary research would include key informant interviews and stakeholder discussions to better comprehend the situation.

- Develop an overall understanding of the housing challenges of respondents and

map those challenges with reference to the 24 March to 31 May 2020 lockdown period in India which resulted in complete shutdown of India's construction sector.

- Make recommendations for shelter solutions for rental accommodation for migrant construction workers and the poor.

3.1.3 Objectives

The objective of the study is to identify the key migration triggers, key facilitators and the various accommodation options

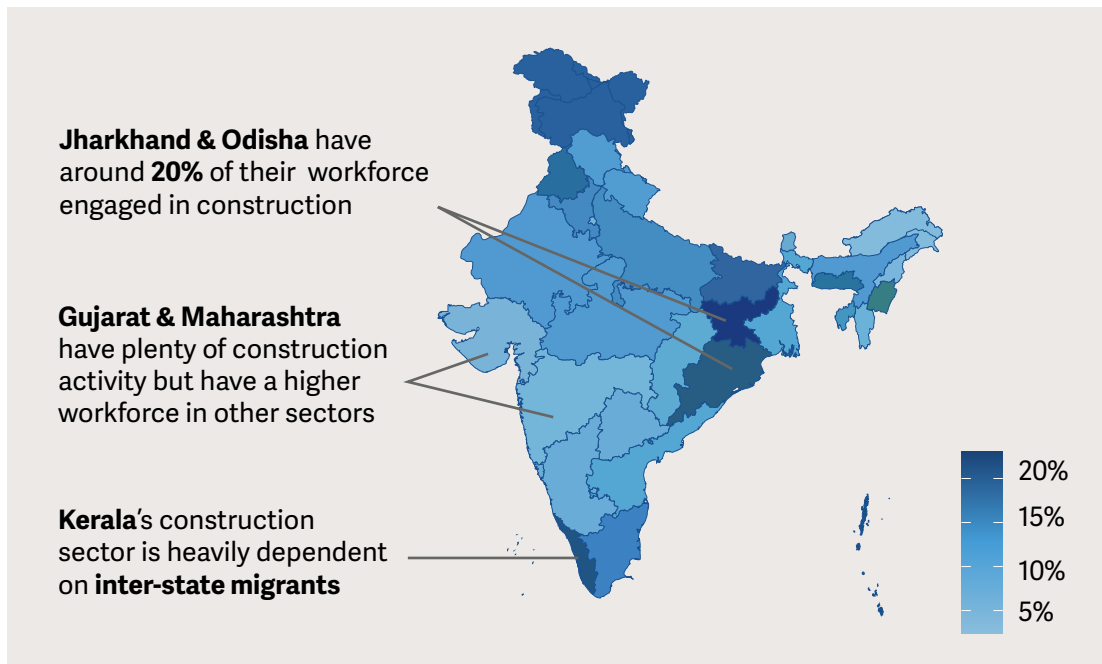
available to migrants upon arrival in the host cities of Maharashtra.

3.2 Research Methodology

Secondary research has indicated large workforce participation in the states of

Jharkhand (22%), Odisha (20%), Kerala (20%), Bihar (17%) and Jammu and Kashmir (16%).

Figure 10 : States with Workforce Share in the Construction Sector



Source: Lewis, Viola, 2021

While considering the case of Maharashtra, secondary data-based analysis indicated the presence of a considerable number of migrants from Uttar Pradesh, Bihar and Odisha. Therefore, it was decided to conduct

the survey of selected migrants at the place of origin, namely Odisha, Bihar and Uttar Pradesh, as well as the destination, specifically in Maharashtra.

2 sets of detailed survey questionnaires were then constructed:

One, in 'places of origin', for construction migrants living in Odisha, Bihar and Uttar Pradesh, who had once migrated out from these states but had now returned back home.

Two, in 'host cities', for construction migrants living in Mumbai, Navi Mumbai, Panvel, Vasai, Pune and Pimpri-Chinchwad.

Both sets of questionnaires were based on the following research questions for the study:

- How do the respondents go to the cities for the first time?
- What accommodation do they look for and whom do they share it with?

- What are the challenges they face in the context of their housing?
- Was housing a factor in their decision to go back to the villages after the COVID-19 related lockdown was announced?
- What housing would be ideal for them in the city?

Subsequently, the following steps were taken:

1. Survey in places of migrant origin, to identify the triggers for the constructions workers' move to the cities;
2. A pilot survey in a host city to test the questionnaire, train the surveyors and identify contextual issues to be included in the final questionnaire, and
3. Surveys in host cities.

3.2.1 Study in Places of Migrant Origins

The methodology for a survey in the 3 states of Bihar, Uttar Pradesh and Odisha was to survey a minimum of 50-60 usable interviews in at least 2 villages per district. Due to the COVID-19 related restrictions and risks for travelling to distant locations, a decision was made to identify the interviewees through

local facilitators and conduct the study through telephonic interviews. The local facilitators, each of whom was to identify 20 interviewees, were identified through social media campaigns. The local facilitators were to identify the respondents to be interviewed in the selected districts.

Table 9 : Selecting Migrant Source Districts

	Bihar	Odisha	Uttar Pradesh
Total population	104,099,452	41,974,218	199,812,341
Total districts	38	30	75
Ratio of Districts	1	1	2.5 (3)
2021 Lok Sabha data on migrants who returned to home states during 2020 pandemic crisis	1,500,612	853,777	3,249,638
Ratio of returned migrants	1.8	1	3.8
Proportion for districts to be considered for survey	2	1	3
Districts with highest male out-migration as per census data	Madhubani	Kalahandi	Gonda
	Darbhanga	Kendrapada	Basti
	Siwan	Khorda	Gorakhpur
District selected from each State for the Pilot	1 (Madhubani)	1 (Kalahandi)	1 (Gonda)
Number of respondents (actual)	30	20	20

We observed that the field agents were unable to identify even 20% construction workers in the villages of the districts. Our investigation of September 2021 of the issue as well as the key findings from the survey of

70 respondents across 3 districts indicated that many of the migrants had returned to previous host cities or to nearby towns and cities.

Key findings from source districts of Odisha, Bihar and Uttar Pradesh

The most popular destinations of construction workers from the study districts are Bangalore, Mumbai and Delhi.

- 74% of the respondents went to the city when 'recruited'/ invited by labour contractors. Consequently, they lived in or rented formal houses that the contractors identified.
- Some respondents do not prefer to stay in a rented accommodation because of the high deposit/ pagdi that has to be paid at the time of renting the accommodation. Further, it is a challenge for bachelors/ single men to get formal accommodation in the city. Therefore, the workers in the source locations agree to go to the cities for work only if the contractor arranges for the accommodation.
- 11% found the accommodation through people from their village while 9% found it on their own.
- 37% of the respondents stated that they lived in large rooms that they shared with 5 persons.
- The preferred monthly rent for a room that they would like to stay is INR 2001 to 3000.
- The minimum monthly income amongst the respondents was INR 12,000 while the maximum was INR 25,000.
- According to a railway contractor, labour contractors generally provide accommodation to their labourers in areas near the work sites. In his case, these are either railway apartments or other accommodation in nearby areas. The room rent for the workers is recovered through deductions from their monthly pay. The workers are placed at different locations depending on the work availability at different sites.
- Another contractor stated that workers generally go from the village in a group and stay on construction sites. This is because the contractors do not always provide accommodation.
- Some respondents stated that due to the COVID-19 pandemic, they are not ready to go to distant locations for work. They prefer to work in the village itself or in nearby urban areas where they may earn a little less but from where they can return home more easily.
- The construction workers mostly prefer to stay on construction sites, or else together with their co-workers in nearby areas in low-rental accommodation.

COVID-19 Lockdown Implications

During the first lockdown, some of the respondents did not leave the city and faced a difficult time since they could not get any

work and they had no income. However, when the second lockdown was declared, the workers did not go back to the village

because they were getting 3 meals a day from political parties or ration from local police stations or help from neighbours. In addition, the construction workers managed to get work on construction sites.

- Some respondents in Bangalore continued to earn their regular income because they were working 'quietly' on construction sites during the lockdown.
- Some contractors provided financial assistance to their construction workers during the lockdown, and subsequently adjusted that amount against work after the lockdown.
- Some respondents who had migrated to the city through a contractor observed that although work availability slowed down after the lockdown in 2020, their contractor made some adjustments and is continuing to provide them with work.
- Few respondents stated that the owners of the houses they lived in, excused them

from paying rent of 2 months since they already have a deposit in the form of a pagadi.

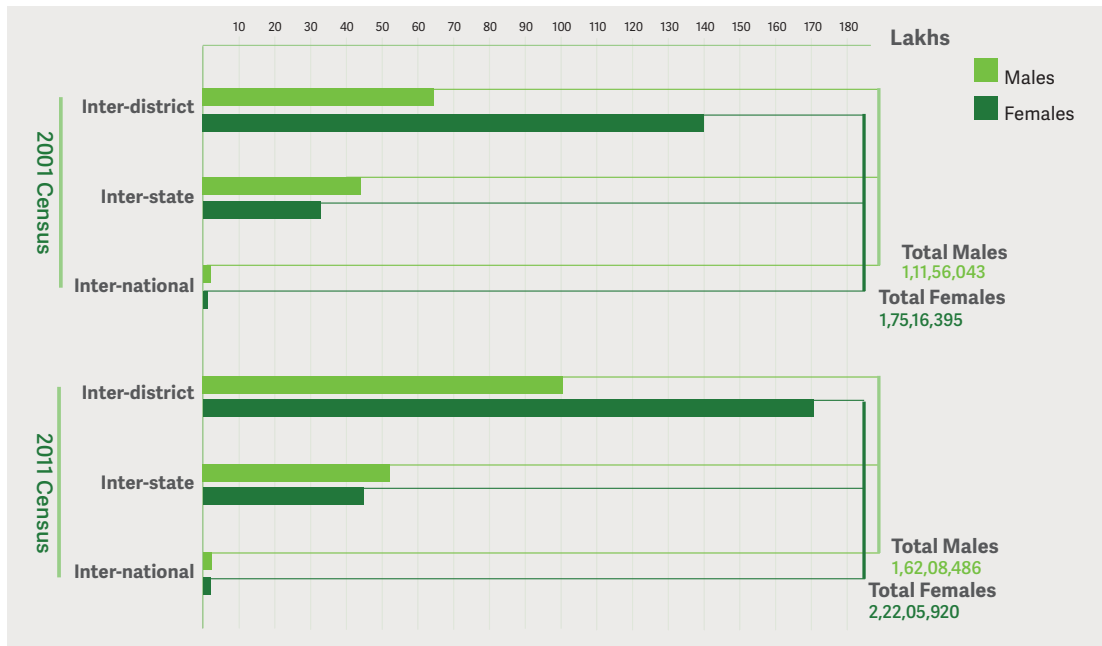
- Overall, the first lockdown caught the respondents and their employers unaware as it did the rest of the people in India. Thus, the respondents went through a hard time in coping with the 'shock' of changed conditions, however, most of the respondents returned to their States in trains.. By the second lockdown, both the respondents and their employers were better prepared to manage the situation. The state machinery, NGOs and in some cases 'good Samaritans', too facilitated the respondents through access to food and other basic living provisions.
- This research in the places of origin contributed to refinement of the questionnaire for the destination areas, especially in terms of queries regarding whom the migrants came to the city with and how they found their accommodation.

3.2.2 Pilot Study in a host city in Maharashtra

Following the pilot in source Districts of Odisha, Bihar and Uttar Pradesh, the ACfS and TCIS decided to initiate the primary research in Maharashtra. With Greater Mumbai and Pune being the two most populous cities of the State, and contributing the highest share of construction activity (FICCI-ANAROCK, 2018), Mumbai, Navi Mumbai, Panvel, Vasai, Pune and Pimpri-Chinchwad were selected as the research cities.

Pune being the eighth largest metropolitan economy and the sixth -largest per capita income in India (Census of India. Pune City Population Census 2011–2021: Maharashtra), Pune district ranks second in Maharashtra's migration destinations. Most of the migrants in the Pune Metropolitan Region, which comprises of the Pune Municipal Corporation (PMC) and Pimpri-Chinchwad Municipal Corporation (PCMC) and their peri-urban areas, come from within Maharashtra (>80%) and many (>40%) from within the same district.

Figure 11 : Migrants in Maharashtra: 2001 & 2011

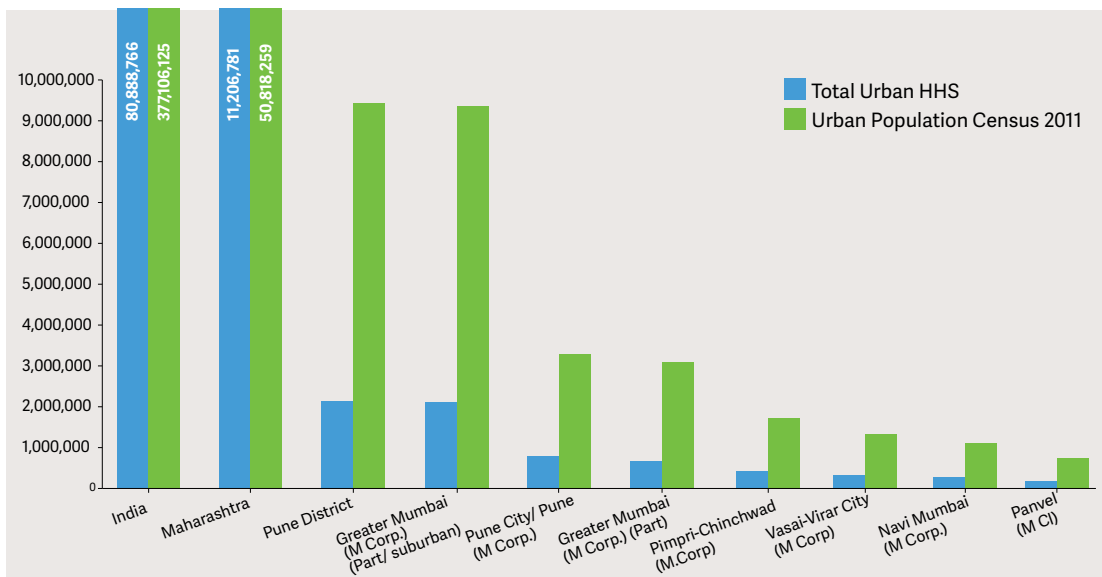


Source: Maharashtra State Census: 2001 & 2011

The Census data for 2001 and 2011 shows the maximum migrants were from within the district, while the inter-State migrants were lesser compared to the inter-district migrants. In the 2001 census, the percentage of inter-district migration was 72.25 percent, inter-state was 27.05% of total migrants, while in the 2011 census, they were 73.87% and 25.53% respectively. The number of migrants has increased in all sectors of migration from the 2001 to 2011 census, but the percentage

of inter-district migration has increased while the other two have decreased. The share of females in inter-state and international sectors of migration is less, that is, 45.93% and 47.93% compared to males. It is because mainly the males migrate in search of jobs, services or better education. Female migrants are dominant in inter-district migration with 61.98% share generally owing to their marriage with the person of neighbouring districts.

Figure 12 : Demography of Study Area



3.3 Research in Mumbai, Navi-Mumbai, Panvel, Vasai, Pune & Pimpri-Chinchwad

Based on the research in the place of origin, the the ACfS decided to survey a minimum of 500 respondents in collaboration with YUVA Urban Initiatives (YUI) and its partner organisations’ network in Mumbai, Navi Mumbai, Panvel, and Vasai (henceforth referred to as MNM-PV)

Here too, the methodology was to conduct

the research in two phases, namely a pilot survey of 60 to 70 migrant workers followed by the main survey covering 440 to 430 more workers. The objective of the pilot was to finalise methodology for identifying the sample locations and the respondents to cover the following criteria:

Table 10 : Sample selection for Pilot in Mumbai, Navi Mumbai, Panvel and Vasai (MNM-PV)

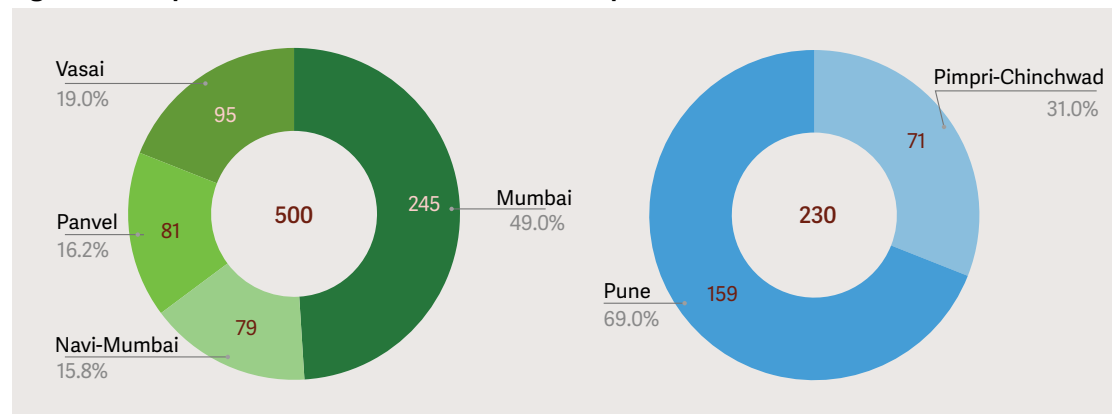
Pilot	15 to 20 interviews each in Mumbai, Navi Mumbai, Panvel and Vasai			
Main	430 interviews			
Places of origin	Uttar Pradesh, Bihar, Odisha and other places Since a large number of construction related workers in MNM-PV are from within Maharashtra, to include 10 to 15% respondents from Maharashtra.			
Who	Workers (men) in construction and related trades. If there are women, they should be independent of the respondents and not helpers of the spouse. The maximum number of such workers should be 2.			
Skill levels	Unskilled	Semi-skilled	Skilled	other
Work types	Casual	Regularly employed for less than a year on projects/ jobs taken by contractors etc.	Regularly employed for more than a year on projects/ jobs taken by contractors etc.	

The survey of the respondents in the Municipal Corporations of Mumbai, Navi-Mumbai, Panvel and Vasai was undertaken from November – December 2021. 49% of the sample was from Mumbai, 16% from Navi Mumbai and Panvel, and 19% was from Vasai. The survey of respondents in Pune and Pimpri-Chinchwad was undertaken

from January-February 2022. 69% of the sample was from Pune and 31% from Pimpri-Chinchwad.

Similarly, for the main survey, the number of respondents for each city were proportionate to the population as given in the Figure below:

Figure 13 : Sample selection for MNM-PV, Pune and Pimpri-Chinchwad

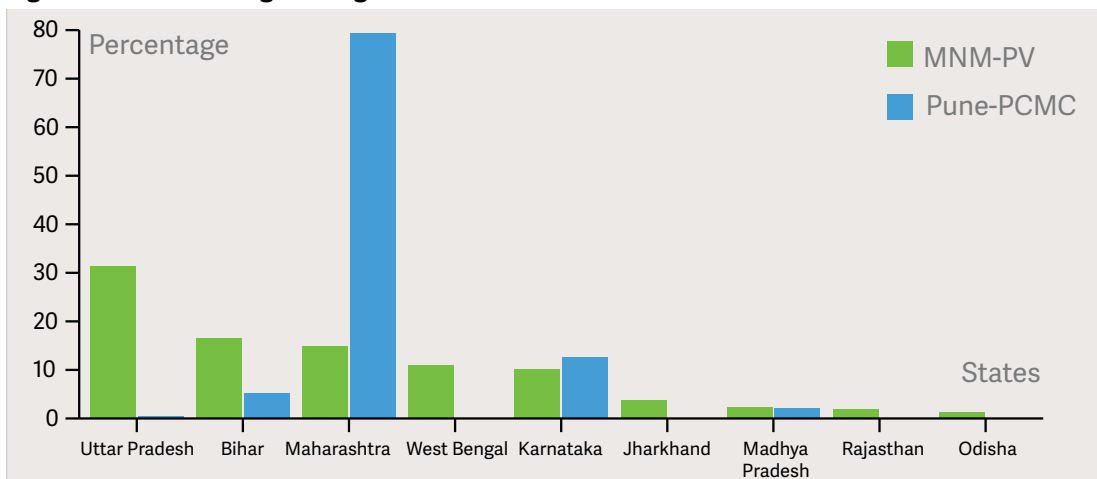


3.4 Research Findings

With the objective of getting an understanding of the housing options of construction workers in different locations in

the MNM-PV and Pune-PCMC, the findings are presented below.

Figure 14 : Places of Origin of Migrant Construction Workers



Source: Primary Survey conducted by the Anant Centre for Sustainability

The highest number of migrants in the MNM-PV sample areas are from Uttar Pradesh followed by Bihar, that is, the same as per Census 2011. In MNM-PV as well as Pune-PCMC, the fifth highest number of

migrants were from Karnataka. In Pune-PCMC, the highest percentage of the sample respondents are from within Pune District and 20.52% are inter-state migrants, which again is representative of the Census 2011.

Duration of Migration

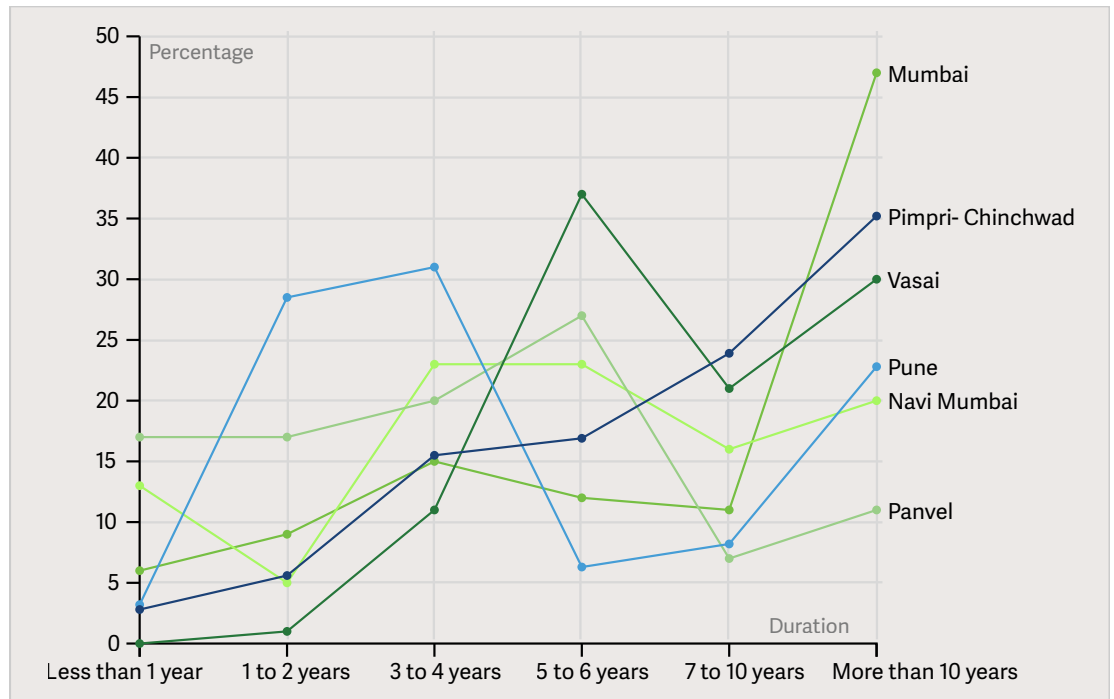
Over 40% of the respondents in MNM-PV have been living in the city for between 3 to 6 years and 34% for over 10 years. In Pune-PCMC, 50% of the respondents have been living there for between 1 to 4 years and 27% have been living there for over 10 years.

not to pay higher rents. In fact, they may move to houses with minimum rents within the same slum, chawl or and public space. 34% of the respondents in MNM-PV have been living and working in the same place for the past 5 to 10 years and 32% have been doing so for up to 4 years.

34% of the respondents in MNM-PV have been living in the same location and working in the same city for more than 10 years. Anecdotal evidence from Mumbai suggests that the reasons for not shifting to a different location is that on the one hand, the respondents cannot afford to or chose

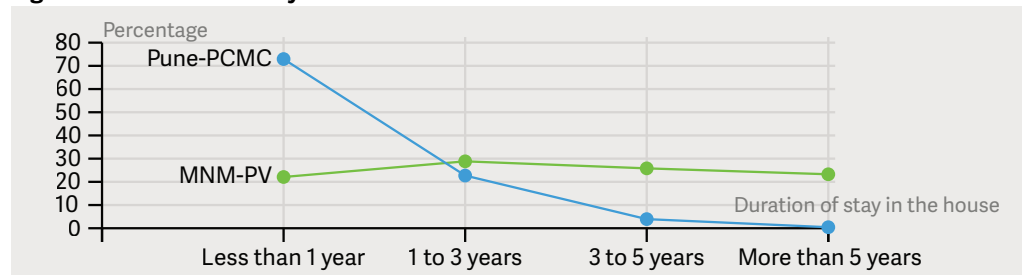
Whereas in Pune-PCMC, 50% of the respondents migrated between 0-4 years of time duration, 23% of them migrated between the last 5-10 years and 27% of respondents migrated more than 10 years ago. In Pune, the percentage of short term migrants is more.

Figure 15 : Duration of Stay in the City



Source: Primary Survey conducted by the Anant Centre for Sustainability

Figure 16 : Duration of stay in the house



Source: Primary Survey conducted by the Anant Centre for Sustainability

However, in MNM-PV, of the 86% respondents who answered the query on how long they had been living in their current accommodation, 22% had been living in the place for less than 1 year, over 28% had been living in their current home for 1 to 3 years,

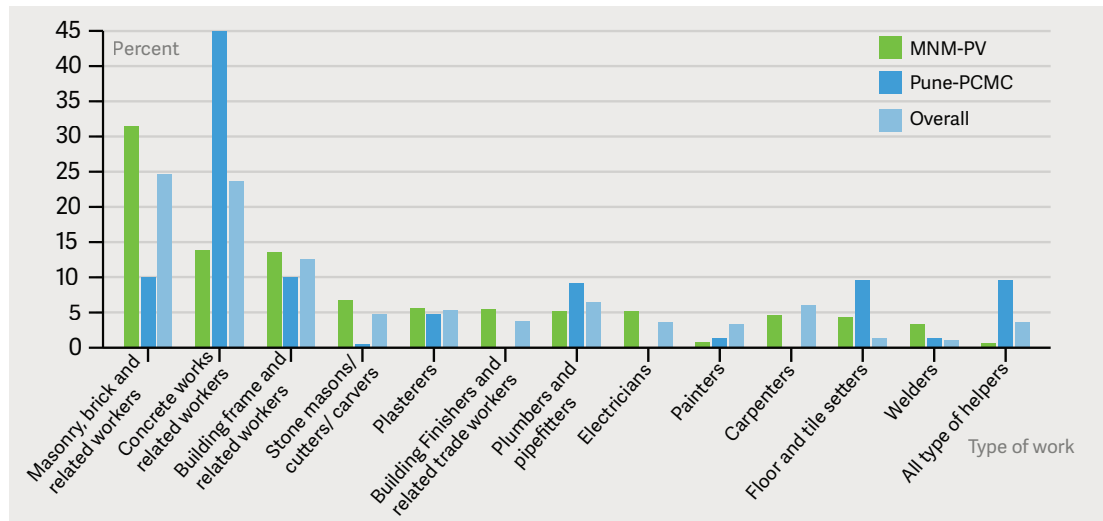
and about 26% stated that they had been living in the same place for 4 to 5 years. In Pune-PCMC, 73% of the respondents stated that they had been living in the current house for less than 1 year and 22.71% had been living in the same house for 1 to 3 years.

Types of Construction Work

In terms of types of work while the sample included construction workers across different trades, the highest percentage in MNM-PV were workers involved in masonry and bricks related work while in Pune-PCMC, the highest number of workers were working in concrete related trades.

Overall, 24.7% of the respondents are masonry, bricks and related workers, 23.6% are concrete related workers, 12.5% work on building frames, 4.8% are stones masons/cutters/carvers, 5.3% are plasterers and 3.7% are building finisher and related trade workers, 6.4% are plumbers and pipefitters, 6% are carpenters, nearly 3% are painters. Nearly 1% are floor and tile setters and welders.

Figure 17 : Work that the Migrants are involved in



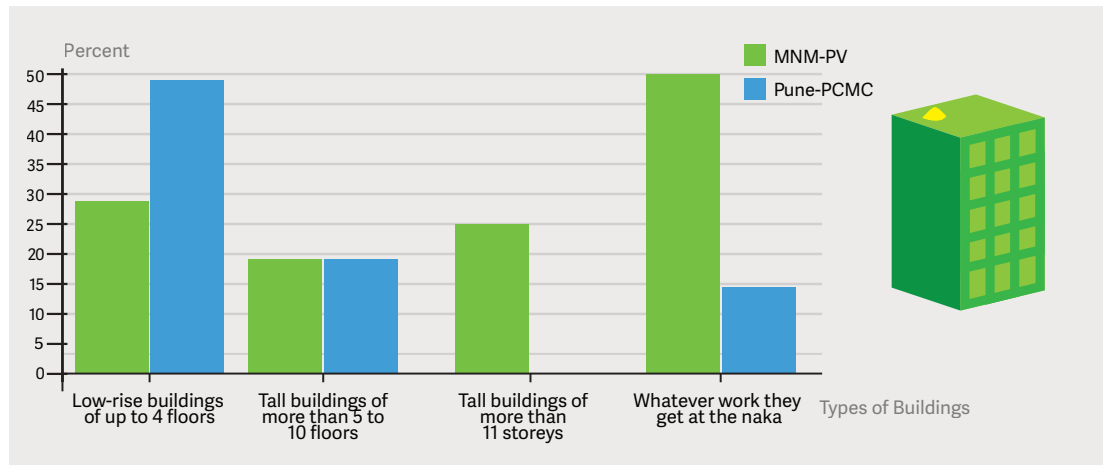
Source: Primary Survey conducted by the Anant Centre for Sustainability

Types of Buildings Migrants Work On

50% of the respondents in MNM-PV were independent workers who looked for work at the labour-nakas and took up whatever work they got. Prior to the COVID-19 lockdowns, many of these workers travel a long distance for their work everyday but due to the pandemic restrictions they were opting to take-up work close to where they stayed.

In MNM-PV, 28% respondents work on low-rise buildings of up to 4 floors, 25% work on buildings of more than 11 stories, 19% worked in buildings of up to 4 floors, 19% in buildings of more than 5 to 10 floors and 14% take up whatever work they get at the nakas. Whereas in Pune-PCMC, 47% of respondents work on low-rise buildings up to 4 floors, 19% work on tall buildings more than 5 to 10 floors and 14% work on as *naka* workers.

Figure 18 : Types of Buildings Migrants Work On



Source: Primary Survey conducted by the Anant Centre for Sustainability

Table 11 : Trades of Migrant Construction Workers by State

Trade	Percentage of Migrants						
	Maharashtra	Uttar Pradesh	Karnataka	Bihar	West Bengal	Jharkhand	Madhya Pradesh
Masonry, brick and related workers	27.2	21.7	17.2	7.8	6.7		
Concrete works related workers	47.1	9.3	14.5	15.1	5.2		
Building frame and related workers	33	15.4		18.7	15.4	6.6	
Stone masons/ cutters/ carvers	8.6	34.3	22.9	20			8.6
Plasterers	14.3	32.1		10.7	28.6		
Building Finishers and related trade workers	22.2	33.3		37			
Plumbers and pipefitters	34.6	34.6		7.7	7.7	7.7	
Electricians	11.5	46.2			15.4	11.5	7.7
Painting	12.5	62.5	12.5	12.5			
Carpenters		82.6		8.7			
Floor and tile setters	36.4	20.5	6.8	18.2	9.1		
Painters, Welders	9.1	54.5	9.1	27.3			
All type of helpers	70.6	11.8	8.8				

Source: Primary Survey conducted by the Anant Centre for Sustainability

Majority of the migrant workers were from within the state of Maharashtra followed by Uttar Pradesh, West Bengal, Karnataka, Bihar and Jharkhand. As is evident from Table 13, the majority of intra-state migrants

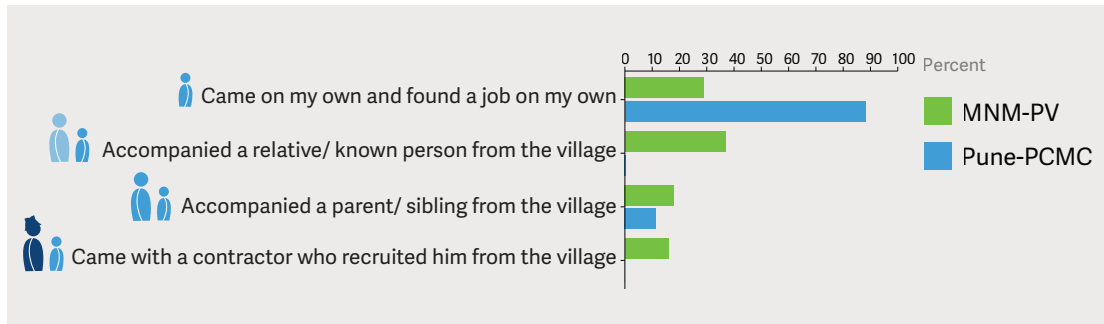
were involved in civil works. Migrants from Uttar Pradesh were more involved in stone masonry, plastering, painting, carpentry and electrical works. Majority of helpers (unskilled workers) were from Maharashtra.

How did the Migrants come to the City?

Data in MNM-PV revealed that 37% of respondents accompanied by a relative/ known person from their village followed by 29% of respondents came on their own and found a job on their own, 18% of respondents accompanied by their parents/ siblings from the village and 16% of respondents came

with contractor who came to their village and asked for construction workers. Whereas in Pune 88.2% of respondents came on their own and found a job on their own and other 11.4% were accompanied by their parents/ siblings.

Figure 19 : Whom did the Migrant Come to the City With?



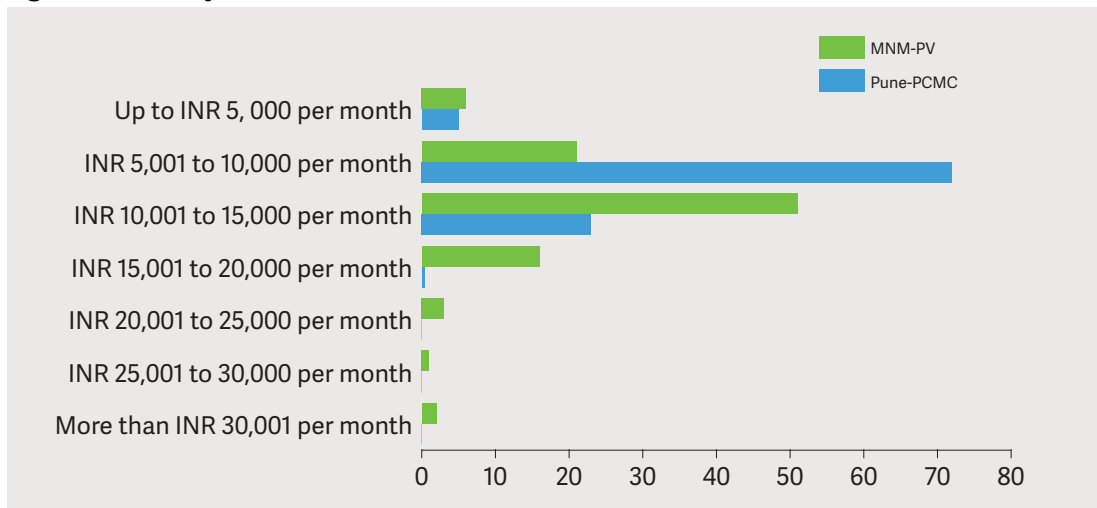
Source: Primary Survey conducted by the Anant Centre for Sustainability

Monthly Income

The COVID crisis, especially the lockdowns significantly affected the livelihoods of informal sector workers and daily wagers. In response to a query on change in incomes before and after the lockdowns, the study

revealed that the income of the migrant workers had reduced because of reduction in per day wages or because of fewer working days per month.

Figure 20 : Monthly Income



Source: Primary Survey conducted by the Anant Centre for Sustainability

51% of the respondents in MNM-PV earn INR 10,000-15,000 per month, 21% earn INR 5,000-10,000 per month and nearly 16% earn INR 15,001-20,000 per month. Only 6% of the workers in MNM-PV earn more than INR 20,000 per month. The median income of the respondents is calculated as INR 12,237.45, which lies between the income range of INR 10,001-15,000.

In Pune-PCMC, 72% respondents earn INR 5001-10,000 per month, 23% earn INR 10,001-15,000 per month, and 5% earn up to INR 5,000 per month. The median income range of respondents is calculated as INR 8,023.95, which lies between the income range of INR 5,001- 10,000.

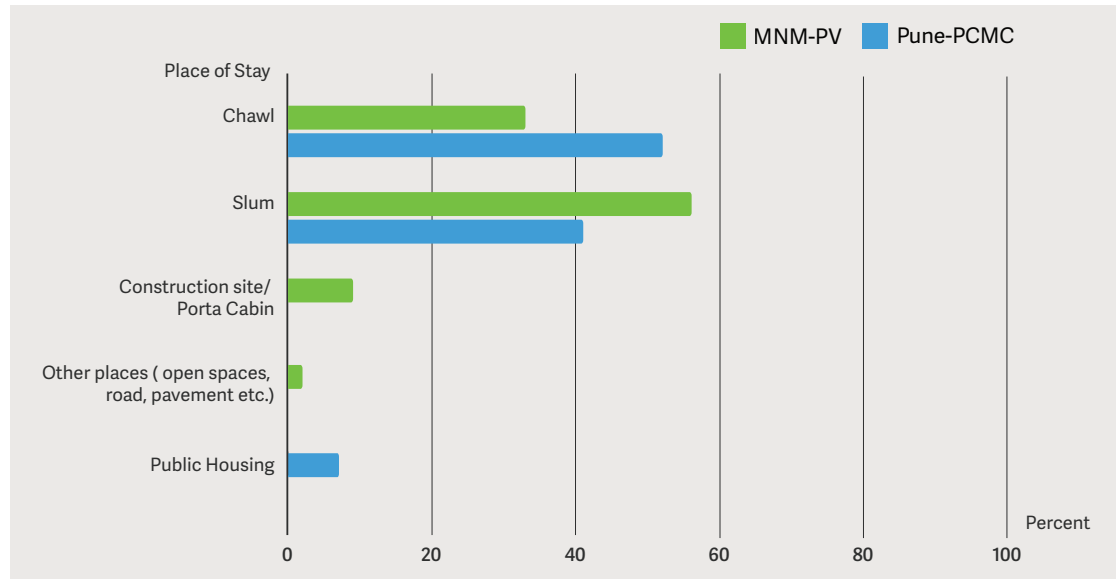
Place of Living in City

Despite the fact that housing is a basic necessity of every human being, the workers who are engaged in building houses for others are often found living in sub-optimal conditions.

The study revealed that in MNM-PV 56% of respondents live in single rooms in slums,

33% live in single rooms in chawls, 6% live in porta cabins, 3% live on construction sites and 2% live on roads, pavements, open spaces etc. In Pune-PCMC, 52% of the workers live in rooms in chawls, 41% live in slums and 7% live in rooms in public housing.

Figure 21 : Place of Living



Source: Primary Survey conducted by the Anant Centre for Sustainability

Types of Accommodation

Within MNM-PV, 38.4% of the respondents live in semi-*pucca* accommodation, 28.2% live in *pucca* houses and 25.4% live in *kutcha*

accommodation. Nearly 6% live in porta cabins and 2% on construction sites.

Table 12 : Type of Accommodation

House Living In	% of Total	%				
		Mumbai	Navi-Mumbai	Panvel	Vasai	Pune-PCMC
Construction Site	2	4.1	0	0	0	0
Porta Cabin	5.8	0.8	2.5	31.3	0	0
Semi- <i>pucca</i>	38.4	34.8	36.7	13.8	69.1	20
<i>Pucca</i>	28.2	22.5	36.7	40	25.8	0
Other	0.2	0.4	0	0	0	0
Total	100	100	100	100	100	100

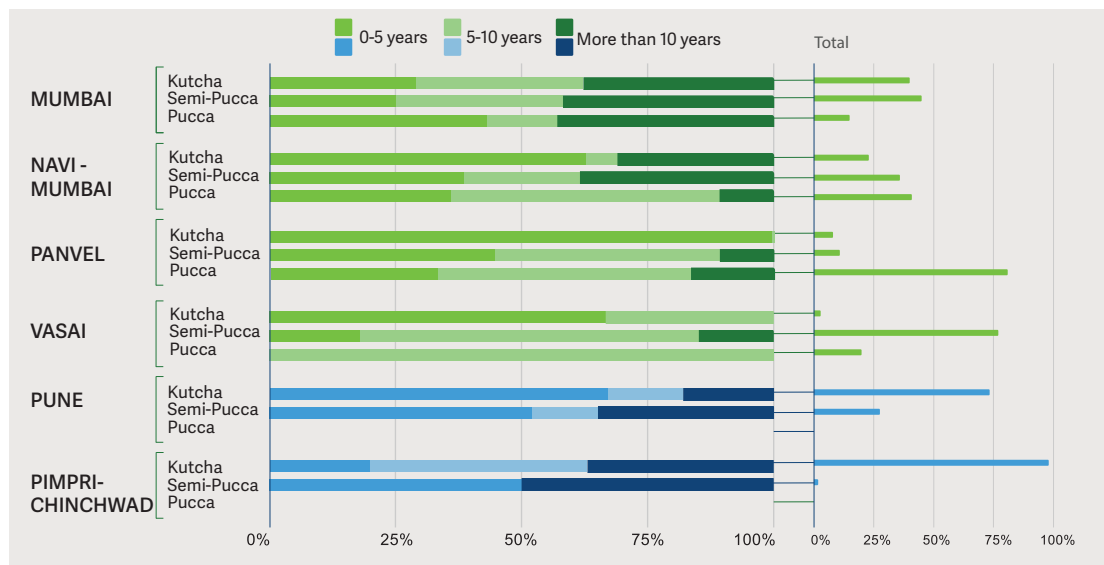
Source: Primary Survey conducted by the Anant Centre for Sustainability

In Mumbai, 37.3% of the respondents live in *kutcha* accommodation, 34.8% live in semi-*pucca* accommodation and 22.5% live in *pucca* accommodation. Whereas 31.3% and 2.5% of the respondents in Panvel and Navi Mumbai, respectively live in *pucca* accommodation. In Vasai, 69.1% of the respondents live in semi-*pucca* accommodation, 25.8% live in *pucca* accommodation and 5.2% live in *kutcha* accommodation. In Panvel, 31.3% respondents live in porta cabins, 40% live in *pucca* accommodation, 15% live in *kutcha* accommodation and 13.8% live in semi-*pucca* accommodation. In Vasai, 69.1% respondents live in semi-*pucca* accommodation, 25.8% live in *pucca* accommodation and 5.2% live in *kutcha* accommodation.

In contrast, 80% of the respondents in Pune-PCMC live in *kutcha* accommodation and 20% live in semi-*pucca* accommodation.

In terms of rental accommodation, 45% respondents in Mumbai live in semi-permanent, 40% in *kutcha* and 15% in *pucca* accommodation. In Navi-Mumbai, 36% respondents live in semi-permanent, 41% in *pucca* and 23% in *kutcha* rental accommodation. In Panvel, 81% of the respondents live in *pucca*, 11% in semi-*pucca* and 8% in *kutcha* rental accommodation. In Vasai, 77% live in semi-permanent, 20% in *pucca* and 3% in *kutcha* rental accommodation.

Figure 22 : Type of Rental Accommodation



Source: Primary Survey conducted by the Anant Centre for Sustainability

The survey in Pune-PCMC revealed that 72% respondents in Pune live in *kutcha* rental accommodation and 28 percent in semi-*pucca* accommodation whereas in Pimpri-Chinchwad, 97% live in *kutcha* and 3% live in semi-*pucca* rental accommodation.

In terms of duration of living in the rented house, in Mumbai 40% had been living in the house for more than 10 years whereas in Navi Mumbai, 43% had been living in the rented house for less than 5 years. In Panvel (48%) and Vasai (74%) respondents had been living

in the house for 5-10 years. In Pune, 62% of the respondents had been living in the rented house for less than 5 years but in Pimpri-

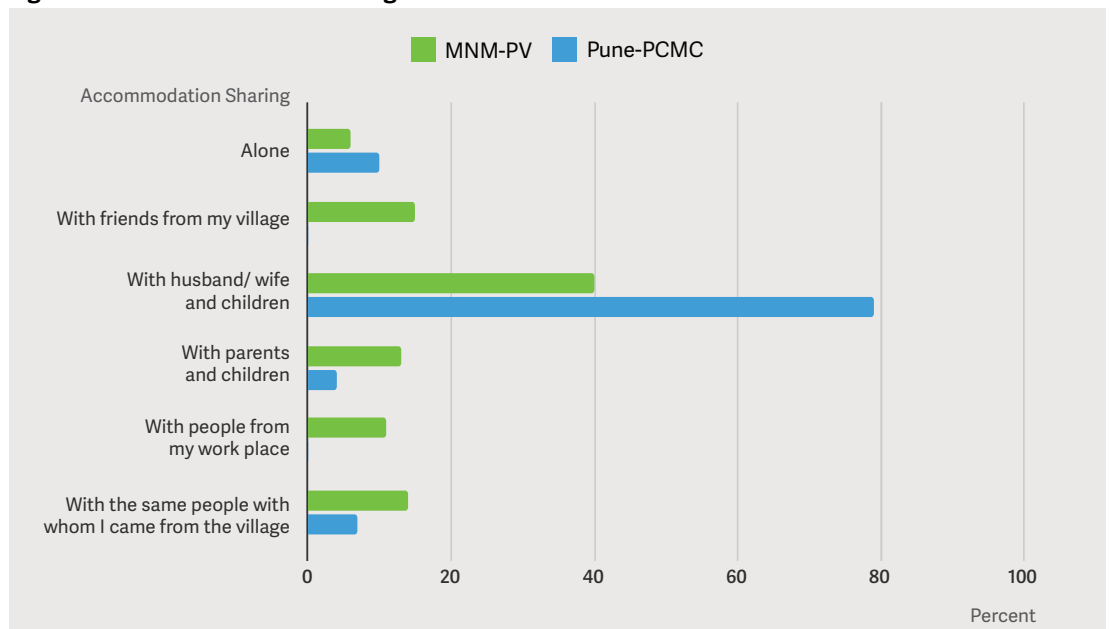
Chinchwad, 42% had been living in the house for between 5-10 years.

Living with whom?

MNM-PV data revealed that 53% of respondents live with their own family, 29% live with friends or relatives or a known person from their village, 11% live with their co-workers and 6% live alone. In porta-cabins, the maximum percentage of respondents live with more than 5 people from their workplace. In *pucca* and semi-*pucca*

accommodation, the maximum number of respondents resides with their own family in one room. But in *kutchra* accommodation, the maximum percentage of respondents live with people from their workplace or with the people from their own village in one room. On construction sites, the maximum percentage of respondents live with their co-workers.

Figure 23 : Accommodation Sharing



Source: Primary Survey conducted by the Anant Centre for Sustainability

Pune-PCMC data revealed that 83% of the respondents live with their own family, 10% live

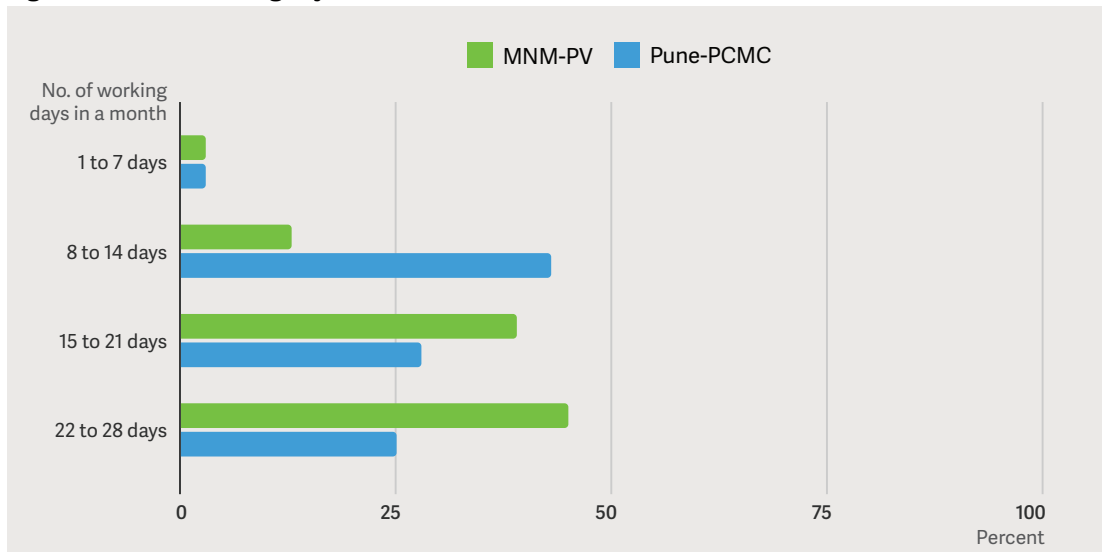
alone and 7% live with the people whom they accompanied when they came from their village.

Working Days per Month

While ascertaining the approximate number of working days per month, it was found that the respondents do not have fixed jobs with steady payments and work schedule. Most of the respondents worked on a daily payment basis, and only those employed on large

projects reported fixed work for some time period. In MNM-PV, 45% of the respondents get work for 22-28 days in a month. 39% get work for 15 to 21 days in a month, 13% get work for 8 to 14 days in a month and the remaining 3% get work for 1 to 7 days in a month.

Figure 24 : No. of working days in a month



Source: Primary Survey conducted by the Anant Centre for Sustainability

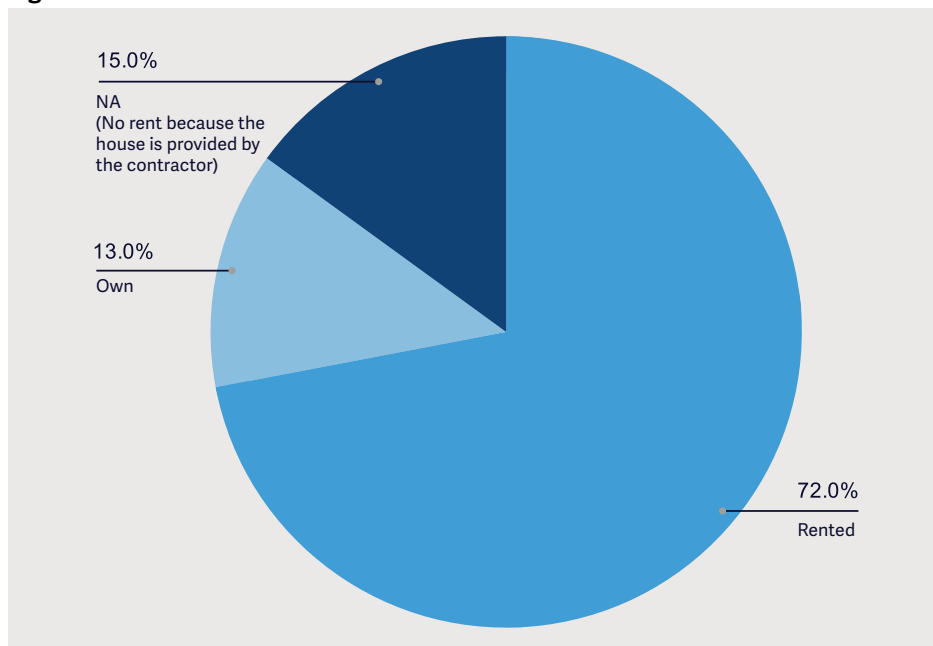
In Pune-PCMC, 44% of the respondents work for 8 to 14 days in a month, 28% work for 15 to 21 days in a month, 25% work for 22 to 28 days in a month and 3% work for 1 to 7 days.

Accommodation (Rental/ Own)

In MNM-PV, 72% of the respondents live in rental accommodation, 13% own the house they live in informal settlements, and 15% live in contractor provided accommodation. Those respondents who had been living in the same city for more than 10 years with more earning

members in their family are own *pucca* accommodation located in slums, chawls or open spaces with questionable legal standing. In the Pune-PCMC all respondents were living in rental accommodation.

Figure 25 : Rented or Owned Accommodation



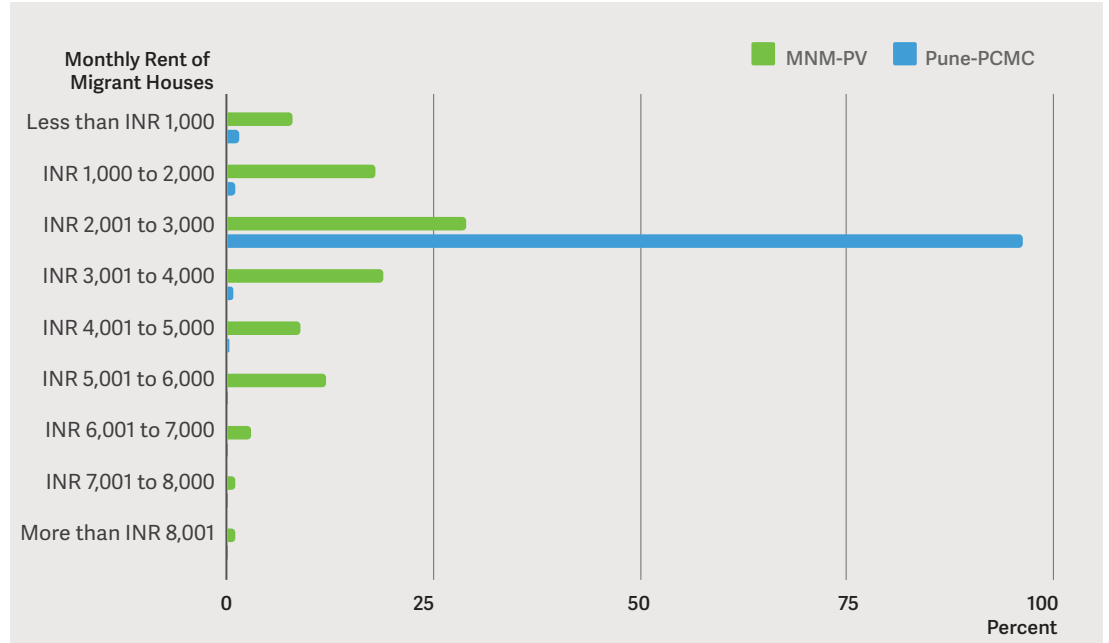
Source: Primary Survey conducted by the Anant Centre for Sustainability

Monthly Rent for House

In MNM-PV, 29% of the respondents pay a monthly rent of INR 2001-3000, 19% pay INR 3001-4000, 18% pay INR 1001-2000, 12% pay

INR 5001-6000 and 9% pay INR 4001-5000. Only 7% of respondents pay a rent of less than INR 1000 per month.

Figure 26 : Monthly Rent for house



Source: Primary Survey conducted by the Anant Centre for Sustainability

In Pune, 96.2% of respondents are paying rent of INR 2001-3000 per month, 1.5% are paying less than 1,000 INR per month,

1.1% are paying INR 1,001-2000, 0.8% of the respondents pay a rent of INR 3,001 - 4,000 and 0.4% are paying rent of INR 4,001-5000.

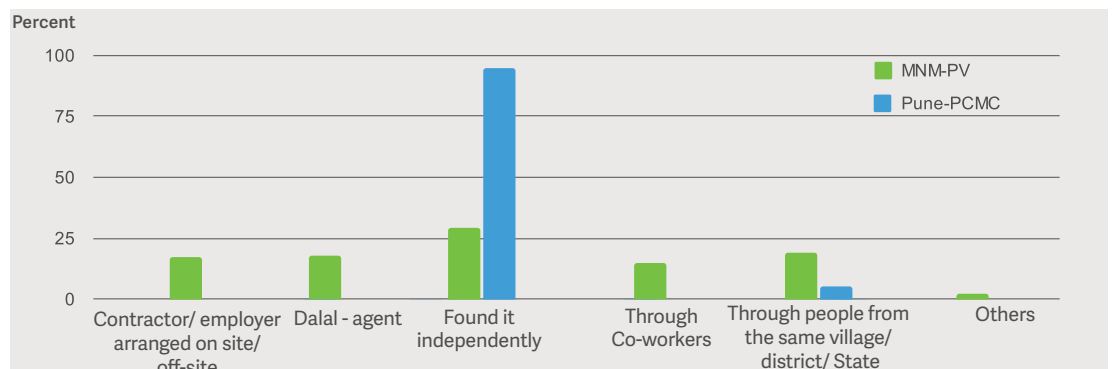
How do they find their accommodation?

In MNM-PV, 29% of respondents found their house independently, 19% found their house through the people of their village or district or state, 18% found their accommodation through agents/ dalal, 17% were living in accommodation arranged by contractor/ employer on site/ off-sites, 15% found their

accommodation through the people they work with, and the remaining 2% found their accommodation through neighbours etc.

In Pune-PCMC 95% of respondents found their house independently whereas 5% found it through people from their village or district or state.

Figure 27 : Support in Finding Accommodation



Source: Primary Survey conducted by the Anant Centre for Sustainability

In the MNM-PV, 34% of respondents have paid some amount for finding their accommodation. Out of that 27% of them paid less than INR 1000, 26% paid INR 2001 to 3000, 24% have paid INR 1001 to 2000, 15% have paid INR 3001 to 4000, 5% of them paid

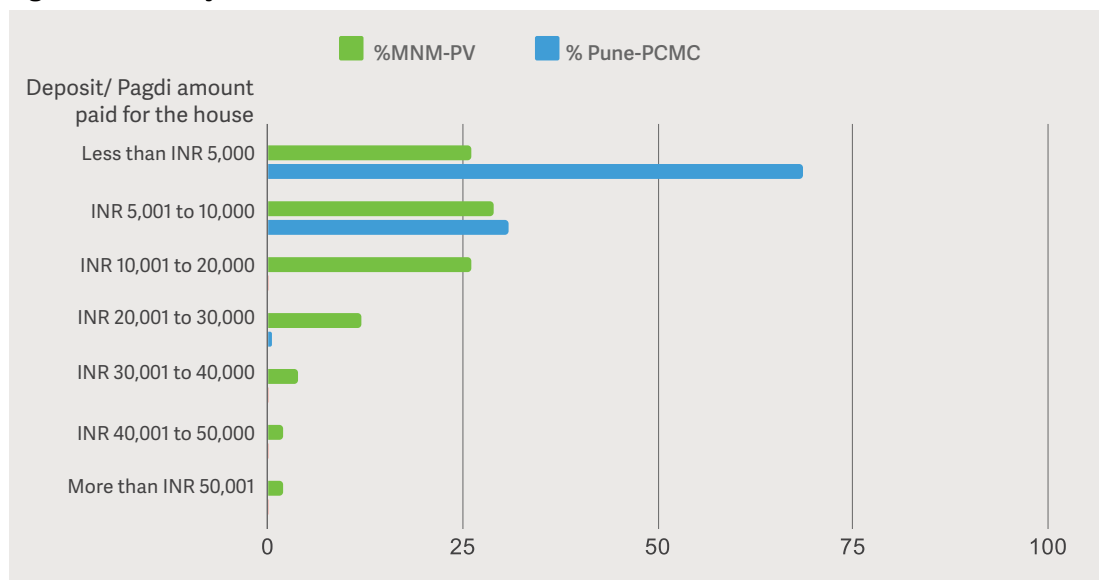
INR 4001 to 5000, and 4% have paid more than INR 5000 respectively. In the Pune-PCMC, only 2% of respondents have paid less than INR 1000 to the person who helped them in finding their accommodation.

Deposit amount for the House Migrants live in

In metropolitan cities like Mumbai, the deposit amount for the rental house for a fixed time period in the beginning is a big challenge for these respondents. In MNM-PV, 29% have paid deposit amount of INR 5001-10,000 for 10 months of time period,

26% have paid less than INR 5,000 and INR 10,001- 20,000 each, 12% of them have paid the amount INR 20,001 to 30,000, 4% have paid INR 30,001 to 40,000, 2% of respondents have paid the amount INR 40,001 to 50,000 and more than 50,001 each respectively.

Figure 28 : Monthly Rent for house



Source: Primary Survey conducted by the Anant Centre for Sustainability

In Pune-PCMC, 68.7% have paid less than INR 5,000 deposit amount for the rental house in the beginning, 30.95 have paid INR 5,001 to

10,000 and half a percent of respondents have paid INR 20,001 to 30,000 as deposit amount.

Access to Basic Amenities

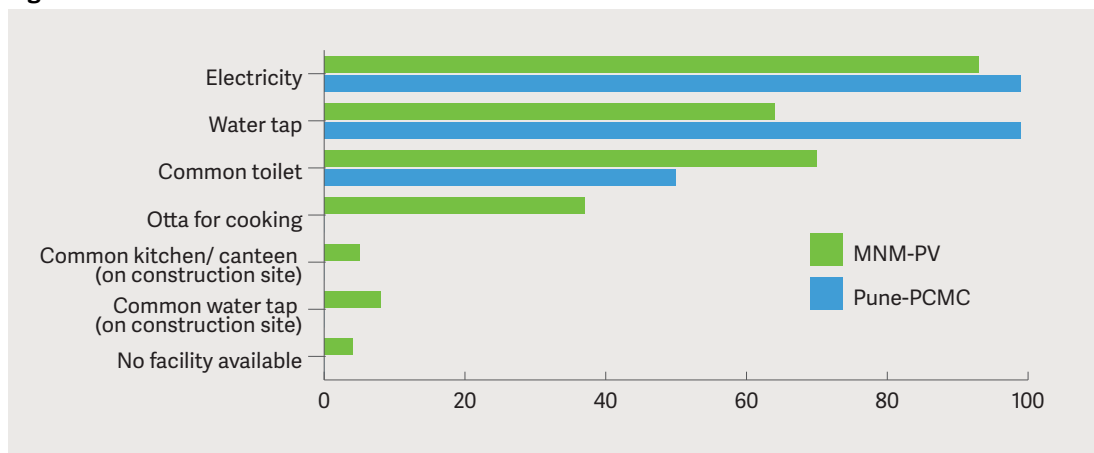
Access to good quality drinking water and better sanitation facilities are still extremely limited despite several government schemes to address this problem In MNM-PV it was found that 93% of the respondents have access to electricity in their dwelling units, whereas 7% of respondents do not have access to electricity. 64% of respondents

have access to water tap facilities, 70% of respondents have access to common toilet facilities. 37% of respondents have *otta* for cooking inside their living space. Amongst those living on construction sites, 5% of respondents have access to common kitchen/canteen on construction sites and 8% of respondents have access to common

water taps on their construction sites. Only 4% of respondents do not have access to any kind of these facilities in their living place. The survey highlighted the fact that the majority of respondents are living on encroached

lands due to which they are not eligible to access several government facilities. Nevertheless, the respondents demand good quality of water and better sanitation facilities for themselves and their families.

Figure 29 : Access to Basic Amenities



Source: Primary Survey conducted by the Anant Centre for Sustainability

In Pune-PCMC 99% of respondents have access to both electricity and water tap and

50% have access to common toilet facilities.

Challenges faced in Living Place

While identifying the day to day challenges faced in various informal settlements, 36% of respondents in MNM-PV identified poor condition of toilets and wash facilities, limited timing and quantity water availability and affordable deposit and rent for the house as the main challenges. 30% of respondents identified increase in rent as a major challenge, 26% of them identified water leakage during the rainy season as a major

challenge. 23% of them mentioned flooding during rains, 22% of them expressed concerns about security, 17% identified inaccessibility to municipal health facilities, 7% identified inaccessibility to educational facilities such as primary school, 7% found daily access to transport as the major challenge, 6% identified threat of eviction, and another 6% mentioned inaccessibility to markets selling daily essentials is major challenge.

Table 13 : Challenges faced in Living Place

Challenges faced in Living Place	% MNM-PV	% Pune-PCMC
Affordable deposit and rent for house	36	99
Do not feel secure in the settlement (not for eviction)	22	0
Threat of eviction	6	0
Water leakage in the house during rains	26	34
Flooding during rains	23	6
Rent increased by landlord	30	73
Poor condition of toilet and wash facilities	36	15

Challenges faced in Living Place	% MNM-PV	% Pune-PCMC
Water availability- limited timing and quantity	36	14
Electricity- reliability and charges	20	0
Access to municipal health facilities	17	0
Access to educational facilities- Primary school	7	0
Access to market selling essentials	6	0

Source: Primary Survey conducted by the Anant Centre for Sustainability

In Pune-PCMC, 99% of respondents identified affordable deposit and rent for a house, 73% identified rent increase by the landlord and 34% of respondents identified water leakage during rains as major challenges they faced

in their homes, 15% identified poor condition of toilet and wash facilities, 14% mentioned water availability -limited timing and quantity 6% considered flooding during rains as a major challenge.

Duration of Living

Overall, the survey revealed that the maximum percentage of respondents are living in a *pucca* house for the last 3 to 4 years. In semi-*pucca* accommodation, the maximum percentage of respondents live for more than 5 years in the same house whereas in *kutcha* accommodation the maximum percentage of respondents live for less than 1 year. In MNM-PV, respondents prefer to live

for longer duration in *pucca* and semi-*pucca* houses rather than *kutcha* accommodation.

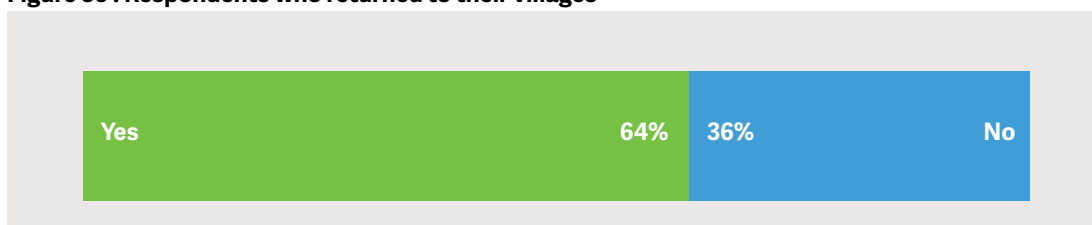
In Pune-PCMC, 73% of the respondents live in the same house for less than 1 year of duration followed by 13% for 1 to 2 years, 9% for 2 to 3 years of time, 3% for 3 to 4 years of time and nearly 1% for more than 4 years of duration.

Covid-19 lockdown and Decision to Return to Place of Origin

The first Covid-19 lockdown in India in March 2020 resulted in large-scale reverse migration. In MNM-PV, 64% of the respondents went back to their native village after the first lockdown was announced and 34% of the respondents did not go back at all.

In Pune-PCMC, 96% of the respondents preferred to stay on in Pune-PCMC since they were getting cooked meals and other essentials regularly.

Figure 30 : Respondents who returned to their villages



Source: Primary Survey conducted by the Anant Centre for Sustainability

Reasons behind Reverse Migration

In response to the query on the top two reasons for returning to their villages

following the first Covid-19 lockdown in March 2020, the top two reasons identified

by the respondents in MNV-PV were “no opportunities to earn an income” (31% of the respondents) and “closure of construction site” (about 28%). Nearly 18% identified “safety from Covid-19 pandemic” while 16% respondents cited “lack of basic necessities and a fear for shortage of essentials”. 10% of

the respondents stated “their landlord asked them to vacate the rented house”. Nearly 8% of the respondents said that their “family wanted them to go back” while 6% identified “concern for the well being of family members in the village” as the reason for going back to their villages.

Table 14 : Reasons behind Reverse Migration

Reasons behind Reverse Migration	% MNM-PV
Landlord asked to vacate the house	10
Construction site was closing down	28
Lack of basic necessities- afraid of shortage of essentials	16
For safety from COVID-19	18
There were no opportunities to earn income	31
Family wanted me to go back	8
Was concerned about the well being of my family in the village	6

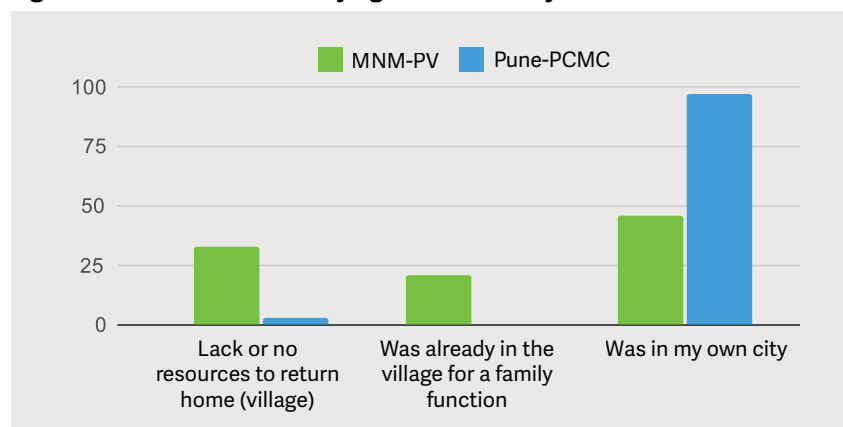
Source: Primary Survey conducted by the Anant Centre for Sustainability

In MNM-PV, the findings from the survey indicated that 46% of the respondents chose to stay back in the city during the first lockdown and the reason identified was that “they were in their own city so they didn’t prefer to go back”. These respondents have been living in the city with their family for more than 10 years. While all of them were rental accommodation occupiers, they have paid a hefty deposit for securing the rental accommodation and hence were not ready to

go back immediately after lockdown. 33% of migrant construction workers identified “lack of suitable resources to return to their village” while remaining 21% replied that they were already in their village at the time of the first lockdown.

In Pune-PCMC, 97% of respondents replied that they were in their own city and 3 percent replied that they lacked the resources to return to their native village.

Figure 31 : Reasons behind staying back in the City



Source: Primary Survey conducted by the Anant Centre for Sustainability

Decision to come back to the city post the COVID-19 lockdown

Post the first lockdown it was observed that many of the migrant workers returned to the city. In MNM-PV, it was found that nearly 34% of the migrant workers came back due to “no work in the village” and 33% identified “the need to start earning again” as the primary reason for return. Further investigation revealed the need to earn money, lack of opportunities in the village and the desire to not stay idle for more than 2-3 months were some of the main reasons for returning to cities.

Nearly 23% of the respondents came back to the city since they had found opportunities for earning income, 21% of came back due to start of work at the construction site, 15% replied they felt safe despite of COVID-19, 12% of migrants cited availability of essential good are the reason for coming back. 6% of the migrant workers were called back by their respective contractors, nearly 5% received confirmation from their landlord to return back to their previous accommodation and nearly 1% identified “rent/ deposit was with the house owner” as the main reason for returning to the city.

Table 15 : Reasons behind returning back to the City post Lockdown

Reasons behind returning back to the City Post Lockdown	% MNM-PV
Had no work in the village	34%
I needed to start earning again	33%
Found opportunities for earning income	23%
Contractor called us back because work on site had restarted	6%
Work had started on construction site	21%
We found that essential things were available	12%
Felt safe despite COVID-19	15%
Landlord confirmed that i could return to the house	5%
Rent/ deposit was with house-owner	1%
NA, Other Reasons	15%

Source: Primary Survey conducted by the Anant Centre for Sustainability

Ideal location for house

Given the choice of location of accommodation, responses in MNM-PV reveal that accommodation near the place of work, near commercial areas of the city and near transportation nodes (bus-stop/ train station/ local) is most preferred. 50% of respondents would prefer to be near places where they can get work easily, which is the preferred choice, 31% would prefer to be near commercial areas of the city and near health facilities 29%

of respondents would prefer to reside near local bus-stop/ train or near bus-stop/station for ease of travel. Besides this, 17% of respondents would prefer to stay near a place where spouse/adult children can get work, 15% would prefer locations near markets, and 14% would prefer to stay near primary/ secondary school respectively. Only 7% of these respondents prefer to stay on construction sites.

Table 16 : Ideal location for house

Ideal location for house	% MNM-PV	% Pune-PCMC
Same place	12	0.4
Near local bus-stop/ train	29	1
Near bus-stop/station for ease of travel to place of origin	29	1
On construction site	7	0.4
Near place where it is easy to get work	50	99
Near place where adult family members can get work	17	56
Near commercial area	31	6
Near markets	15	0
Near primary/ secondary school	14	2
Near health facilities	31	16

Source: Primary Survey conducted by the Anant Centre for Sustainability

In Pune-PCMC, 99% of respondents indicated proximity to the workplace as a first choice, 56% would prefer a place where their spouse/adult children can get work

and another 6% of respondents would prefer accommodation near a commercial area of the city.

Ideal/ Preferred House

Data in MNM-PV revealed that the majority (32 percent) of respondents' ideal house in the city are House with a kitchen *otta* and attached toilet, 26% of respondents' would choose House with a kitchen, *otta* and common toilet, 16% of respondents' would choose house with a single room with an attached toilet and 10% of respondents' were okay with a single room with a common toilet. Only 6% of respondents want a shared

room or house with a common toilet.

Data revealed that 25% of respondents would be willing to pay INR 2001 to 3000 per month rent for their house, 18% with INR 3001 to 4000 rent per month, 11% of respondents are willing to pay rent INR 1001 to 2000 per month for their house, 12% of respondents would be comfortable to pay INR 5001 to 6000 per month respectively.

Table 17 : Ideal/Preferred House

Preferred House	% MNM-PV	% Pune-PCMC
House with kitchen <i>otta</i> and attached toilet	36	20
House with kitchen <i>otta</i> and common toilet	26.6	0
Shared room or house with common toilet	6.6	0.5
Single room with attached toilet	17.8	2.1
Single room with common toilet	12.2	77.4
Others/ NA	0.8	0
	100	100

Source: Primary Survey conducted by the Anant Centre for Sustainability

In Pune-PCMC 77.4% of respondents' ideal choice of house is a single room with a common toilet, 20% of respondents would

choose a house with kitchen *otta* and attached toilet and 2.1% respondents were okay with a single room with attached toilet.

Table 18 : Preferred Amount of Rent

Preferred Amount of Rent	% MNM-PV	% Pune-PCMC
INR 1,000 or less per month	9.8	21
INR 1,001 to INR 2,000 per month	11	30
INR 2,001 to INR 3,000 per month	25.2	35
INR 3,001 to INR 4,000 per month	17.6	14
INR 4,001 to INR 5000 per month	11.4	0
INR 5,001 to INR 6,000 per month	12	0
More than INR 6,001 per month	3	0
	100	100

Source: Primary Survey conducted by the Anant Centre for Sustainability

35% of respondents would prefer to pay a rent of INR 2001 to 3,000 per month, 30% would prefer to pay INR 1,001 to 2,000 per

month, 21% would prefer to pay INR 1,000 or less per month, and 14% would prefer to pay INR 3001 to 4,000 per month.

Table 19 : Rental Preference for Ideal/ Preferred House

Rental Preference for Ideal/ Preferred House	% MNM-PV	% Pune-PCMC
Present rent = Preferred rent for Ideal House	24	29
Present rent > Preferred rent for Ideal House	33	58
Present rent < Preferred rent for Ideal House	44	13

Source: Primary Survey conducted by the Anant Centre for Sustainability

In MNM-PV 44% of respondents look for higher rent for their ideal house compared to their present rent, 33% prefer lesser rent than present rent and 24% look for an equal amount of rent with better accommodation.

Whereas in Pune-PCMC, 58% respondents look for lower rent than what they were paying at the time of the study, 29% prefer the same rent and 13% are willing to pay more rent.

Tenure for Rental Accommodation

In MNM-PV, 53% of respondents were willing to go for 2 years or more of tenure if they have access to their ideal accommodation within the affordable rental amount. 37% preferred 1 year tenure and 10% respondents stated that they would prefer 6 months tenure.

In Pune-PCMC 66% of the respondents stated that they would be comfortable with 1 year tenure whereas 34% were okay with a tenure of 2 years or more.

Number of visits to their native place in a year

In MNM-PV, 69% of the respondents visit their native village once in a year for 15 to 45

days, 20% visit twice in a year and 7% visit thrice in a year. Remaining 4% visit their

villages only when there is some emergency or an event.

In Pune-PCMC, all respondents replied that they visit their native village once in a year.

Table 20 : General visit to their native Village in a Year

General Visit to their native Village	% MNM-PV	% Pune-PCMC
Once a year	69	100
Twice a year	20	-
Thrice a year	7	-
Others	4	-
	100	100

Source: Primary Survey conducted by the Anant Centre for Sustainability

Reasons for visits to native village

In response to a query on identifying the top two reasons for visits to their villages, in MNM-PV, 50% identified “visiting due to familial ties and obligations”, 46% identified “important family occasions such as birth, marriage etc.”, 44% identified “celebrating festivals”, 36% identified “crop planting and harvest season work”, and 22% identified “for break during children’s holidays”. In Pune-

PCMC, 83% of the respondents gave “visiting the village to celebrate festivals with their family” as the top reason, 60% identified “visiting during their childrens’ holidays”, 39% identified visiting “for voting in the village”, 21% to visit their family, 18% for “marriage, birth etc. in their family”, and 2% visited for crop planting and harvest season work.

Major changes in work situation after COVID-19 lockdown

An important consideration in this study was to ascertain the changes in work situation post COVID-19 lockdown (March 2020).

not experience any change at all. Overall, 82% of the respondents replied that there is a change happening in their work situation.

In MNM-PV, it was found that 63% of respondents experienced a lot of change in their work situation, 19% respondents experienced little change in their work situation and 17% did

In the Pune-PCMC, 98% of respondents experienced no change at all in their work situations, while only 2% experienced a lot of change.

Table 21 : Any changes occurred in your Work situation

Any changes occurred in your Work situation?	% MNM-PV	% Pune-PCMC
No - everything is the same	17	98
Yes - a little has changed	19	-
Yes - a lot has changed	63	2
NA	1	-
	100	100

Source: Primary Survey conducted by the Anant Centre for Sustainability

Since the majority of respondents experienced substantial changes in their workplace, it was necessary to identify these changes. The respondents were asked to identify the two most important changes in their work situation after March 2020 - the first Covid-19 lockdown. In MNM-PV, 82% of respondents identified "difficulty to get work after the pandemic" as the major reason, 64% of the respondents identified "strict adherence to

COVID-19 related precautions and protocols". 49% of respondents cited pay being lesser than before as an important change. In Pune-PCMC, 92% of respondents identified "difficulty to get work after the pandemic" as the major reason, 78% identified "strict adherence to COVID-19 related precautions and protocols" in the working place and 46% of respondents cited pay being lesser than before as an important change.

Table 22 : Major Changes in work situation after COVID-19 Lockdown

Major Changes in work situation after COVID-19 Lockdown	% MNM-PV	% Pune-PCMC
COVID-19 related precautions have to be strictly adhered to	64	78
It is more difficult to get work	82	92
It is more easier to get work	8	-
The pay is lesser than before	49	46
The pay is more than before	1	-

Source: Primary Survey conducted by the Anant Centre for Sustainability

4 Responses to Key Questions

4.1 How do the respondents go to the cities for the first time?

In **MNM-PV**, where the percentage of inter-state migrants is higher, 55% of the respondents stated that they came to the city with a family member or a known person from their village, 29% came on their own and 16% came through a contractor. In **Pune-PCMC**, where the percentage of migrants from the State is higher, over 88% of the

respondents stated that they came to the city on their own.

Conversely, in the places of origin, the respondents stated that they would go to the city only through a contractor for an assured job/ work.

4.2 What accommodation do they look for and whom do they share it with?

Data from the source region revealed that sample respondents when they reach cities, they prefer to stay either on site/ off-site accommodation provided by labour contractors and they prefer to share it with their friends and relatives from their village. In case, accommodation is not provided by contractors then look for low-cost rental accommodation in any informal settlements near to their workplace sharing with their co-workers.

Data from **MNM-PV** and **Pune-PCMC** revealed that the majority of respondents came on their own source, so their first preference is no rental/ low rental accommodation without any extra payment in any informal settlements through their known contacts. Those who came through labour contractors look for on-site/off-site accommodation provided by contractors near to the workplace.

Table 23 : Correlation between Income and Housing of Migrant respondents

		Income of the respondents	Type of Housing migrants live in
Income of the migrant respondents	Pearson Correlation	1	.639**
	Sig.(2-tailed)		0
	N	230	230
Type of Housing migrants respondents live in	Pearson Correlation	.639**	1
	Sig.(2-tailed)	0	
	N	230	230

** Correlation is significant at the .001 level

The Pearson correlation between the Income of the migrant respondents in **Pune-PCMC** and the type of housing they

live in was found to be moderately positive and statistically significant($r=.639^{**}$, $p < .001$). That means higher income leads to

opting for better housing. There is a positive relationship between respondents' income and the type of housing they prefer to stay in. People with higher income look for a

pucca house with higher rent and people with lower income look for a lower/no rental house.

4.3 What are the challenges they face in the context of their housing?

In **MNM-PV**, 36% of respondents listed the poor condition of toilets and wash facilities, limited timing and quantity and water available. 30% of the respondents found the rent increase by the landlord a major challenge, 26% identified water leakage in the house during rains, and 23% identified flooding during rains as a significant challenge. 22% of them replied they do not feel secure in the settlement (not for eviction), 20% replied water leakage in the house during rains, 17% replied that access to municipal health facilities, 7% replied access to educational facilities- Primary school, 7% replied daily access to transport is the major challenge for them, 6% replied

threat of eviction, another 6% replied access to market selling essentials is major challenge for them.

Data in **Pune-PCMC** revealed that, affordable deposit and rent for house is the major challenge for 99% of respondents followed by rent increase by landlord major challenge for 73% of respondents, 34% of respondents replied that water leakage in the house during rains is the major challenge, poor condition of toilet and wash facilities for 15% of respondents, water availability -limited timing and quantity for 14% of respondents and flooding during rains is major challenge for 6% of respondents.

4.4 Did housing influence their decision to go back to the villages?

The major focus of the present survey was housing. During March 2020, the

countrywide COVID-19 lockdown showed a vivid picture of reverse migration.

Table 24 : Correlation between respondents living in no-rental accommodation and those went back to their native place after Covid-19 lockdown

		Migrants living in No-rental Accommodation	Migrants went back after the first lockdown, March 2020
Migrants living in No-rental Accommodation	Pearson Correlation	1	.664**
	Sig.(2-tailed)		0
	N	500	500
Migrants went back to their native after the first lockdown, March 2020	Pearson Correlation	.664**	1
	Sig.(2-tailed)	0	
	N	500	500

** Correlation is significant at the .001 level

The correlation analysis in **MNM-PV** region shows a positive correlation between the migrants living in no-rental accommodation and the migrants who left the city after the first lockdown announced in March, 2020. In the present study we can opined that yes housing was a factor in their decision to go back to the villages after COVID-19 lockdown was announced in the **MNM-PV** region. Because when construction work got

stopped, contractors asked them to go back to their native. No work means no income, these migrant workers are daily wagers, and they do not have fixed monthly income. Many respondents who were staying in rental accommodation, their house owners also asked them to go back. When the situation got normal their contractors and house- owners also called them back to the city.

4.5 What housing would be ideal for them in the city?

Survey revealed that the majority of respondents' ideal house in the city areas are House with a kitchen *otta* and attached toilet/common toilet followed by a single room with an attached toilet/common toilet. Majority of the respondents are living with

their family for a longer duration, therefore they prefer above facilities. Those who share their room with their friends/ co-workers look for a shared room/ dormitory. The ideal rental amount will be between INR 1000- INR 4000 depending upon the facilities available.

4.6 Conclusions

A detailed secondary data based analysis has confirmed that the majority of construction sector jobs are informal and thus most construction workers do not get any benefits or social security. Construction jobs, especially for skilled workers are reasonably well paying but in a majority of cases they are daily wage or project specific, that is, there is cyclicality and frequent income shocks. Workers face high living costs as at times they have to be mobile and move or travel to distant locations or other cities. A large number do not have steady work or a permanent home in the city, and the irregular pay makes them vulnerable.

initiating the thought process for migration for work. Once a migrant is in the city, this network becomes the support system essential for a migrant's survival. Besides the assurance of employment, housing is a critical factor for survival in the city. Majority of the migrants preferred to live in proximity to their workplaces and looked for accomodation with low rental. Presently, the housing options available to migrants are substandard and plagued with poor conditions of essential facilities. Each of the migrants, while being thrifty with their finances, aspire for better housing solutions with increase in their incomes.

That being said, the study affirms that migration for employment is not a standalone event. It is greatly dependent on the network of family members and acquaintances who are influential in

The study ascertained that COVID-19 lockdowns brought about the re-emergence of the vulnerabilities of migrant construction workers. Insecurities about lack of stable employment, assured monthly income

were brought to the fore with brutal force. Most migrants faced employment based uncertainties due to the lockdown, which in turn impacted their capacities to pay the monthly rent for their accommodations. This in turn propelled them to vacate their rental accommodations and move to their native place where basic living provisions are assured and there is no rental expenditure. Of course the migrants viewed this as a short term solution with the intent of

coming back to the city once the lockdown restrictions were eased.

The present study thus highlights the insufficiencies in the migrant housing supply chain where there is a greater dependence on informal means of supply and demand fulfilment. This leaves the end-users exposed to vulnerabilities during uncertain circumstances.

5 Solutions to Shelter for Migrant Construction Workers

The present study highlights the immense challenge to access to affordable housing for migrant workers earning less than INR 50,000 per month (Economic category - LIG). Due to the focus of PMAY-U on ownership, the mission has failed to keep up with the demand of migrants for affordable rental housing. Further, there is an evident dearth of housing options with flexible tenures, better suited for migrants who tend to return to their homes at least once a year for a month or longer.

Broadly, the migrant housing supply chain needs to provide housing solutions to cater to the unique needs of migrants, especially in the construction sector.

- 1. Temporary Accommodation:** Since a large number of people migrate on their own, they require temporary or transit accommodation until they are able to secure a job and find an affordable and *pucca* house. Such transit accommodation needs to provide basic shelter of flexible tenure and access to services. Ideally it needs to be rent free for a certain timeframe in which the person can avail benefits and settle in. It should be safe and in close proximity to hubs of economic activity.
- 2. Rental Accommodation:** Housing that is of acceptable quality, safe, with access to basic services such as sanitation. It needs to be well connected to places of employment and reasonably priced. The government has identified this as an area of concern and launched the Affordable Housing Rental Complexes scheme. The scheme is well intentioned, but the implementation leaves much to be desired. To make the rental viable at the scale that is needed, it is necessary to incentivize it as an asset class. Based on a recent award of a brownfield site, rental yield to the asset owner is anticipated to be around 0.4%, which makes it neither scalable nor replicable. Thus rental housing is a much bigger and more complex challenge and it is essential to address the structural issues rather than targeting a specific segment.
- 3. Onsite Accommodation:** Construction projects of a reasonable scale may last 2 to 5 years. Consequently, developers in Tier II and III cities try to incentivize workers by providing them accommodation on site. Onsite accommodation is primarily made by stacking blocks or bricks without using mortar, and with a roof made of galvanised iron sheets. In large-scale projects, the workers are housed in the under construction buildings. Such accommodation enables the construction workers to save on rent or travel or both, and have access to electricity, water and some drainage. In addition, safety is an issue. There is no standard to which such housing is provided. Apart from a few of the larger developers and contractors, most are reluctant to have formal housing on site as it opens them to liabilities. Most onsite accommodation is thus informal.

4.Ownership: For migrants who stay in a city beyond five years and move their families with them, owning a house remains an important goal. The inflection point of ownership is usually when migrants move their families and return to their villages not more than once a year. However, since neither subsidised housing under PMAY-U nor the markets fulfil this need, both supply and demand side solutions are necessary that create a bridge between rental and ownership. From April 2022, PMAY ownership interventions are limited to Affordable Housing in Partnership and Beneficiary Led Construction - both are unlikely to impact affordability for this segment.

Based on the finding of the present research there is a strong need to address the migrants housing requirements from the time they reach the cities to the time they establish a base, gain skills and create capital. The following recommendations would be key for a seamless transition of migrant construction workers and help them in adapting to the changed environs efficiently:

1. Assurance of Shelter upon Arrival

This is the first step of the housing solution for migrants. The 'Shelter Homes/ Night Shelters' that are operated primarily by local governments can become transit accommodation for migrants on arrival. This would require modifying the present guidelines and rules of the shelters, though there are examples of them being used as ad hoc old people homes. A number of non government organisations and charitable institutions usually provide free food, clothing and healthcare at these facilities.. These shelters could also help bring the migrants into the formal sector and give them access to government welfare schemes The 'Shelter Homes' are important and impactful solutions that are usually overlooked both by policy makers and the migrants themselves. Some anecdotal evidence at these centres in Gujarat seems to point towards a lack of awareness and unwarranted apprehension by migrants, which can possibly be overcome through better communication and awareness generation.

2. On Site Accommodation

Large construction companies and developers have policies regarding on-site accommodation for workers, and maintain strict quality control of the accommodation and support services. Since the past several years, many leading property developers in the affordable housing space, provide space for day-care and school that are run by NGOs for children of the construction workers on their site for on-site and contract workers. To encourage the mid tier developers and assure provision of basic living facilities, adequate policy measures need to be introduced, minimum housing standards need to be ascertained and options for providing economical onsite accommodation have to be identified.

It is recommended that irrespective of type of shelter and material used, there need to be some basic guidelines regarding on site accommodation that takes into consideration minimum quality of dwelling, area, sanitation and safety. The primary parameters would be as under:

- Minimum size: a 10ft x 10ft shelter should be provided to a family or 3 single people.
- The units should be raised from the ground level and some form of flooring should be provided to avoid seepage of water.
- The sanitation facilities should be at a reasonable distance from the living quarters.
- Cooking facilities should be in a separate area to reduce the risk of fire.
- A separation of living areas from the construction area.

Besides catering to the minimum requirements, onsite accommodation needs to be economical, easy to set up, maintain, repair, well ventilated and give reasonable insulation. Traditionally, most sites use stacked bricks or tin sheets for construction workers' housing. Along with this numerous non-conventional options are available as detailed below:

- Cross laminated tarpaulin: CLT is inexpensive, easily available and workable. It can be insulated through a sandwich process and is long lasting. The modular unit can easily be disassembled and transferred between sites and would be particularly useful in hard-to-reach areas. The estimated cost of such a unit would be in the range of 300 to 400 rs/ sq.ft.
- Dry wall construction with metal roofing: Dry walls construction is fast, can be done with onsite labour and is flexible. Dry walls have good insulation and are reasonably strong. They cannot be reused and so the cost would have to be accounted for in the life cycle for a single project. The cost would be upwards to 700 rs/sft. The primary cost driver would be foundations which could account for nearly 30% of the total cost.
- Bamboo panels: Bamboo panels are eco-friendly, lightweight, cost effective and easy to assemble. An underlying tarpaulin layer is used under the roof to make it weather resistant. They are comfortable in all weather conditions. The structure can partially be reused but a large part must be expensed. These would be in the same range as CLT solutions but in many cases more durable as CLT solutions would be prone to cuts and tears.

3.Rental Accommodation with Optional Flexible Tenure

Rental solutions require innovative approaches that address issues of deposits, tenure, cost, location and access to finance in addition to social and personal requirements.

The government has initiated the ARHC scheme to increase the stock of rental housing while utilising vacant houses in existing Government housing schemes. The key to the success of ARHC is its scalability. Initial calculations and uptake seem to indicate that in its current form it will be challenging to scale up the ARHC scheme.

Further, tenure is an important factor for rental housing, especially for migrants who travel to their villages at least once annually during the farming season. While in the formal sector most landowners do not allow renters to stay for more than 11 months at a stretch, in the informal sector, migrants may have longer tenure.. This not only has cost implications but also results in social disruption and potential loss of income.

Rental accommodation of varied tenures that is close to transportation hubs would be ideal for migrant workers. A coupon based system where the cost can be augmented by the beneficiaries with their own funds can help create a formal rental ecosystem for the segment. A rent to own model could be a natural bridge between ARHCs and PMAY ownership housing. Such a system would help migrants create capital at very early stages even if they are unsure of settling in the same city or area. This model would have to be government driven and policy interventions would be needed to address issues of domicile and yields.

4. Facilitating Home Ownership

For migrant households that decide to live in a particular city, home ownership is one of the greatest value creators and helps bring them into the formal economy. It is important to look beyond current home ownership solutions to bridge this gap.

Some of the possible options include:

Transit oriented development: Locating dense affordable housing close to transit hubs will help open up cheaper land with better quality of life. Fast public transit can help reduce travel time to work, help access public services and makes it easier for the government to deliver welfare schemes. This would require a radical rethink of urban development as we know it in India today. Cutting commuting time and cost for people in the lower income segment can give them more disposable income leading to increase in quality of life and potentially push up their productivity.

Rent to own: Such a solution is difficult to achieve when rental yields are on an average sub 3% across India and the risk-free rate stands at over 6%. Rent to own is a complex structure as stated above but the potential impact for a country like India can be substantial. A capital and loanable asset such as a house can help pull people out of poverty and include them in the formal economy. The biggest advantage of 'Rent to Own' apart from creating capital for early migrants is the flexibility of moving that capital to a different region if necessary for better opportunities.

Both of these options require a policy based intervention to initialise solution creation in the affordable housing segment. (These options may be explored separately, outside the current study)

5. Introducing Co-Living Accommodation and Hostels to Entry Level Market

Co-living accommodation and hostels form a part of the rental market, but they are listed separately as there are complexities to both these solutions. Co-living, especially among college students and young professionals belonging to higher income families, has become a trend in many cities. Service providers go beyond plain rental models to augment revenue by charging for services and giving flexible tenure. This model works well for higher income segments but there are a number of start-ups that are trying to cater to the entry level market. So far, co-living accommodations for migrant workers have met with numerous challenges including taxation and lacunae in current labour laws which lack incentives to employers who would incur lower costs while providing housing to their workers.

6.Reorganising the Corporate Social Responsibility Code of Practice

The employers would be the biggest beneficiaries of an economical and efficient workforce that is living in a secured ecosystem. Modifying the mandatory Corporate Social Responsibility regulations to include affordable housing as a key action area and provision of affordable housing to workers on subsidised rent or ownership can have multiple positive outcomes for companies. It could in the long run also help facilitate a rental ecosystem as the CSR capital deployed could initially subsidise the development. To ensure viable and sustainable housing solutions for migrant workers, an unconventional, out of the box thought process is needed. Further, relooking at the existing policy provisions to support ease of access to affordable housing would go a long way in addressing the challenges of affordable housing especially for migrants who are a part of cyclical industries such as construction and infrastructure development.

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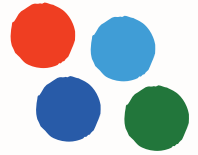
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Glossary

<i>Adivasis</i>	Tribes who are considered indigenous to places within India.
<i>Chawls</i>	Chawls are typically 4 to 5 storied buildings with a number of rooms on each floor. A central staircase leads to a long passage which runs the length of each floor. Many chawls are also built around a small courtyard, which functions as a communal space for residents.
<i>Dalal</i>	A middleman, an agent or a broker.
<i>Kutcha</i>	Dwellings made from mud, thatch, straw, plastic or metallic sheets and other low quality materials
<i>Otta</i>	A shelf that serves as a cooking surface
<i>Pagdi</i>	Deposit to be paid by a tenant to a house-owner Pagdi is a traditional tenancy rental system in Mumbai that ensures the tenant that the rent for the property remains nominal.
<i>Potla</i>	Bundle
<i>Pucca</i>	Dwellings that are constructed of <i>pucca</i> materials such as bricks, stones and concrete
<i>Semi-pucca</i>	Dwellings that may have walls made of bricks or stone but roof of materials such as metal sheets or thatch etc.

Abbreviations

ACFS	Anant Centre for Sustainability
ARHC	Affordable Rental Housing Complex
EWS	Economically Weaker Section
GDP	Gross Domestic Product
Gol	Government of India
GSDP	Gross State Domestic Product
GVA	Gross Value Added
LIG	Low Income Group
MBR	Maximum Base Rent
MIG	Middle Income Group
MNM-PV	Mumbai, Navi-Mumbai, Panvel and Vasai
MoHUPA	Ministry of Housing and Urban Poverty Alleviation (created in 2004)
MoHUA	Ministry of Housing and Urban Affairs (Ministry of Urban Development and MoHUPA merged as MoHUA in July 2017)
MoSPI	Ministry of Statistics and Programme Implementation
NSSO	National Sample Survey Organisation
PCMC	Pimpri-Chinchwad
PMAY-U	Pradhan Mantri Awas Yojana - Urban
TCIS	Terwilliger Center for Innovation in Shelter
UAs	Urban Agglomerations



Anant Centre for Sustainability

The Anant Centre for Sustainability is a think-teach-do tank established within Anant National University that focuses on affordable housing, indigenous models of circular economy, and building sustainable education campuses in India. The Centre publishes research reports and multimedia products, creates and teaches relevant course work, and implements projects.

Terwilliger Center for Innovation in Shelter, Habitat for Humanity

The Terwilliger Center for Innovation in Shelter, a unit of Habitat for Humanity International, works with housing market systems by supporting local firms and expanding innovative and client-responsive services, products and financing so that households can improve their shelter more effectively and efficiently. The ultimate goal of the Terwilliger Center's market systems program is to make housing markets work more effectively for people in need of decent, affordable shelter, thereby improving the quality of life for low-income households. To learn more, visit habitat.org/tcis.



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