

Affordable Rental Housing for the Seasonal Migrants to Urban Vernacular Settlements in India

Deepashree Choudhury¹, Dharitri Das² & Maitreyee Mishra³

¹Professor, Apeejay School of Architecture and Planning,
Dr. A.P.J. Abdul Kalam Technical University, Greater Noida, India,

²Professor, Principal, Piloo Mody College of Architecture,
Biju Patnaik University of Technology, Cuttack, India,

³Professor, Head, Piloo Mody College of Architecture,
Biju Patnaik University of Technology, Cuttack, India.

Corresponding email: ar.deepachoudhury@gmail.com

Email : dharitri.das@pmca.ac.in; maitreyee.mishra@pmca.ac.in

Received	Revised	Published
01.10.2023	04.12.2023	31.12.2023

<https://doi.org/10.61275/ISVSej-2023-10-12-04>

Abstract

Seasonal migration, driven by economic opportunities, has become a prominent feature of urbanization worldwide, including India. Seasonal migrants face numerous challenges in accessing decent and affordable housing, which can contribute to urban poverty, social exclusion, and inequality. Provision of affordable and adequate housing for this section of the population has emerged as a pressing concern for many countries including India.

In recent times, affordable rental housing has emerged as one of the potent solutions to address this concern. This paper delves into the critical issue of affordable rental housing for urban seasonal migrants in India, who eventually produce the urban vernacular settlements. It explores the unique dynamics of housing for seasonal migrants and seeks to provide a comprehensive analysis of such settlements. The study examines the obstacles and vulnerabilities experienced by these migrants and offers potential policy recommendations and interventions to make them healthy and livable places.

This research employs a literature survey and case studies. The paper demonstrates how urban planning and architecture can aid the efforts of enabling the people to produce the settlements by themselves and providing adequate and appropriate housing for urban residents in India. It contributes to a better understanding of housing as a key component of urban sustainability and social equity. The paper provides valuable insights and recommendations to policymakers, urban planners, architects, and stakeholders of affordable housing, in order to promote sustainable urban developments and improve the living conditions of seasonal migrants in Indian urban vernacular settlements.

Keywords: Seasonal Migrants, Affordable Housing, Sustainable Urban Growth, Social Exclusion, Rental Units, Urban Planning

Introduction

Human settlements across the world have been profoundly influenced by migration. The act of people or groups relocating from one country, region, or dwelling to establish themselves in a different location has historically been a primary driver in the establishment of cities and villages, dating back to the earliest stages of urbanization. Migration remains a dominant force shaping urban dynamics. Among the many categories of migrants, seasonal migrants, found in various regions, encounter graver challenges than others owing to their seasonal movement patterns which include inadequate housing, a lack of basic amenities, and social exclusion among many others.

India is a country of rich diversity and complexity, where migration has been a part of its social and economic fabric for centuries. India has also been experiencing rapid urbanization, leading to a growing housing shortage over the past few decades. The Technical Group that worked on Urban Housing Shortage about the 12th Plan (TG-12) projected that India will face a shortage of 38 million houses by 2030 (MHUPA, 2012; Rashmi, 2020). The consequences of inadequate housing are felt by the entire population, but the most vulnerable group affected by this issue is migrants, especially the seasonal migrants.

While rural-to-urban migration has been a longstanding phenomenon, the last few decades have witnessed a significant influx of seasonal migrants into India's cities. The phenomenon of urban seasonal migration in India has become an intricate issue with profound social, economic, and environmental implications. Though these migrants contribute significantly to the urban workforce and the growth of cities, their integration into urban settings and the provision of suitable housing remains a pressing challenge (Gopalan & Venkataraman, 2015). Seasonal migrants, who primarily come from rural areas, find themselves in a perpetual state of flux as they move between rural and urban areas in search of employment, particularly during certain seasons such as harvest and construction. These migrations are not just a consequence of individual choices but are also shaped by broader socio-economic factors, including poverty, lack of employment opportunities in rural areas, and the quest for a better life (Nayak & Kumar, 2018).

Understanding the plight of urban seasonal migrants is essential, as they form a significant portion of the urban labor force in India. The challenges they face are not isolated but interconnected with broader issues of urbanization, poverty, and social inequality (Trask, 2022). Among these challenges, the struggle to find suitable housing in the absence of any permanent job and social connections in the city is probably the gravest. Offering tailored and appropriate housing solutions for this population segment can serve as a potent instrument in reinforcing the foundations of sustainability, encompassing environmental, economic, and social aspects (ILO, 2004; Kashkari, 2023).

For seasonal migrants, the challenges of a temporary stay in cities and a lack of economic stability represent the two most formidable impediments when searching for suitable accommodation. Affordable rental housing holds considerable promise in sheltering them, as it addresses these two crucial aspects of their lives. Apart from accommodating other contextual requirements, such housing options can significantly alleviate the hurdles faced by this marginalized segment of urban society (ElFayoumi et al., 2021). Therefore, understanding the various facets of affordable rental housing, including their design and implementation, will go a long way in advancing the goal of providing adequate housing for seasonal migrants (Haberfeld et al., 1999).

Among the various disciplines that hold promise as potential contributors in the endeavor of providing adequate and appropriate housing solutions for seasonal migrants, architecture and planning are very significant. Architects and urban planners bring their expertise in design, sustainability, and cultural sensitivity to create housing that is not only functional but also environmentally responsible and culturally respectful. They can address infrastructure, accessibility, and urban integration, fostering social cohesion and contributing to the economic growth of the surrounding area. Additionally, insights from these professionals can inform effective government policies, ensuring that housing solutions are holistic

environments that enhance the quality of life for seasonal migrants while promoting the sustainable development of urban areas (Lozanovska, 2019).

This paper addresses the housing challenges faced by urban seasonal migrants in India and explores diverse facets of affordable rental housing as a means to address those. It also investigates the pivotal role of architects and urban planners in designing and implementing housing solutions that cater to the unique needs of this specific demographic.

Its objectives are:

1. To examine the specific housing challenges faced by urban seasonal migrants in India, with a focus on their living conditions and access to essential amenities.
2. To explore the various dimensions of affordable housing and understand its appropriateness as a solution to tackle the challenge of offering housing solutions for seasonal migrants.
3. To explore affordable housing practices in India and abroad through selected case studies and affordable rental housing policies adopted in India.
4. To investigate the role and impact of architects and urban planners in designing and implementing sustainable housing solutions tailored to the unique needs of urban seasonal migrants.
5. To propose strategies to enhance affordability and access to affordable rental housing for seasonal migrants.

The scope of this review paper is limited to inferences drawn from the literature study and analysis of secondary sources and case studies on different aspects of affordable housing for seasonal migrants in India.

Research Methodology

The paper employs an exploratory approach, conducting a critical analysis of literature and case studies obtained from secondary sources to meet its objectives. The literature survey encompasses a thorough search using the Google Scholar database and published books, employing key phrases; "affordable housing," "affordable rental housing," "migrants," "seasonal migrants," "affordable rental housing in India," "architects and planners in affordable housing," and "policies for affordable rental housing in India and abroad." Additionally, Scopus, Web of Science, SAGE Journals, and University of Wollongong, Australia library databases were undertaken for sourcing the literature. Developing Library Network, New Delhi (DELNET), and Shodhganga (A reservoir of Indian thesis) databases were also scrutinized for a comprehensive review. After an initial screening of 80 online research papers, 30 were selected for an in-depth literature study. This also includes working papers, reports, and books that were found relevant to the subject. The selection of research papers was based on their alignment with the objectives and outcomes pertinent to this paper.

Regarding secondary data, information on migration and seasonal migrants in India was sourced from various databases, including the Census of India, National Sample Survey (NSS), Ministry of Housing and Urban Poverty Alleviation, Government of India (MHUPA), and the Institute for Human Development (Desai & Vanneman, 2019). The data obtained from census handbooks (Census of India, 2011) and district statistical departments of multiple Indian states provided insights into the governmental policies related to housing and migration.

Traditionally, migration data in India came primarily from the Census and the National Sample Survey (NSS). The Census captured stable and permanent migration, while the NSS focused on migration trends, with the 55th and 64th rounds providing information related to the migrant population in the country. However, both sources have limitations, with the Census data being outdated by nearly twenty years, and the NSS data being a decade old, hindering an accurate estimation of the migrant population. This study utilizes unit-level data from the 64th round of the NSS (NSS 2010) to delve into various aspects of seasonal migration as unlike the 55th round (1999-2000), the 64th round lowered the minimum duration to 30 days to effectively capture short-term movements or temporary migration.

In addition to the Census and NSS, the Institute of Human Development Survey (IHDS) serves as a valuable dataset, offering comprehensive information on individuals not residing in

a particular place, remittance transactions, and seasonal migration. The IHDS, conducted in 2004-05 and 2011-12, spans two distinct time intervals, making it suitable for studying migration trends. Scholarly literature investigating various aspects of seasonal migrants' lives in urban territories has further contributed to the study. The use of multi-faceted data and their analysis ensures a comprehensive exploration of the issues this review paper aims to take up.

Seasonal Migration

Temporary or seasonal labor migration is a widespread phenomenon in developing countries, including India, often interchangeably termed as circular, seasonal, short-term, or spontaneous migration. Globally, it is recognized as a significant livelihood strategy, especially among the most economically disadvantaged sections of society (Breman, 1994; Deshingkar & Start, 2003; Mosse et al., 2005; Deshingkar & Farrington, 2009). Seasonal migration involves a type of mobility where the economic activities of an individual shift, but their usual residence remains unchanged (Bilsborrow et al., 1984). While different academic opinions regarding the duration of stay persist, there is a consensus that migration can be considered temporary only when the migrant is absent from the place of origin for a continuous duration though the exact description of such duration varies from account to account (Zelinsky, 1971). Seasonal migrants engage in economic activities in various places without changing their usual residence, characterized by relocation for a specific season or designated period, typically for work or livelihood purposes based on seasonal labor requirements (Davies, 2020). Official data sources in most countries generally consider six months as the maximum duration for a temporary move; otherwise, the person is classified as having a new place of residence (Srivastava, 2012; Brauw, 2007; Keshri & Bhagat, 2012).

Challenges Seasonal Migrants Face in Cities

The seasonal migrants who stay in cities face a multitude of challenges and uncertainties, a few of which are listed below (Desai & Sanghvi, 2018).

Living Conditions: The seasonal migrants often find themselves residing in overcrowded and unhygienic living conditions. They live in temporary shelters, makeshift huts, or cramped accommodations near their worksites. These accommodations lack proper sanitation facilities, clean drinking water, and adequate ventilation, which pose serious health risks. Moreover, the absence of basic amenities and infrastructure adds to their difficulties, further exacerbating their precarious living conditions (Deshingkar & Start, 2003).

Exploitative Labor Practices: Migrant workers frequently find themselves subjected to exploitative labor practices. They are often engaged in physically demanding and low-paying jobs, primarily in the agricultural and construction sectors. These workers are vulnerable to long working hours, meager wages, and lack of job security. Many of them are forced to work in hazardous conditions without proper safety measures or protective gear, jeopardizing their health and well-being (Mobarak & Reimao, 2020).

Legal and Social Exclusion: Seasonal migrants often face legal and social exclusion in urban centers. They are often unaware of their rights, and language barriers hinder their ability to seek legal assistance. Lack of proper identification documents, such as ration cards and voter IDs, further marginalizes them, making it difficult for them to access government welfare schemes and entitlements. Moreover, social discrimination and prejudices often contribute to their isolation and limited integration into the local communities (Agarwal, 2022; Albaik, 2023).

Healthcare and Education: Access to healthcare and education remains a major challenge for seasonal migrants. Due to their transient nature, they often struggle to access affordable and quality healthcare services. Limited awareness and financial constraints prevent them from seeking timely medical attention, resulting in increased vulnerability to diseases and health complications. Similarly, their children face barriers to accessing education, as they often lack proper documentation and face discrimination in schools (Nitika et al., 2014).

Psychological and Emotional Toll: The plight of seasonal migrants takes a toll on their psychological and emotional well-being. The separation from their families, the uncertainties of their living conditions, and the constant struggle for survival contribute to stress, anxiety, and a sense of insecurity. The lack of social support networks further exacerbates their psychological challenges, leaving them emotionally vulnerable (Choudhury, 2023).

The most pressing urban challenge faced by migrant populations globally is the acute shortage of affordable and accessible housing that caters to their fundamental life needs. This dire situation not only significantly impacts the well-being of migrants but also poses a substantial obstacle to the sustainability goals of urban centers (Li & Liu, 2018; UNESC, 2017). Migrants, often among the most vulnerable, face heightened risks of human rights violations, with housing rights standing out as one of the most jeopardized (UNHRC, 2010). Housing, constituting more than 70% of land use in most cities, plays a pivotal role in shaping urban landscapes, influencing population densities, generating employment, and contributing to overall urban growth (UN-HABITAT, 2015). Cities globally struggle to provide adequate and affordable housing for migrant populations, due to soaring housing prices which are most often beyond the means of this segment. This often exaggerates the other challenges that they face in the course of their daily living outlined above (WEF, 2017).

Housing Poverty in India: Gravest Challenge for seasonal migrants

Despite India's status as the world's fastest-growing economy, with an 8.2 percent growth rate in the first quarter of 2018-2019 (ET, 2018), a staggering 63.67 million households in both urban and rural areas lack adequate housing (Kumar, 2014). This significant figure is a cause for concern, especially considering the 'Global Strategy for Shelter to the Year 2000' outlined by the United Nations General Assembly in December 1988. The UN's definition of "adequate housing" underscores elements like privacy, space, security, lighting, ventilation, basic infrastructure, and a location conducive to work and facilities, all at a reasonable cost (D'Souza, 2019). In India, the Technical Group on Urban Housing Shortage for the 12th Plan (TG-12), established by the Ministry of Housing and Urban Poverty Alleviation, estimated that for the years 2012-2017, approximately 18.78 million households in cities lacked "decent" housing (Bilsborrow, Oberai, & Standing, 1984, MHUPA, 2012). This figure encompasses those residing in non-liveable, temporary, overcrowded, and dilapidated homes, reflecting the harsh reality of "housing poverty" in urban India (MHUPA, 2012).

In the Indian context, seasonal migration is propelled by factors such as droughts, floods, lack of job prospects, and poverty. According to the Census of India 2011, there were approximately 139 million internal migrants in India, 64% originating from rural regions (Patel, 2021). 9% of total internal migrants are seasonal migrants as per the Census of India published report (CENSUS, 2011). Aajeevika Bureau, a nongovernmental Organization working in the field of migrants' welfare in India places the number of seasonal migrants at a staggering 140 million (Keshri & Bhagat, 2012). In India, many states witness significant seasonal migration. According to data produced by the Institute of Human Development (IHD) in 2020, Uttar Pradesh, Bihar, Rajasthan, Odisha, and Madhya Pradesh top the list (Refer to Table 1) (Deshingkar & Farrington, 2009). A substantial proportion of seasonal migrants in India find employment in the construction, manufacturing, and agriculture sectors, predominantly in informal urban settings devoid of social protection provisions, pushing them into situations of poverty (Keshri & Bhagat, 2012). Among the challenges faced by seasonal migrants after urban relocation, finding suitable living spaces stands out as the most severe. Their limited rent-paying capacity often forces them into marginalized urban areas, including flood plains, informal settlements, and slums. Additionally, they encounter social discrimination, inequality, and various forms of marginalization. In light of these challenges, providing affordable and quality housing for seasonal migrants becomes imperative for the sustainable urban future of cities in India (Rana & Rana, 2016; Yang & Guo 1999).

Table 1: Institute for Human Development (IHD) 2011-12 Statistics on Seasonal Labor Migrants (Past Five Years) Based on Place of Origin Across different States of India published in 2020
Source: Desai & Vanneman, 2019; Authors

States of India	Rural	Urban	Total	Remarks
Andhra Pradesh	2,015,974	1,21,650	2,137,624	The term "place of origin" pertains to the original location where the migrant used to stay. When examining the state-wise outcomes concerning seasonal migration over the past five years. It becomes apparent that Bihar is at the forefront, succeeded by Madhya Pradesh, Chhattisgarh, Andhra Pradesh, West Bengal, and Rajasthan (each exceeding 2.0 percent) in terms of having a larger proportion of seasonal migrants. In urban areas, Bihar has 2.4% of the total seasonal migrants, which is the highest among the Indian states whereas all other states exhibit rates below 1%. In rural areas, Madhya Pradesh has the highest percentage of seasonal migrants with Bihar, Andhra Pradesh, Chhattisgarh, West Bengal, Gujarat, and Rajasthan coming after that; all having more than 2.5%. Except for Kerala, Punjab, Karnataka, Tamil Nadu, and the North Eastern states, more than 90% of seasonal labor migrants originate from rural regions.
Assam	410,409	6774	417,183	
Bihar	3,382,065	2,70,692	3652,757	
Chhattisgarh	888,341	28,8925	9,17,166	
Chandigarh	NA	11,748	11,748	
Daman and Diu	1,599	NA	1,599	
Delhi	0	44,080	44,080	
Dadra and Nagar Haveli	0	0	0	
Goa	0	0	0	
Gujrat	896,587	55,512	952,099	
Haryana	61,608	4408	66,016	
Himachal Pradesh	28,765	2,184	30,949	
Jharkhand	556,304	34,928	591,232	
Jammu and Kashmir	121,252	9,225	130,477	
Karnataka	896,112	222,874	1,118,986	
Kerala	60,108	88,721	68,980	
Maharashtra	1,427,923	9,184	1,447,107	
Madhya Pradesh	2,147,222	132,595	2,279,817	
North East	29,374	17,150	46,524	
Odisha	675,4383	0,899	706,337	
Puducherry	0	8,240	8,240	
Punjab	75,301	15,66490	,965	
Rajasthan	1,317,705	53,354	1,371,059	
Tamil Nadu	545,763	1,64,800	710,473	
Uttarakhand	83,022	6,467	89,489	
Uttar Pradesh	3,097,450	291,015	3,388,465	
West Bengal	1,793,127	150,176	1,943,302	
Total	20,511,359	1,711,3162	2,222,675	

Affordable Housing as a Solution

The term "affordable" lacks a concrete definition as it hinges on relativity. This concept holds diverse meanings for individuals of varying economic status. Across the world affordability in this domain signifies the financial capacity of citizens to purchase a house. In the United States and Canada, a widely acknowledged norm dictates that to be considered affordable, housing including taxes, insurance, and utilities should be within one-third of a household's yearly income. If the monthly costs of a house, including loan repayments and essential services, surpass 30-35% of the household's monthly income, it could be deemed unaffordable (JLLI, 2018).

Affordable housing as defined by the Reserve Bank of India (RBI) in 2014 mandates that to qualify as affordable housing, the market value of a house should be between INR 50 to 65 lakhs in non-metropolitan and metropolitan areas, respectively (Palayi & Priyaranjan, 2018). This definition remains subject to periodic reviews due to inflation. High-Level Task Force on 'Affordable Housing for All' operating under the Ministry of Housing and Urban Poverty Alleviation (MHUPA) in 2012 has outlined affordable housing as residences that fulfill specific affordability standards, which could involve income thresholds, house dimensions, or affordability measured through monthly payments or by the percentage of income spent on housing, either in buying or renting it (Table 2)(MHUPA, 2012). These parameters may be

independent or interdependent, with income levels distinguishing expenditure potential and unit size ensuring liveable space minimums. Furthermore, this definition's applicability across India, a diverse country with varying urban profiles and income levels, adds complexity. For instance, different developers offer 1 BHK units at different prices in different areas. Location plays a role in the variation of affordable housing definitions, even within a city (MHUPA, 2012).

Table 2: Affordable Housing Definition as per Report of Taskforce on Promoting Affordable Housing
Source: MHUPA, 2012

Income Category	Size	Income Limits	Affordability
Economically Weaker Section(EWS)	The carpet area of 21-27 sqm, could be increased to 25.2 -30.8 sqm with linked subsidies.	The monthly household income limit for the EWS is set at INR 8,000, while for the (LIG) it stands at INR 16,000; If the household income is inconsistent, the annual income criteria are INR 1lakh for Economically Weaker Section (EWS) households and INR 2lakhs for Lower Income Group (LIG) households is considered.	The ratio of house price to income in affordable housing should be 5.
Low Income Group(LIG)	carpet area of 28-40 sqm, could be increased to 36.9 - 45.1 with linked subsidies		
Mid Income Group(MIG)	41-60 sqm of carpet area		

Jones Lang LaSalle Incorporated, based in the United Kingdom, a well-known global real estate and investment consultant in its report titled 'Affordable Housing- Indian perspective & future Outlook' suggests that in addition to factors such as unit size, pricing, and occupant affordability; certain context-specific criteria namely; establishing a minimum habitable unit size, ensuring basic amenities provision, managing costs, and optimizing location must be woven into the concept of affordable housing for deriving definitions which respond to local realities (JLLI, 2018) (Table 3).

- (i) Ensuring the minimum provision of essential services, including sanitation, water supply, power to both individual dwelling units and communal spaces and accessible healthcare facilities within the project or nearby, is imperative.
- (ii) With the escalating demand for urban land, there is a shift towards vertical architecture. Rather than adhering solely to area standards, incorporating an additional volume standard allows for greater flexibility in the vertical planning of a housing unit.
- (iii) The housing project's location is crucial, necessitating proximity to workplaces and efficient connectivity through affordable public transport. Ensuring both housing and transportation affordability is imperative. In the context of innovative residences, strategic placement near key industrial nodes can also transform them into central workplace hubs.
- (iv) When evaluating the buyer's affordability, it's essential to consider not only the acquisition expenses but also the maintenance costs associated with the dwelling unit. The project's success hinges on minimizing maintenance and operational costs.

Table 3: Suggested Categorization of Affordable Housing based on the criteria listed in Jones Lang LaSalle Incorporated's Report titled 'Affordable Housing- Indian Perspective & Future Outlook'

Source: Authors

Income categories	Minimum dwelling size and volume	Amenities and infrastructure	Cost Aspects	Locational attributes
EWS	A carpet area of 250 square feet and an internal	Facilities -sanitation, water supply, electricity, along with the inclusion of	Monthly installments should be within the range of 30-40% of	Situated within a 20 km radius of employment hub,

	volume of 2,250 cubic feet	community spaces, parks, schools, and healthcare infrastructure; vary according to the dimensions and site of the housing development. These amenities may be included in the project brief or available nearby.	the buyer's net monthly income, inclusive of maintenance costs.	adequately connected by public transport
LIG	A carpet area ranging from 300 to 600 square feet and an internal volume ranging from 2,700 to 5,400 cubic feet			
MIG	600–1,200 sq. ft carpet area, 5,400–10,800 cu ft internal volume			

Affordable Housing in India: Various Issues

India, boasting a total population of 1.21 billion, has 377 million inhabitants residing in urban areas. By 2031, the urban population of the country is expected to reach 600 million as the migration to cities continues at a rate surpassing 10 million individuals annually (MHUPA, 2012). Revision of World Population Prospects, 2022 conducted by the United Nations Department of Economic and Social Welfare Population Division claims that India will gain the distinction of being the most populous country in the world, reaching 1.4 billion people by the end of 2023. As per a report from India's Ministry of Housing and Urban Affairs published in 2012, Indian cities are plagued by a housing deficit of around 19 million units. The study, aligned with the 2011 census, emphasized that over 95 percent of this deficit is created by a lack of low-income group housing. Indian Council for Research on International Economic Relations (ICRIER) in 2020 reported a 54 percent increase in India's urban housing shortage, a housing deficit escalated from 18.78 million to 29 million in 6 years starting from 2012 (Roy et al., 2022). This shortage encompassed households experiencing homelessness, those living in inadequate and unimprovable conditions, houses that had become obsolete, and those residing in congested environments. These reports underscore the persistent challenge of housing, particularly for low-income urban households, many of whom are migrants. Seasonal migrants emerge as one of the most marginalized groups grappling with this housing shortage, facing numerous obstacles in securing access to affordable housing.

Key Challenges in the Affordable Housing Domain

1. **Land Costs:** Increasing land costs are making affordable housing projects unfeasible in many Indian cities in India. Urban city centers often have exorbitant land prices, constituting over 50% of total project costs for developers (JLLI, 2016). This inhibits the building of affordable housing as in this case excess cost cannot be passed on to end-users (Chary, 2018).
2. **Centralized Volume Control:** Many urban centers in India enforce restrictions on construction volume in central locations, leading to a development shift to peripheral areas with inadequate infrastructure (Hoda, 2018).
3. **Construction Expenses:** Controlling construction costs is crucial for affordability, as profit margins for developers increase disproportionately across various project segments. Ensuring construction costs remain reasonable is pivotal (Manoj, 2017).
4. **Approvals Process:** Lengthy processes for land use conversion and building approvals (18-30 months on average in metropolitan cities of India) escalate project costs due to extended holding periods (Pethe et al., 2023).
5. **Utilization of Public Land:** Public entities, like railways, own large, unused land parcels in strategic areas, often leading to squatter settlements. These sites remain underutilized for affordable housing projects (Rana & Rana, 2016).

6. **Access to Finance:** Lower Income Groups (LIG) and Economically Weaker Sections (EWS) often lack access to organized finance due to informal sector occupation and inadequate documentation, creating hurdles in home purchasing (Desai, 2014).
7. **Outdated Laws:** Laws like the Rent Control Act can negatively impact urban development by decaying housing stock and hindering prime location redevelopment (Gandhi et al., 2021).
8. **Government Policies:** Affordable housing necessitates targeted government policies that incentivize developers to engage in these projects, fostering a more appealing environment for the sector (Gopalan & Venkataraman, 2015).

The challenges within the affordable housing domain present significant obstacles for seasonal migrants seeking housing in urban areas. While affordable housing initiatives cater to the low income of seasonal migrants, specific issues unique to their temporary residency can impede their access to units typically allocated in cities for economically weaker groups (Refer to Table 4).

Table 4: Challenges Faced by Seasonal Migrants in Accessing Affordable Housing
Source: Authors

Challenges	Explanation	Potential Solutions	Literature Referred
Temporal Nature of Migration	Seasonal migrants' cyclical movements require housing flexibility, unsuitable for long-term commitments common in affordable housing.	Develop temporary housing models or rental schemes tailored to short-term stays.	Sethi et al., 2013; Bhullar & Verma, 2018; Usami, 2012.
Unpredictable Income Streams	Irregular and informal employment among seasonal migrants makes their income unpredictable, challenging the steady financial criteria of affordable housing.	Introduce flexible payment options, income-based housing schemes, or subsidies for migrant workers.	D'Souza, 2019; D'Souza & Agrawal, 2020
Lack of Social Infrastructure	Affordable housing often integrates residents into urban social systems, but seasonal migrants' temporary presence limits their access to intended social support.	Implement community programs and services specifically designed for the transient nature of seasonal migrants.	Joseph & Shukla, 2018; D'Souza, 2019
Incompatibility of formal structures of affordable housing projects	Seasonal migrants often reside in informal settlements with unique dynamics, differing from the formal structures of affordable housing projects.	Consider integrating informal settlement practices into affordable housing planning, ensuring cultural compatibility.	Menshawy et al., 2016; Mushumbusi, 2011
Policy and Legal Constraints	Legal challenges faced by seasonal migrants, including documentation issues and residency restrictions, hinder their inclusion in affordable housing initiatives.	Advocate for inclusive policies, streamline documentation processes, and address legal barriers to migrant housing eligibility.	Patel et al., 2017; Moghe & Kumthekar, 2021

Affordable Rental Housing: Housing Requirements of Seasonal Migrants

Seasonal migrants often employ an incremental housing strategy when relocating to destination cities, opting for affordable rental accommodations within existing informal settlements (Joshi et al., 2022). The flexibility inherent in rental housing proves advantageous,

especially considering the nature of informal employment marked by minimal job security, the absence of formal social security benefits, irregular and low incomes, and high mobility. The rented space serves not only as a residence but also as a potential worksite, a platform to access city resources, and a place to accommodate migrating family members. This multifaceted role defines the concept of "housing" in the context of migrant experiences (Choudhry et al., 2021). While informal housing provides a practical solution for economically disadvantaged migrants, tenure security in informal tenancy arrangements is often precarious, subjecting tenants to the arbitrary power of private landlords (Naik, 2015).

Initiatives like the Affordable Rental Housing Complex (ARHC) scheme could potentially address these challenges, but success requires a nuanced understanding and engagement with the complex realities of informal housing. The ARH emerges as a crucial solution to the intricate housing needs of seasonal migrants, addressing their unique challenges upon relocating to urban areas (Bhan et al., 2014). It can offer not just affordable living spaces but also a degree of assurance and legal protection for tenants. Through its structured approach, the ARH scheme may contribute significantly to improving the housing conditions of seasonal migrants, offering them a more dignified and secure living environment while accommodating their specific needs and circumstances (WEF, 2017).

Case Studies of Affordable Rental Housing in India and Abroad

This section presents case studies of affordable rental housing in India and abroad selected from a study of secondary sources (Refer to Table 5). The chosen case studies go beyond exclusively examining affordable housing tailored for seasonal migrants and encompass a wider spectrum that includes initiatives aimed at the broader migrant population. This inclusive approach ensures a thorough and diverse analysis of affordable housing programs, avoiding limitations that might arise from focusing solely on seasonal migrant-targeted initiatives. The selection comprises four affordable rental housing schemes from India and three from international contexts, offering a comprehensive understanding of various facets of affordable rental housing. The criteria for selecting these case studies emphasized the necessity for diversity and representativeness. Only schemes that were successfully implemented on the ground were included, and the objective was to gather insights from published literature sources, providing valuable perspectives on the complexities and outcomes of each housing initiative.

Table 5: Case Studies of Affordable Rental Housing in India and Abroad

Source: Authors

	City	Description / Strategy	Implementation Framework/ Present Status
1	Sao Paulo, Brazil: The social renting voucher program, known as the Parceria Social scheme, was introduced in 2007. The program concluded in 2010 after benefiting a total of 1,012 families, primarily due to financial constraints (Stiphany et al., 2022).	The scheme provided transitional housing solutions through the distribution of rental vouchers, targeting households undergoing relocation to social housing projects.	The initiative operates as part of the city municipality's program, aligning with the vision outlined by the Ministry of Cities in the country. Under this arrangement, the municipality covers the entire rental amount and pays the entity owning the property directly for a maximum duration of three and half years.
2	Nanjing, China: A talent attraction program featuring various incentives, notably substantial rental subsidies for eligible settlers (Clement et al., 2018).	The program targets skilled young migrants, emphasizing their potential contribution to urban economic growth, with no specified limitations on participation.	Managed by the municipality, the scheme aligns with broader regional and national planning guidelines aimed at establishing counter-magnets to tier-1 cities. The municipality takes care of the financial part aspects of the initiative.
3	Berlin, Germany: In this city, up to 88% of households are engaged in rental living. In this	•More than 60% of rental housing units available in the	As the government subsidy ended, many rental housing facilities run by private entities stopped their operation

	context, municipal housing companies have recently pledged to boost their allocation of affordable rental units and policies promoting cooperative housing are being introduced (Baleo, 2019).	market are owned by private entities. <ul style="list-style-type: none"> • More than 15% of rental housing units available in the market are owned by public entities and constructed by city municipalities. • Around 11% of rental housing units available in the market are owned by cooperative entities. 	as a result of which rentals increased. Due to public pressure, the subsidies were resumed in 2014 in a bid to curb the rising rentals. Additional initiatives: offering development land with reduced and special incentives, along with the implementation of a rent freeze for five years.
4	Maharashtra, India: Piloted a rental housing scheme through the Mumbai Metropolitan Region Development Authority (MMRDA) from 2008-2015. While the scheme achieved modest success, it fell short of attracting the envisioned scale of private-sector participation. In 2015, it was absorbed into a more comprehensive affordable housing initiative. (Nallathiga & Dharmasi, 2016)	50 housing projects located in the area of jurisdiction of MMRDA constituted the scheme. One hundred thousand units were planned to be delivered annually. The scheme followed the provision of the Maharashtra Housing Policy and was framed keeping public-private collaboration in mind. To encourage private sector involvement, the scheme offered relaxed construction norms, particularly valuable in the high-pressure Mumbai market.	<ul style="list-style-type: none"> • A Floor Space Index (FSI) of 4.0 with Transferable Development Rights (TDR) was provided which could be used for private construction. The scheme specified that requiring the utilization of if FSI of 3.0 is utilized in building affordable rental housing units, and the left-over area could be sold by the builder in the market. • A Floor Space Index (FSI) of 3.0 without TDR was provided which could be used for private construction. The scheme specified that requiring the utilization of if FSI of 1.0 is utilized in building affordable rental housing units, and the leftover area could be sold by the builder in the market. • Construction on MMRDA land could be entitled to an FSI of 4.0, with the condition that if an FSI of 3.0 is utilized for affordable rental units, then the remaining FSI could be consumed for building commercial floors.
5	Chandigarh, India: The Chandigarh Housing Board (CHB) rent-to-own scheme was introduced in 2006. Also called the Slum-Free City Scheme (SFS), it comprises 25,728 flats for slum dwellers. Initially planned for rehabilitating slum areas, it later got amalgamated into Jawaharlal Nehru National Urban Renewal Mission's (JNNURM) Basic Services for the Urban Poor (BSUP) project. The total project cost estimated was INR 12,377 million (Teotia, 2015; Nallathiga, 2019).	The plan aims to construct more than 25,278 units for 23,841 beneficiary families, equivalent to approximately 100,000 individuals. The scheme continues with allotments occurring incrementally. The CHB is required to transfer 95% of the collected rent under both schemes to the Consolidated Fund of India (Chandigarh Administration, 2020; MoHUA, 2021).	By the year 2020, 17,700 flats have been handed over to the target group (Gupta and Kavita, 2020). Some vacant units have been repurposed as Affordable Rental Housing Complexes (ARHCs). A monthly rent of INR 3000 has been fixed for model ARHC units. Every five years, the rent is programmed to increase by 20%. After 20 years, the occupants are to be conferred with ownership rights of the units they inhabit subject to the payment of a pre-decided amount based on a socio-economic survey. Oversight and management of the project are entrusted to the Chandigarh Housing Board (CHB).
6	West Bengal, India: The Public Rental Housing Estates (PRHEs) consist of 89 complexes, with 75 of them being funded by the government. These estates were established in government and Kolkata Improvement Trust (KIT)	'Rent-to-own' scheme; tenants become owners of the house after a specified period, provided they pay the rent on time and a down payment at the ownership transfer. The complexes were financed through long-term	Despite charging nominal rents, the income generated is insufficient to cover maintenance expenses, making these estates a financial burden on the West Bengal government. Primarily built for government employees, these complexes offer 20,000 units in rent

	owned sites during 1970s) (Roy et al., 2022).	loans from the Life Insurance Corporation (LIC) with a payback period of 75 years.	and are located in high-value land in Kolkata and Howrah.
7	Kota, India: Rent-to-own Scheme; initiated under the Rajiv Awas Yojana; was implemented in areas situated outside the municipal borders of Kota city. The Kota Urban Improvement Trust (UIT), managed the project, comprising 1528 flats (MoHUA, 2015). These apartments could be purchased by tenants after five years by paying 10% of the project's construction cost, totaling INR 35,000.	Kota UIT officials, around 1470 units have been completed and handed over since July 2019. The construction cost was divided, with the union government covering 50%, the state government contributing 30%, and the Kota Municipal Corporation providing 20%. Rent was fixed at INR 525 per month, subject to a five percent yearly escalation, and tenants were required to pay an additional INR 100 as maintenance charges.	Unlike the Chandigarh case, beneficiaries in Kota typically settle outstanding rental payments promptly upon receiving notifications from officials. This trend may be attributed to the foreseeable ownership timeframe and the comparatively affordable rent. The project incorporated an estimated subsidy of INR 0.35 million per dwelling unit, encompassing the land cost. (Bhan et al., 2014).

Interdisciplinary Dimensions in Designing and Delivering Affordable Housing

The complex tapestry of affordable housing involves the collaboration of various disciplines, each contributing its unique expertise to create sustainable, inclusive, and economically viable housing solutions ((McRobert, 2019). Following is the list of disciplines that contribute significantly to the affordable housing domain:

1. **Economics:** Economists analyze market trends, labor markets, and income distribution to understand the economic feasibility of affordable housing projects. They help in developing financial models, assessing the affordability of housing options, and recommending policy interventions (McDonald, 2015).
2. **Urban Planning:** Urban planners address spatial organization, land use, and infrastructure planning for optimal community development. They design master plans, ensuring efficient land utilization, connectivity, and the integration of affordable housing within the urban fabric (Mekawy, 2014).
3. **Legal and Regulatory Experts:** Legal professionals navigate the complex regulatory landscape, ensuring compliance with zoning laws, building codes, and tenant rights. They guide navigating legal frameworks, advocating for supportive policies, and streamlining approval processes (CitiesAlliance, 2020).
4. **Social Sciences:** sociologists and anthropologists study community dynamics and social needs to create inclusive housing environments. They inform the design process by considering cultural nuances, social equity, and community well-being, fostering a sense of belonging (Haman, et al., 2021).
5. **Architecture:** Architects translate vision into physical structures, considering aesthetics, functionality, and sustainability. They design cost-effective, aesthetically pleasing housing units that maximize space, energy efficiency, and adaptability to residents' needs (Danko, 2013).
6. **Urban Design:** Focus on the aesthetics, layout, and functionality of public spaces, ensuring a cohesive and visually appealing urban environment are the contributions urban designers can make in the area of affordable housing design. They integrate the principles of urban design into affordable housing projects, creating well-planned neighborhoods, enhancing walkability, and promoting a sense of community (Campbell & Meades, 2011).
7. **Finance and Investment Experts:** Financial analysts evaluate funding models, investment risks, and return on investment for affordable housing projects. They evaluate the financial viability of projects by identifying funding sources, managing

budgets, and ensuring long-term economic sustainability (Gopalan & Venkataraman, 2015).

8. **Construction and Engineering:** Engineers and construction experts provide technical expertise in implementing architectural designs, ensuring structural integrity and safety. They execute construction plans, incorporating innovative building materials and techniques to optimize costs while maintaining quality (Spaan & Abraham, 2023).
9. **Technology Specialists:** Technology experts explore innovative solutions, including smart infrastructure and sustainable building practices. They integrate technology to enhance energy efficiency, reduce environmental impact, and improve the overall functionality of affordable housing units (Gangwar, 2016).

The Pivotal Role of Architects and Urban Designers

Architects and urban designers serve as orchestrators, synthesizing insights from various disciplines to craft holistic and human-centric affordable housing solutions (Petrescu & Petcou, 2023). Their role encompasses:

- Translating diverse requirements into cohesive architectural and urban design concepts.
- Balancing aesthetic appeal with functionality and cost-effectiveness in both building and neighborhood design.
- Advocating for sustainable, inclusive, and culturally sensitive housing environments.
- Collaborating with experts across disciplines to ensure a comprehensive and well-integrated approach.
- Fostering community engagement and participatory design processes for both individual structures and the broader urban fabric.

Findings

Affordable housing falls short of the requirements to house the seasonal migrants due to the nature of their stay in cities which are of short duration and impermanent. The lack of permanent income increases the vulnerability of seasonal migrants and blocks their access to mainstream rental housing. Thus, developing affordable rental housing tailored to short-term stays is the most appropriate solution that can be adopted to house them adequately in cities. Opportunities and challenges associated with affordable rental housing in India and Abroad as inferred from case studies are listed in Table 6 presented below:

Table 6: Inferences drawn from the case studies

Source: Authors

	City/ Scheme	Opportunities	Challenges
1	Sao Paulo, Brazil Social renting voucher program	<ul style="list-style-type: none"> •Unlocking private inventory-The initiative successfully breathed new life into vacant housing stock, alleviating the need for extensive new construction. Utilization of vouchers played a pivotal role in instilling confidence among the homeowners, by securing income from renting out their private property. •Rental housing as a transitional Step-Occupying houses on rent was put forward as an intermediate phase towards achieving homeownership, aligning with the aspirations of people. Occupancy terms were skillfully 	<ul style="list-style-type: none"> •Lack of a solid financial foundation- The scheme suffered from a lack of a sustainable financial underpinning. This approach lacked scalability and self-financing mechanisms, leading to its abandonment in a short time after its inception. •A weak policy framework program has witnessed multiple transformations during its time of operation. Ownership and rental; both were promoted under this program from time to time. Policy supporting the program also has been inconsistent, leading to its failure.

		<p>leveraged to secure social development and commitments from renters.</p> <ul style="list-style-type: none"> •Freedom of choice for renters- The vouchers empowered renters, liberating them from the obligation to inhabit government-designed and delivered housing. Typically plagued by issues such as limited space, inflexibility, poor location, or inadequate services, this scheme allowed renters to select a private unit that suited their preferences. 	
2	Nanjing, China Rental subsidies program	<ul style="list-style-type: none"> •The initiative utilizes affordable rental housing as a driving force for urban development. •Decoupling subsidies - the subsidies offered can be used in any kind of housing; public or private, thus giving choice to the renters. 	<ul style="list-style-type: none"> • Financial viability -Financial viability was not worked out for the diverse contexts within the country. • Centralized governance- The lack of empowerment of local-level governing bodies posed challenges to replicating Nanjing's rental housing model in different locations.
3	Berlin, Germany Rental housing schemes	<ul style="list-style-type: none"> •Sectoral vibrancy- Rooted in a robust history of welfare and cooperative housing, the rental housing sector in Berlin displays exceptional vibrancy by offering diverse responses to those seeking affordable rentals. • Balanced engagement of the private sector -Acknowledgement of the government's limitations in satisfying the housing demand and framing incentives and policies for private sector inclusion has vitalized the affordable rental housing segment in the country. • Rental communities - The city's extensive rental living legacy has cultivated unified rental communities and networks, prominently demonstrated through cooperative endeavors. 	<ul style="list-style-type: none"> •Rising real estate cost -Commercial pressure on land due to a boom in construction-linked activities has emerged as a challenge for government housing companies. •Take over by private builders-Private sector companies are acquiring housing units in large numbers. This rent increase lowers affordability. • Financial viability - Despite the constant evolution of the rental market in Berlin, the government has been unable to frame policies that would ensure the financial viability of affordable housing complexes.
4	Maharashtra, India MMRDA Rental Housing scheme	<ul style="list-style-type: none"> • Private sector engagement Marked India's first attempt to - the private sector in delivering affordable rental housing. • Land value capture efforts - The scheme linked the construction of affordable rental units with a free sale component, striking a balance between capturing land value and addressing a social welfare agenda. Multiple incentive models provide private developers with the flexibility to choose the most profitable option according to their calculations (Roy & Meera, 2020). 	<ul style="list-style-type: none"> • Design flaws - The need for rapid unit delivery forced compromises on architectural design and livability, resulting in issues like poor ventilation, vertical slumming, and rigid living spaces. • Densification without services - Higher FSI led to densely populated projects, without due consideration given to service provision. • Nonconfidence of allied vendors - Stringent norms posed challenges in aligning the scheme with rental management companies, leading to operational issues. • Program assimilation -In 2015, the scheme was integrated into a broader affordable housing program without thorough analysis and resolution.
5	Chandigarh, India Chandigarh Housing Board	<ul style="list-style-type: none"> • Community engagement- The scheme fostered early engagement with communities slated for relocation, establishing trust and ensuring community cooperation. The rapid evacuation of slums was achieved in a very short time. 	<ul style="list-style-type: none"> • Extension of timeline • One size does not fit the all-singular design of all flats did not meet the requirement of all households. •Outstanding rental

	(CHB) rental housing scheme	<ul style="list-style-type: none"> •Easy inclusion- Acknowledging the importance of migrant workers to the city's economy, the initiative permitted their registration without imposing politically motivated restrictions. •Use of technology- Using technology for allotments and verifications throughout the scheme's implementation has expedited processes • Multi-institutional Collaboration - Involving various city departments in the allotment process and the suggested transfer of units to the municipal corporation for maintenance played a crucial role in establishing an institutional network for rental housing (Kumar, 2010). 	<ul style="list-style-type: none"> •Situated on the outskirts of the city, offers fewer livelihood opportunities, increased daily transportation •Unlike in their previous slum accommodations where services like electricity and water were free, these rental complexes charge for such amenities. •Residents of rental housing allocated after 2018 faced heightened difficulties during the COVID-19 pandemic in 2019, resulting in a lack of income. However, additional expenses persisted, including rent and other services.
6	West Bengal, India Public Rental Housing Estates (PRHES)	The Kolkata Improvement Trust (KIT) allocated around INR 4 crore annually for the maintenance of rental units (Chakraborti, 2007). However, the collected annual rent amounted to just INR 30 lakh. Unlike schemes such as ARHCs, which have a set rental timeline of 25 years, West Bengal Public Rental Housing Estates (PRHES) lacked a specified rental period. To alleviate financial stress, the Government of West Bengal sought to sell the units to tenants, including those in unauthorized occupation, at heavily subsidized rates (Sengupta & Tiple, 2007).	Efforts to sell the flats faced significant challenges, with existing tenants showing reluctance due to the poor condition of the units. Only 80 flats in Jorasanko, Kolkata, were successfully sold at a considerable discount compared to the market rate. Overall, only about 10-15% of PRHE flats were sold, leading to the abandonment of the idea. Consequently, these complexes continue to strain the state finances of West Bengal. The West Bengal experience emphasizes the need to reassess the financial sustainability of government-managed projects like those under the ARHCs Model 1 after 25 years for informed decision-making.
7	Kota, India Rent-to-own initiatives	The Kota Urban Improvement Trust (UIT) served as the management agency of the scheme, and there was reluctance among tenant beneficiaries to pay a monthly maintenance fee of INR100. Currently, Kota UIT is responsible for the upkeep of these units. However, after the passage of five years and the transfer of ownership to the beneficiaries, Kota UIT is no longer involved in maintenance.	Formation of the resident's welfare association has been a challenge. Unlawful occupation and antisocial activities frequently occur in unallocated vacant units.

The investigation into the role and impact of architects and urban planners in crafting sustainable housing solutions for urban seasonal migrants reveals critical insights. Architects play a pivotal role in maximizing spatial efficiency, creating community-centric designs, and emphasizing adaptability and flexibility. Collaborating closely with urban planners, they integrate green spaces, ensure infrastructure accessibility, and champion inclusive design practices. The synergy between architects and urban planners results in cost-effective, affordable housing solutions that address the diverse needs of seasonal migrants. This interdisciplinary approach contributes not only to the physical structures but also to the creation of supportive, inclusive, and resilient communities, highlighting its pivotal role in addressing the unique challenges posed by urban seasonal migration. Strategies that can be adopted to enhance access to appropriately designed affordable rental housing for seasonal migrants, as suggested by the literature review are presented below:

Design Strategies

1. **Modular Construction:** Embrace modular and prefabricated techniques for rapid and scalable housing development to accommodate dynamic seasonal migration.
2. **Flexible Dwelling Designs:** Develop adaptable housing designs that can be easily reconfigured to accommodate varying family sizes and spatial requirements of seasonal migrants.
3. **Diverse Housing Typologies:** Recognize the diversity among seasonal migrants and provide a range of housing typologies. Offering options such as single-bedroom units, dormitories, and family accommodations cater to the varied preferences and requirements of the migrant.
3. **Inclusive Amenities:** Incorporate inclusive amenities such as communal spaces, childcare facilities, and healthcare services to enhance the overall living experience and cater to diverse migrant needs.
4. **Cultural Sensitivity:** Integrate cultural sensitivity into the design process, acknowledging the diverse backgrounds and preferences of seasonal migrants to create a sense of belonging and community.
5. **Natural Lighting and Ventilation:** Prioritize natural lighting and ventilation in the design to enhance the quality of living spaces, contributing to the overall well-being of migrant residents.
6. **Safety Measures:** Implement safety measures in the design, considering factors like fire safety, emergency exits, and security features to ensure a secure living environment for seasonal migrants.
7. **Accessibility Standards:** Adhere to universal design principles to ensure that housing units are accessible to migrants with disabilities, promoting inclusivity and equitable living conditions.
8. **Scalable Architecture:** Design housing structures with scalability in mind, allowing for the phased expansion or reduction of dwelling units based on seasonal migration patterns.

Implementation Strategies

1. **Transparent Beneficiary Selection:** Develop transparent and inclusive criteria for beneficiary selection, taking into account the specific needs of urban seasonal migrants. Prioritize those in greatest need, ensuring a fair and equitable distribution of affordable housing resources.
2. **Community Engagement:** Foster community engagement throughout the implementation process, involving seasonal migrants in decision-making and ensuring their voices are heard to create a sense of ownership and cooperation.
3. **Collaboration with Local Authorities:** Establish strong collaborations with local authorities to streamline the implementation process, address regulatory requirements, and facilitate a smoother integration of affordable housing projects within the existing urban framework.
4. **Public-Private Partnerships (PPP):** Explore and promote PPP models to leverage both public and private resources for the successful implementation of affordable housing initiatives, ensuring financial sustainability and efficiency.
5. **Technology Integration:** Incorporate IT-based platforms for efficient project management, allotments, and verifications, reducing administrative burdens and expediting the implementation timeline.
6. **Phased Construction Approach:** Implement a phased construction approach to ensure the timely completion of housing units, allowing for the swift relocation of seasonal migrants and minimizing delays associated with large-scale projects.
7. **Maintenance Collaboration:** Collaborate with local municipalities or city corporations for the maintenance of housing units, creating a sustainable

institutional network for the ongoing upkeep and management of affordable rental housing complexes.

Financial Strategies

1. **Financial Inclusion:** Implement financial inclusion strategies to facilitate access to affordable rental housing for seasonal migrants. This may include providing financial literacy programs, promoting access to formal credit, and exploring innovative financing mechanisms to enhance affordability.
2. **Rent Subsidies or Sliding Scales:** Consider implementing rent subsidy programs or sliding scales based on income levels to make housing affordable for seasonal migrants. This approach ensures that the cost of housing aligns with the economic capacity of the beneficiaries.
3. **Government Subsidies and Incentives:** Explore avenues for government subsidies and incentives to developers and investors involved in affordable housing projects. These measures can stimulate private sector participation and contribute to the financial viability of such initiatives.
4. **Community-Based Financial Models:** Investigate community-based financial models, such as cooperatives or community land trusts, which empower seasonal migrants to collectively manage and finance housing projects, fostering a sense of community ownership and sustainability.
5. **Microfinance Initiatives:** Facilitate partnerships with microfinance institutions to provide affordable and tailored financial solutions for seasonal migrants, enabling them to meet rental obligations and build financial resilience.

Conclusions

This paper concludes that the examination of housing challenges faced by seasonal migrants underscores the significance of tailored solutions, particularly affordable rental housing. The impermanent nature of their stays and lack of a stable income make traditional affordable housing inadequate. Developing rental options for short-term stays emerges as a fitting solution for this vulnerable population in urban areas.

Case studies worldwide, including Sao Paolo, Nanjing, Berlin, Maharashtra, Chandigarh, West Bengal, and Kota, reveal opportunities and challenges in affordable rental housing. Successful initiatives, like unlocking private housing inventory and fostering community engagement, show innovative approaches. However, challenges such as financial sustainability and weak policy frameworks highlight the complexities in effective implementation.

The role of architects and urban planners is crucial, emphasizing spatial efficiency, community-centric designs, and adaptability. This interdisciplinary approach not only addresses physical aspects but contributes to creating supportive, inclusive communities. Findings stress the need for a holistic, collaborative, and technology-driven approach to urban development. The identified strategies offer a comprehensive framework, integrating design, implementation, and financial aspects, providing actionable steps to address multifaceted challenges related to seasonal migration. The success lies in the intersection of thoughtful design, inclusive implementation, and strategic financial mechanisms, offering a blueprint for creating sustainable urban habitats for seasonal migrants globally.

Acknowledgments

We would like to express our heartfelt gratitude to the management, library staff, and colleagues of ABIT-PMCA for their support and encouragement throughout my study. We would also like to thank officials of Orissa State Housing Board, Cuttack Municipality and Housing & Urban Development Department, and Odisha Urban Housing Mission for their cooperation while doing the study. Last, but not least, we would like to thank all the migrant

workers, whose names and addresses are unknown to us for answering our queries and talking to us in depth which immensely helped us in producing this paper.

References

- Agarwal, P. (2022) State-Migrant Relations in India: Internal Migration, Welfare Rights and COVID-19, in *Social Change*, Vol.52, Issue 2, pp. 239-256.
- Albaik, M. (2023) The Social Impact of Gentrification in the Jabal Al-Weibdeh Neighborhood in Jordan, in *ISVS e-journal*, Vol.10, Issue.5, pp.225-245.
- Baleo, M. (2019) Berlin: the challenge of affordable housing in a city of low-income tenants, Paris: La Fabrique Cinema De L'Institut Francais.
- Bhan, G., Anand, G. & Harish, S. (2014) Policy Approaches to Affordable Housing in Urban India, in *IHS-RF Policy Paper Series*, Vol .1, Issue. 2, pp. 1-68.
- Bhullar, K. K. & Verma, A. K. (2018) Working Condition of Migrant Labourers in Non-Agricultural Sector of Urban Punjab, in *IOSR Journal Of Humanities And Social Science*, Vol.23, Issue.3, pp. 15-24.
- Bilsborrow, R. E., Oberai, A. S. & Standing, G. (1984) Migration Surveys in Low-Income Countries: Guidelines for Survey and Questionnaire Design, London: Croom Helm.
- Brau, A. (2007) Seasonal Migration and Agriculture in Vietnam, Working Paper No. 07-04, Rome: Agricultural Development Economics Division, The Food and Agriculture Organization of the United Nations.
- Breman, J. (1994) Wage Hunters and Gatherers: Search for Work in the Urban and Rural Economy of South Gujarat, Delhi: Oxford University Press.
- Campbell, M. & Meades, Z. (2011) Urban Design Principles for Low-Cost Housing on a Micro-level of Planning, in *The International Journal of the Constructed Environment*, Vol.1, Issue.2, pp. 29-56.
- Census of India (2011) New Delhi: Office of Registrar General and Census Commissioner, Available at < <https://www.census2011.co.in/> > Accessed on 23rd Nov, 2023.
- Chandigarh Administration (2020) Notification, Chandigarh Administration, Chandigarh: Finance Department.
- Chary, S. V. (2018) A Critical Review On Low-Cost Housing System In India, in *International Journal of Creative Research Thoughts*, Vol. 6, Issue.2, pp. 458-464.
- Choudhry, P., Basu, R. & Khan, M. S. (2021) A Study in the Scope and Impediments of Affordable Rental Housing in India, in *International Journal of Creative Research Thoughts*, Vol.9, Issue.6, pp 1-12.
- Choudhury, D. (2023) Housing the seasonal migrants, a challenge for Urban Sustainability: The Case of India, in *Sustainability, Agri, Food and Environmental Research*, Vol. 11, Issue.1, pp.1-23.
- Choudhury, D. & Bhaduri, S. (2020) Collage Cities: A Contemporary Reading, in *International Journal of Advanced Science and Technology*, Vol. 29, Issue 12, pp. 2004-2022.
- Cities Alliance (2020) Policy Lab 1 India: Policy and Legal Framework of Rental Housing, Brussels: Cities Alliance.
- Clement, F. D., Cheng, Y. & Hong, Z. (2018) Effectual Planning on Affordable Housing, Case of Nanjing, in *World Journal of Engineering and Technology*, Vol.6, Issue 2B, pp. 63-82.
- D'Souza, R. (2019) Housing Poverty in Urban India: The Failures of Past and Current Strategies and the Need for a New Blueprint, New Delhi: Observer Research Foundation.
- D'Souza, R. & Agrawal, A. (2020) Affordable rental housing for the urban seasonal migrants in India, New Delhi: Observer Research Foundation.
- Danko, M. R. (2013) Designing Affordable Housing for Adaptability: Principles, Practices, & Application, Pitzer College: Claremont.
- Davies, A. (2020) Aging and Migration, in *International Encyclopedia of Human Geography*, ed. Audrey Kobayashi, London: Elsevier, pp. 73-77.

- Desai, A. (2014) Financing Affordable Housing for the Low-Income in Urban India, Pennsylvania: University of Pennsylvania.
- Desai, R. & Sanghvi, S. (2018) Migrant Construction Workers Housing in Ahmedabad: Seasonal Labour Migration Translocal Lives and Urban Governance, Ahmedabad: CEPT University.
- Desai, S. & Vanneman, R. (2019) India Human Development Survey Panel (IHDS, IHDS-II), 2005, 2011-2012, New Delhi: National Council of Applied Economic Research.
- Deshingkar, P. & Akter, S. (2009) Migration and Human Development in India, New York: United Nations Development Programme.
- Deshingkar, P. & Farrington, J. (2009) Circular Migration and Multilocational Livelihood Strategies in Rural India, New York: Oxford University Press.
- Deshingkar, P. & Start, D. (2003) Seasonal Migration for Livelihoods in India: Coping, Accumulation and Exclusion, London: Overseas Development Institute.
- ElFayoumi, K., Salas, J. & Tudyka, A. (2021) Affordable Rental Housing: Making It Part of Europe's Recovery, London: International Monetary Fund.
- ET Online (2018) India's GDP grows at 8.2 percent in 2018-19 Q1, New Delhi: The Economics Times.
- Gandhi, S., Green, R. . K. & Patranabis, S. (2021) India's housing vacancy paradox: How rent control and weak contract enforcement produce unoccupied units and a housing shortage at the same time, in *SSRN Electronic Journal*, Vol.2, Issue. 1, pp. 1-40.
- Gangwar, G. (2016) *Affordable Housing: Emerging Technologies and Building Materials in Indian Context*, Raipur, Indian Buildings Congress Mid Term Seminar on "Use of New Technologies in Const. of Affordable Housing.
- Gopalan, K. & Venkataraman, M. (2015) Affordable housing: Policy and practice in India in *IIMB Management Review*, Vol. 27, Issue.2, pp. 129-140.
- Haberfeld, Y., Menaria, R. K., Sahoo , B. B. & Vyas , R. N. (1999) Seasonal migration of rural labor in India. *Population Research and Policy Review*, Vol.18, Issue.1, pp. 471-487.
- Haman, O. B., Hulse, K. & Jacobs, K. (2021) Social Inclusion and the Role of Housing, in P. Liamputtong, ed. *Handbook of Social Inclusion*. Geneva: Springer, pp. 1-20.
- Hoda, A. (2018) Land use and Land Acquisition laws in India, New Delhi: Indian Council for Research on International Economic Relations.
- ILO. (2004) Towards a fair deal for migrant workers in the global economy, Geneva: International Labour Office, United Nations.
- JLL. (2018) Affordable Housing: The Indian perspective & future outlook: Building change & sustainable communities, London: Jones Lang LaSalle Incorporated.
- Joseph, R. T. & Shukla, K. (2018) Housing for Urban Migrants, Bangalore: SELCO Foundation.
- Joshi, S., Monani, D., Sahu, A. & Bhatnagar, A. (2022) Shelter Solutions for Migrant Construction workers, Ahmedabad: Anant National University.
- Kashkari, M., & Brar, T. S. (2023) Planning for Sustainable Urban Developments: The Historic Towns of Karnataka, India, in *ISVS e-journal*, Vol. 10, Issue.1, pp.217-228.
- Keshri, K. & Bhagat, R. B. (2012) Temporary and Seasonal Migration: Regional Pattern, Characteristics and Associated Factors, in *Review of Rural Affairs*, Vol.47, Issue 4, pp.81-88.
- Kumar, A. (2014) Estimating rural housing shortage, in *Economic and Political Weekly*, Vol. 49, Issue.26, pp. 74-79.
- Li, J. & Liu, Z. (2018) Housing stress and mental health of migrant populations in urban China, in *Cities*, Vol. 81, Issue.3, pp. 172-179.
- Lozanovska, M. (2019) Migrant Housing, Architecture, Dwelling, Migration, New York: Routledge.
- Manoj, P. (2017) Construction costs in affordable housing in Kerala: the relative significance of the various elements of costs of affordable housing projects, in *International Journal of Civil Engineering and Technology*, Vol.89, Issue.9, pp. 1176-1186.
- McDonald, J. F. (2015) Affordable Housing: An Economic Perspective in *Architecture_MPS*, Vol.72.Issue.2, pp. 1-17.
- McRobert, A. (2019) Building a Holistic Approach: Towards an Interdisciplinary Platform for Housing Affordability, State of Australian Cities Conference and PhD Symposium, pp. 1-17, Perth: University of Western Australia.

- Mekawy, H. S. (2014) Role of planning mechanisms in affordable housing delivery: Inclusionary zoning, in *International Journal of Development and Sustainability*, Vol. 3, Issue.9, pp. 1927-1945.
- Menshaw, A. E., Shafik, S. & Khedr, F. (2016) Affordable Housing as a Method for Informal Settlements Sustainable Upgrading, in *Procedia - Social and Behavioral Sciences*, Vol. 223, Issue.3, pp. 126-133.
- Ministry of Housing and Urban Affairs, MoHUA. (2021) Housing for All Mission – Scheme, New Delhi: Government of India.
- Ministry of Housing and Urban Poverty Alleviation, MHUPA. (2012) Report of The Technical Group On Urban Housing Shortage (TG-12), New Delhi: Government of India.
- Ministry of Housing and Urban Poverty Alleviation, MHUPA. (2015) Minutes of the 20th Central Sanctioning and Monitoring Committee meeting, New Delhi: Government of India.
- Mobarak, A. M. & Reimao, M. E. (2020) Seasonal Poverty and Seasonal Migration in Asia, in *Asian Development Review*, Vol., Issue.1, pp. 1-42.
- Moghe, T. & Kumthekar, M. (2021) Constraints in developing affordable housing to urban poor, in *International Research Journal of Engineering and Technology*, Vol.8, Issue. 3, pp. 2037-2039.
- Mosse, D., Gupta, S. & Shah, V. (2005) On the Margins in the City: Adivasi Seasonal Labour Migration in Western India, in *Economic and Political Weekly*, Vol.40, Issue. 28, pp. 3025-3038.
- Mushumbusi, M. Z. (2011) Formal and informal practices for affordable urban housing, Stockholm: Royal Institute of Technology.
- Naik, M. (2015) Informal Rental Housing Typologies and Experiences of Low-income Migrant Renters in Gurgaon, India, in *Environment and Urbanization Asia*, Vol.6, Issue.2, pp. 154-175.
- Nallathiga, R. & Dharmasi, G. G. (2016) MMRDA Rental Housing Scheme: A Case of Affordable Housing, in *Shelter*, Vol.17, Issue.1, pp. 10-16.
- Nallathiga, R. (2019) Housing for the Urban Poor: The Case, in *Nagarlok*, Vol.1, Issue.1, pp. 1-10.
- Nayak, C. & Kumar, C. . R. (2018) Seasonal Migration and Livelihood of Marginalised Communities-A Case Study in Boudh District of Odisha in *Indian Journal of Economica and Development*, Vol.14, Issue. 2, pp. 316-323.
- Nitika, L . A., Nongkynrih, B. & Gupta, S. K. (2014) Migrants to urban India: need for public health action, in *Indian Journal of Community Medicine*, Vol.39, Issue.2, pp. 73-79.
- Palayi, A. & Priyaranjan, N. (2018) Affordable Housing in India, New Delhi: RBI Bulletin.
- Patel, A. (2021) *How can Indian cities shield vulnerable migrants from climate change? With better affordable housing*, Available at < <https://scroll.in/magazine/1007459/how-can-indian-cities-shield-vulnerable-migrants-from-climate-change-with-better-affordable-housing> > Accessed on: 23rd Oct 2023.
- Patel, B., Byahut, S. & Bhatha, B. (2017) Building regulations are a barrier to affordable housing in Indian cities: the case of Ahmedabad, in *Journal of Housing and the Built Environment*, Vol.3, Issue.1, pp. 1-21.
- Patel, P. & Ganeshgudi, A. (2020) To Study and Analyze the Promotional Strategies of Museum of Patola Craft Built by Salvi Families in Patan, Gujarat, in *International Journal of Research in Engineering, Science and Management*, Vol.3, Issue.3, pp. 152-156.
- Pethe, A., Sharma, R. & Desai, D. (2023) A pathway for Affordable Housing in Urban India: A Case study of Mumbai, New Delhi: Observer Research Foundation.
- Petrescu, D. & Petcou, C. (2023) The role of architects in initiating, sustaining and defending urban commons in mass housing estates: R-Urban in Grand Ensembles, in *Journal of Architecture*, Vol. 28, Issue.1, pp. 169-181.
- Rana, D. P. & Rana, A. K. (2016) Core Issues and Challenges of Affordable Housing, in *Indian Journal of Applied Research*, Vol.6, Issue.1, pp. 193-195.
- Roy, D., ML, M., Haque, I. & Gupta, E. (2022) Institutional provisioning of affordable rental housing in urban India: Past experiences and way forward, New Delhi: Indian Council for Research on International Economic Relations (ICRIER).

- Sethi, S., Ghuman, R. S. & Ukpere, W. I. (2013) Socio-economic analysis of the migrant laborers in Punjab: An empirical analysis, in *Global Journal of Business Management I*, Vol.7, Issue.9, pp. 001-009.
- Spaan, M. & Abraham, Y. S. (2023) Barriers to and Enablers of Affordable Housing Construction: Insights from Construction Industry Professionals, in *Engineering Proceedings*, Vol.53, Issue.1, pp. 36-43.
- Srivastava, R. (2012) Internal Migration in India: An Overview of its Features, trends, and Policy Challenges, New Delhi: United Nations Educational, Scientific and Cultural Organization, and UNICEF India Country Office.
- Stiphany, K., Ward, P. M. & Perez, L. P. (2022) Informal Settlement Upgrading and the Rise of Rental Housing in Sao Paulo, Brazil, in *Journal of Planning Education and Research*, Vol.11, Issue.2, pp.1-17.
- Teotia, M. K. (2015) Housing for the Urban Poor in Chandigarh, in *Shelter*, Vol.16, Issue. 2, pp. 55-63.
- Trask, B. S. (2022) Migration, Urbanization, and Family Dimension, New York: Department of Economic and Social Affairs, United Nations.
- UNESC. (2017) Housing for Migrants: Challenges and Practices in the ECE Region, Geneva: United Nations Economic and Social Council.
- UN-Habitat (2015) Housing at the center of the New Urban Agenda, Nairobi: United Nations Human Settlements Programme.
- UN-Habitat (n.d) Population living in slums (%) of the urban population, Available at <<https://data.worldbank.org/indicator/EN.POP.SLUM.UR.ZS>> Accessed on: 3rd Oct, 2023.
- UNHRHC. (2010) Migration and the right to housing-special Rapporteur on the right to adequate housing, Geneva: United Nations Human Rights Office of the High Commissioner.
- Usami, Y. (2012) A Note on Migrant Workers in Punjab, in *The linkage between Agriculture and Industry in India*, ed. Uchikawa, S., pp. 85-114, London: Institute of Developing Economics.
- W.E.F. (2017) Migration and Its Impact on Cities, London: World Economic Forum.
- Yang, X. & Guo, . F. (1999) Gender Differences in determinants of temporary labour migration in China: a multilevel analysis, in *International Migration Review*, Vol. 33, Issue,4, pp. 929-953.
- Zelinsky, W. (1971) The Hypothesis of the Mobility Transition, in *Geographical Review*, Vol. 61, Issue.2, pp. 219-249.