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CASE
STUDY

ENABLING MARKET TO SUPPLY AFFORDABLE HOUSING THROUGH INCLUSIONARY HOUSING POLICIES LEARNINGS FROM AHMEDABAD

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the GIZ Sustainable Urban Development - Smart Cities (SUD-SC) initiative



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ENABLING MARKET TO SUPPLY AFFORDABLE HOUSING THROUGH INCLUSIONARY HOUSING POLICIES

LEARNINGS FROM AHMEDABAD



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FOLDER-A: INTRODUCTION

ENABLING MARKET TO SUPPLY AFFORDABLE HOUSING THROUGH INCLUSIONARY HOUSING POLICIES

LEARNINGS FROM AHMEDABAD







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PREFACE

Inclusionary Housing or Inclusionary Zoning or Regulations uses the planning system or policies to create affordable housing and foster social inclusion by capturing resources created through the market. These terms can refer to a program, regulation or law that provides incentives to private developers like density bonus, zoning variance, fee reduction, tax holiday etc., to create affordable housing or below market price housing either on the same site or on some other site. Further, some alternatives may also be provided to the developers if they cannot create the stipulated affordable housing like donating a part of their land, repairing/rehabilitating existing public housing, fee etc. Though the terms are used interchangeably in the literature, Inclusionary Zoning, Inclusionary Regulations, and Inclusionary Housing are not the same. Inclusionary Zoning, Regulation, and Housing are defined below in the preface, and these definitions will be used throughout the case study.

As the name suggests, Inclusionary Zoning is spatial, i.e., it pertains to a zone or an area where affordable housing or below market rate housing is to be provided by developers. E.g., the Residential Affordable Housing Zone of Ahmedabad or the Zona Especial de Interesse Social (meaning Special Zone of Social Interest), Brazil or NYC Inclusionary Zoning in specified areas of the Bronx, Brooklyn, Manhattan, and Queens. All these have a particular zone associated with it, usually marked in the city's Development Plan.

Inclusionary Regulations are part of Development Control Regulations or Building Byelaws that allow the city to create Affordable Housing pan-city. E.g., The regulations in Mumbai, India or Johannesburg, South Africa.

Inclusionary Housing has a wider definition, and it includes all programs, regulations, policies, and laws which allow private developers to provide affordable housing. E.g., the Income Tax Section 80 IBA of India exempts tax on affordable housing or section 106 of the Town and Country Planning Act 1990 of the UK, allowing local bodies to negotiate with developers to provide affordable housing.

Inclusionary Zoning originated in the 1970s in the USA to counter the "exclusionary" zoning, a mechanism of socio-economic segregation in the housing market, i.e., keeping out the black and poor from affluent white communities. Since then, it has been adopted in many different cities worldwide to combat gentrification and create affordable housing with little to no public investment.

IZR can be seen in several states and cities in India as well. Their results, however, are not documented because most of these are relatively recent. This case study attempts to understand the realisation of IZR in India, particularly the experience of Ahmedabad. It covers the inception of the IZR in Ahmedabad, its mandates, and tries to assess the output by calculating the increase in housing supply and establish the outcome of IZR through assessing its effectiveness and efficacy in providing affordable housing that is decent according to standards and the end users' perceptions.

After understanding the experience and learning from it, recommendations are made to strengthen the IZR in Ahmedabad. Further, we explore how the learnings from the experience of Ahmedabad can be used for other cities.

ABBREVIATIONS

AHP	:	Affordable Housing in Partnership vertical of the HFA/PMAY policy of Govt. of India
AUDA	:	The Ahmedabad Urban Development Authority
BRTS	:	Bus Rapid Transit System
CRDF	:	CEPT Research and Development Foundation
CREDAI	:	Confederation of Real Estate Developers' Associations of India
DCR	:	Development Control Regulations
DP	:	Development Plan
DU	:	Dwelling Units
FSI	:	Floor Space Index
GIZ	:	Gesellschaft für Internationale Zusammenarbeit; (meaning organization for International cooperation)
GST	:	Goods and Services Tax
HH	:	Household/s
IH	:	Inclusionary Housing
INR	:	Indian Rupees
IR	:	Inclusionary Regulations
IT	:	Income Tax
ITPI	:	The Institute of Town Planner in India
IZ/IZR	:	Inclusionary Zoning/ Inclusionary Zoning and Regulations
NAREDCO	:	National Real Estate Development Council
NIMBY	:	Not In My Back Yard
NM	:	New Mexico State of the USA
NUHHP	:	National Urban Housing and Habitat Policy, 2007 of Govt. of India
NYC	:	New York City
RAH	:	Residential Affordable Housing zone of Ahmedabad DP 2021
SEWS	:	Socially and Economically Weaker Sections
SPRR	:	Sardar Patel Ring Road in the city of Ahmedabad
SPARC	:	The Society for the Promotion of Area Resource Centers
SUD-SC	:	Sustainable Urban Development- Smart cities
TNIFMC	:	Tamil Nadu Infrastructure Fund Management Cooperation
TPS	:	Town Planning Scheme
UK	:	The United Kingdom
UN	:	The United Nations
US	:	The United States
USD	:	United States Dollar
USA	:	The United States of America



EXECUTIVE SUMMARY

Affordable housing has become a major challenge with the rapid urbanisation of cities globally and in India. About 440 million houses, is the estimated global housing need by 2025, and in India, the estimated housing shortage is about 18.78 million. To provide for housing, governments would need to incur major public expenditure. While governments worldwide have been providing housing to their citizens since World War II. Since the 1990s, there is a shift in this approach, and governments have taken the role of enablers of the housing markets instead of providers of housing. The private sector is seen as more efficient, with better capacity and ability to innovate compared to the government for providing housing. The government must continue to provide housing for the poorest of the poor, and even if it does not directly construct it, public money will be used to subsidise such housing. The markets provide housing for all the other income groups. In such a dynamic, some (lower) income groups that generate a substantial housing demand are not adequately catered to by the government or the markets. The markets may be unable to provide to the 'less catered' groups because of low profitability and higher risks associated with such projects. Inclusionary Housing (IH) or Inclusionary Zoning and Regulations (IZR) is a strategy for generating housing for the 'less catered' groups.

Why should government propose Inclusionary Zoning?

The two main reasons for the government to propose Inclusionary Zoning (IZ):

1. To foster inclusive communities with mixed income groups living in the same neighbourhoods, leading to the upward economic mobility of the income groups earning less.
2. To increase the supply of affordable housing without directly spending public money.

Critique of Inclusionary Housing / Inclusionary Zoning

The two main problems of IH or IZ are:

1. It does not adequately address the housing needs of the poor and is a 'band aid', not a cure.
2. It does not target the poorest population i.e., the HH earning incomes at the bottom 25% of the city.

Global and National Experience

The IH or IZR can either be voluntary or mandatory. Both types can be seen in the USA, although there is a trend of voluntary IZR not delivering the required output. As a result, local jurisdictions are switching from voluntary to mandatory IZR. The developer has to reserve some DUs in the project in the US as affordable or below market priced DUs or affordable DUs, usually 10-15%. There is a price/rent restriction on these DUs and an income restriction for the beneficiary based on the local median income. The developer may be provided with one or more incentives like density bonus, zoning variance, fee reduction or waiver, expedited permission, or tax benefits.

In the UK, the local authorities negotiate with the developers for creating affordable housing under the various sections of their various (the Kingdoms') Town Planning Acts. The developers have to provide this as a planning obligation, and the law does not require the authorities to provide incentives. This mandate saw great success as 40% of all affordable housing in the UK in 2004 were due to these planning obligations. However, there are drawbacks to the policy: As these are negotiable and not transparent, they bring about uncertainty and cause many delays. Certain local governments are unable to negotiate with developers due to poor capacity and market knowledge.

The cities of Brazil have IZ and IH policies as a result of protests and movements, but their implementation has not seen much success due to NIMBY-ISM. IZ's focus in these cities has shifted from spatial inclusion and creation of mixed-income neighbourhoods to creating affordable housing units.

There are several IZR and IH policies/programs in India as well, and they can take two forms: the national level IH policies and the local level spatial tools.

The IH policies by GoI include:

1. The PMAY's AHP vertical supports the construction of houses up to 30 sq. mt. carpet area with basic civic infrastructure by private developers.
2. Section 80IBA of the IT Act 1961 allows a 100% income tax exemption for affordable housing projects.
3. Reduction of GST for affordable housing from 5% to 1%.
4. Infrastructure status granted to affordable housing projects by the Ministry of Finance.

These policies incentivise private developers to provide affordable housing, but each has a different definition and conditions for what constitutes an affordable housing project.

At the local level, in India, there are spatial tools such as land management tools, state township regulations, or IZR. Land management tools such as Town Planning Scheme allow reserving up to 10% of the pooled land for housing the urban poor. Similarly, township regulations also allow reservation of plots and built up area. The IZR are zoning or regulation in the DP and DCR, which reserve housing units as affordable housing for the poor. The IZR in India is largely mandatory, except for Ahmedabad. These regulations reserve a percentage of housing or land; usually, 10 – 20 %, which is then given to the beneficiaries and the developers are also given incentives in return to offset the cost. The state government sets a price cap and an income cap that is not linked with the city's local income levels, resulting in the beneficiary group not getting identified properly.

Further, during implementation, the beneficiaries are not allotted housing according to the policy/program mandates. Beneficiaries, in some cases, have also under reported their incomes which further impacts the effectiveness of IZR in India. There is a lack of comprehensive research focusing on the outputs and outcomes of the IZR in India. This case study is a response to this research gap.

Inclusionary Zoning and Regulations of Ahmedabad

IZR of Ahmedabad presents itself as a unique case in India as it is voluntary and takes a liberal market driven approach. The inception of IZR in Ahmedabad resulted from a political manoeuvre by the then Chief Minister of Gujarat, Mr Narendra Modi, in 2012. It was delineated as a one kilometre (1 km) buffer zone on the outer edge of SP Ring Road, the city's outermost ring road, in the Development plan.

The IZR mandates the creation of 1.5 million affordable DUs' in this zone by 2035. The definition of affordable housing is not based on its price but the size, i.e., the size of the DU should not be more than 90 sq. mt. (80 sq. mt. before October 2020.) The IZR of Ahmedabad is voluntary. Developers are given some direct incentives: bonus density, zoning variance, and reduction in the price of purchasing FSI; and some indirect incentives like expedited provision of serviced land and connectivity to public transport to build small sized DUs. The developer is allowed to sell the DUs in the free market. There are no mandates that help create mixed income neighbourhoods or look at spatial inclusion in the IZR of Ahmedabad. It is a tool for the creation of relatively smaller sized DUs. In this respect, it has shown some success.

About 44% of the zone has serviced land through TPS. Over 31,000 DUs have come up in this zone in the last seven years, about 2% of the mandated target. These units have come across the zone in various locational submarkets. Around 20% of these DUs are smaller sized DUs i.e., 1RK, 1BHK and 1.5BHK. These housings are affordable to HH, earning 50 – 80 % of the city's median income.

The developers have developed an innovative model of the value chain or supply mechanisms to provide housing at INR 0.8 - 0.9 million for 1RK in 2021. The developers also take benefit of the IH policies by trying to converge those with the IZR. The developers are concerned with maximising their profit margins. They either invest in the land when cheap (speculative land banking) and own the land historically or become partners with landowners. To minimise the risk associated with these projects, multiple individuals may also form a partnership, especially if investing in low-priced land which may be under some uncertain condition.

It is observed that under the regulation of IZR, the developers have also successfully created hostels instead of the intended affordable housing, showing an inclination towards the creation of serviced apartments or furnished apartments to maximise profits. The IZR does not create affordable rental housing; there are no mandates to create rental housing as the policy largely focuses on ownership housing.

The housing created under IZR is decent i.e., of adequate construction quality and structural strength. There is no congestion observed. The housing projects have access to physical and social infrastructure and are well connected due to the S P Ring Road. There is also an extensive network of public transport, but public transport service is not adequate.

One of the strengths of urban planning in Ahmedabad is the provision of serviced land through TPS, which also allows for the reservation of land for the SEWS. Thus, the poorest population is catered through the housing created on land reserved under the TPS. The IZR of Ahmedabad can focus on providing affordable housing for ownership to the 'less catered' group. Since IZR is a market driven development and there is no price restriction or income criteria, there cannot be a case of poor implementation or underreporting of HH income to become beneficiaries.

Thus, Ahmedabad has achieved some success in providing housing to the 'less catered' and can be thought of as a good practice in implementing IZR in high cash economies.

It can be strengthened through:

- Fast-track delivery of serviced land in RAH zone prioritising areas with existing or proposed Public Transport connectivity i.e., Metro and BRTS station within 0.5 to 1 km.
- Providing better incentives to the developers for creating smaller sized DUs (1RK and 1BHK.)

Another IZ can be created where the land value is so high that the poor cannot afford to buy a house, and TPS have not reserved land for affordable housing. These should be near job centres or public transit corridors that provide greater accessibility.



Adopting Inclusionary Zoning and Regulations in other Indian cities

There are some conditions a city must meet before thinking of adopting an IZR:

1. Presence of a healthy and competitive developer's market.
2. Significantly high market prices of land.
3. Connectivity of the zone with road networks and public transport.
4. Fast tracked delivery of serviced land through land pooling mechanism.

Legal conditions for adopting Inclusionary Zoning and Regulations:

1. The ability of the statute to establish a need for such an Inclusionary zone
2. The ability of the statute to enable conditional Land use zoning
3. The ability of the statute to set regulations that incentivise developers to build affordable housing:

A possible form of Inclusionary Zoning and Regulations in other cities

The IZR of Ahmedabad cannot be directly adopted in another city. The last section of the case includes some key points that are necessary to be addressed to design a context specific IZR policy. Answers to some key questions may provide us with indicators necessary to move forward with the policy design. Therefore, the following key questions are discussed in detail to evaluate the policy as a whole:

- Should the IZR policy focus on creating mixed income group neighbourhoods or focus on creating a quantum of units?
- Should IZR be applicable to pan city or only targeted to specific zones of the city?
- Whom will the IZR policy include, as beneficiaries or end users, and how would their affordability be defined?
- Should the IZR policy be a mandatory, voluntary, or negotiated?
- Should developers be allowed to pay a fee instead of providing affordable units on-site?
- Should developers be allowed to provide the required affordable units at off-site locations?
- Should the affordable units produced be regulated for a certain number of years to remain affordable?



OBJECTIVES & METHODOLOGY

The key question that is addressed in this case explores the effectiveness and efficacy of Inclusionary Zoning and Regulations (IZR) i.e., if IZR helps in providing decent housing at an affordable price which improves the quality of the residents' life and residents' perception of living in a house created through IZR. The main objectives of the case are:

1. To understand the theoretical context and global practices for Inclusionary Housing (IH).
2. To understand the Practice, Output, and Outcome of the IZR in Ahmedabad.
3. Replicating IZR or IH in other cities of India.

The method involves primary and secondary research. The primary research is qualitative.

The study includes many narratives recorded through research papers, literature studies, government documents and reports, relevant legislations, field observations and stakeholder interviews to create comprehensive case-based teaching material.

To get a sense of the actual processes, we consulted urban planners, who were part of the Ahmedabad Development Plan (DP) team involved in the inception of Ahmedabad's IZR and the developers implementing the projects in the Inclusionary Zone of Ahmedabad. The impact of IZR in Ahmedabad was assessed considering both its output and the outcome. We used the GUJRERA's database for a flow analysis of the Dwelling Units (DUs) created in the various submarkets of Ahmedabad to determine the output of IZR in Ahmedabad. We also conducted semi-structured interviews to understand the affordability of the DUs generated quality of life improved regarding access to services and the user's perception of their house.

The scope of the study is limited to interactions with select stakeholders and the experiences of the end users in the RAH zone.

IZR in Ahmedabad has shown some success and can be thought of as a good practice. At the same time, some issues need to be addressed. The case does offer reflections and suggestions for the same. It does advise the planners looking at implementing IH/IZR in other cities.

FOLDER-B: MAIN CASE

ENABLING MARKET TO SUPPLY AFFORDABLE HOUSING THROUGH INCLUSIONARY HOUSING POLICIES

LEARNINGS FROM AHMEDABAD



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ABBREVIATIONS

AHP	:	Affordable Housing in Partnership vertical of the HFA/PMAY policy of Govt. of India
AMC	:	The Ahmedabad Municipal Corporation
AMI	:	Area Median Income
AUDA	:	The Ahmedabad Urban Development Authority
BDA	:	Bhubaneshwar Development Authority
BHK	:	Bedroom, Hall, and Kitchen
BRTS	:	Bus Rapid Transit System
BUA	:	Built-up Area
CA	:	California State of the USA or Carpet Area
CBD	:	Central Business District
CO	:	Colorado State of the USA
DBSS	:	Design Build Select Scheme
DC	:	Washington DC State of the USA
DCR	:	Development Control Regulations
DDA	:	Delhi Development Authority
DP	:	Development Plan
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FAR	:	Floor Area Ratio
FDI	:	Foreign Direct Investment
FLISP	:	Finance Linked Individual Subsidy Programme
FP	:	Final Plot
FSI	:	Floor Space Index
GIDC	:	Gujarat Industrial Development Corporation
GIFT-City	:	Gujarat International Finance Tec-City
Gol	:	Government of India
GST	:	Goods and Services Tax
GTPUDA	:	The Gujarat Town Planning and Urban Development Act of 1976
Guj-RERA	:	The Gujarat Real Estate Regulatory Authority
HDB	:	Housing Development Board of Singapore
HFA	:	Housing for All policy of the Govt. of India
HH	:	Household/s
HIG	:	Higher Income Group/s
HK	:	Hall and Kitchen
IH	:	Inclusionary Housing
IL	:	Illinois State of the USA
INR	:	Indian Rupees
IR	:	Inclusionary Regulations
IT	:	Income Tax
ITC	:	Input Tax Credit
IZ/IZR	:	Inclusionary Zoning/ Inclusionary Zoning and Regulations
NURM	:	Jawaharlal Nehru National Urban Renewal Mission

KTCPA	: The Kerala Town and Country Planning Act of 2016
LIG	: Lower Income Group/s
MA	: Massachusetts State of the USA
MD	: Maryland State of the USA
MIG	: Middle Income Group/s
MP	: Master Plan
MPH	: Moderately Priced Housing
MRTP	: Maharashtra Regional and Town Planning Act of 1966
NC	: North Carolina State of the USA
NIMBY	: Not In My Back Yard
NM	: New Mexico State of the USA
NUHHP	: National Urban Housing and Habitat Policy, 2007 of Govt. of India
NYC	: New York City
ODAA	: The Odisha Development Authorities Act of 1982
PIR	: Price to Income Ratio
PMAY	: The Pradhan Mantri Awas Yojna of the Govt. of India
PPH	: Person per hectare
PPP	: Public Private Partnership
RAH	: Residential Affordable Housing zone of Ahmedabad DP 2021
RK	: Room and Kitchen
S\$: Singaporean Dollar
SB	: Senate Bill
SBI	: State Bank of India
SEWS	: Socially and Economically Weaker Sections
SG Highway:	Sarkhej-Gandhinagar Highway
SPRR	: Sardar Patel Ring Road in the city of Ahmedabad
SRS	: Slum Redevelopment Scheme
SUD-SC	: Sustainable Urban Development- Smart cities
TDR	: Transfer of Development Right
TNTCPA	: The Tamil Nadu Town and Country Planning Act of 1971
TOD	: Transit-Oriented Development
TP	: Town Planning
TPS	: Town Planning Scheme
TPVD	: Town Planning and Valuation Department of Govt. of Gujarat
UD&UHD	: Urban Development and Urban Housing Development Department of the Govt. of Gujarat
UK	: The United Kingdom
ULB	: Urban Local Body
UN	: The United Nations
US	: The United States
USD	: United States Dollar
USA	: The United States of America
VA	: Virginia State of the USA
VT	: Vermont State of the USA
ZEIS	: Zona Especial de Interesse Social







PART - 1 BACKGROUND TO INCLUSIONARY ZONING AND REGULATIONS

1

BACKGROUND

1.1 AFFORDABLE HOUSING CHALLENGE IN INDIA

1.2 THE NEED FOR INCLUSIONARY ZONING AND REGULATIONS

- What is Inclusionary Zoning and Regulations?
- Why should Governments propose Inclusionary Housing?
- Critique of Inclusionary Housing / Inclusionary Zoning

1.3 INCLUSIONARY HOUSING IN INDIA AND THE DEFINITION OF AFFORDABLE HOUSING

1.4 INCLUSIONARY ZONING AND REGULATIONS IN AHMEDABAD: RESIDENTIAL AFFORDABLE HOUSING ZONE AND REGULATIONS

- City Profile of Ahmedabad
- Planning Institutions of Ahmedabad
- Past Planning Efforts in Ahmedabad
- Role of the state legislation and local regulation in facilitating Inclusionary Zoning and Regulations in Ahmedabad.

1.1 AFFORDABLE HOUSING CHALLENGE IN INDIA

One of the significant challenges that has emerged with urbanization globally and in India, is providing affordable housing in rapidly growing cities. It is estimated that United States Dollar (USD) 16 trillion is required to meet the demand for 440 Million (Mn) affordable houses globally between 2010 and 2025 (Woetzel et al., 2014). According to the Government of India MOUPA (2012) estimates, the housing shortage in India is about 18.78 Mn, arguably requiring a tremendous public investment, unless the housing strategy is re-evaluated.

Most countries have invested in providing housing for their citizens since World War II. In the United States (US), the history of housing programmes can be divided into four distinct phases. In the first phase, from the founding of the republic till 1937, the federal government provided no support for low-income housing. The second phase (1937 to 1974) saw a single federal housing programme for Low Income Groups (LIG): the low-rent public housing owned and operated by government agencies. This scheme focused on slum removal and replacing “slums” with public housing. This period also saw an explosion of federal grants for housing. The third phase (1974 to 1990) encouraged the private entities to provide federally subsidized housing for the poor where the government leased existing housing stock for the poor rather than constructing new ones. The focus of this phase was community development and urban renewal, which was financed on a competitive basis. The fourth phase (in the 1990s and onward) saw more flexibility in programme and local government participation. It also saw the downsizing of the US federal government’s role in the housing sector (Katz et al., 2000).

Similar trends have been seen for the state’s approach to affordable housing globally (Figure 1).

India has also followed a similar trajectory in its housing policies over the years: The government has taken multiple roles, from being the provider of housing and services to an enabler of the housing markets. (Figure 2). No one policy can solve all problems; it requires multiple targeted housing strategies (Hammam, 2014). Therefore, the country’s current policies undertake an umbrella approach with various verticals focusing on facilitating affordable housing for various income brackets.

The government approach of providing housing focuses on catering to the ‘poorest of the poor’. On the other hand, the significant share of housing supply in the market through private developers is for the higher income group. The private developers often refrain from supplying for certain income groups due to risks and lack of profit margins; as a result, the supply is less than the demand for these groups. Furthermore, these groups less catered to by the market are also not provided public housing. The housing market is integrated, rather

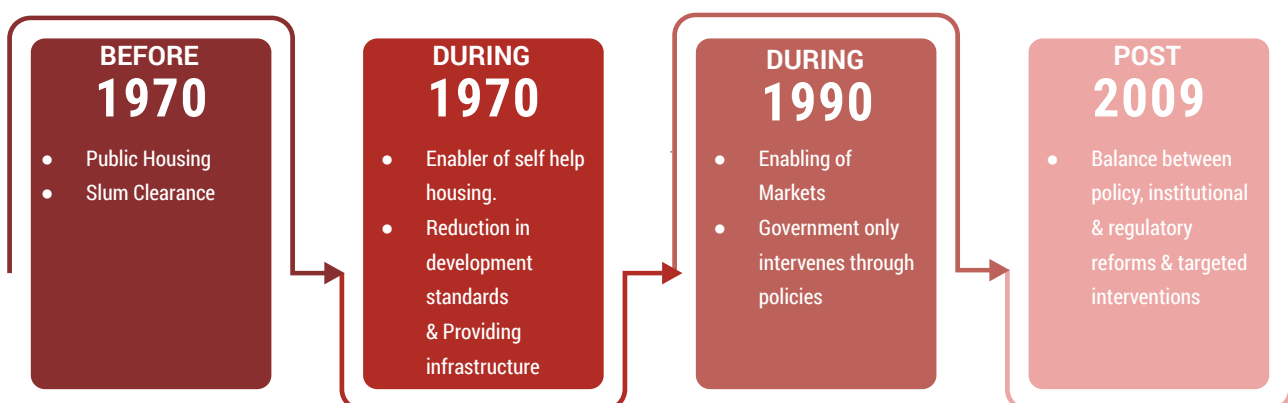


Figure 1: Global approach to Housing Policy

Source: Compiled by Authors, Adapted from Hammam (2014)

than discrete submarkets. It can be thought of as an integrated ladder (Figure 3), so market failures in the higher rungs would result in trickling down of demand from these households (HHs) who will try to occupy the housing stock meant for the poorer sections of the society resulting in them moving to slums. Therefore, the supply of affordable housing for this less catered group needs to be improved, and the government must incentivize the markets to do so. Inclusionary Housing (IH) or Inclusionary Zoning and Regulations (IZR) is one such strategy that enables the markets to provide affordable housing without direct public spending

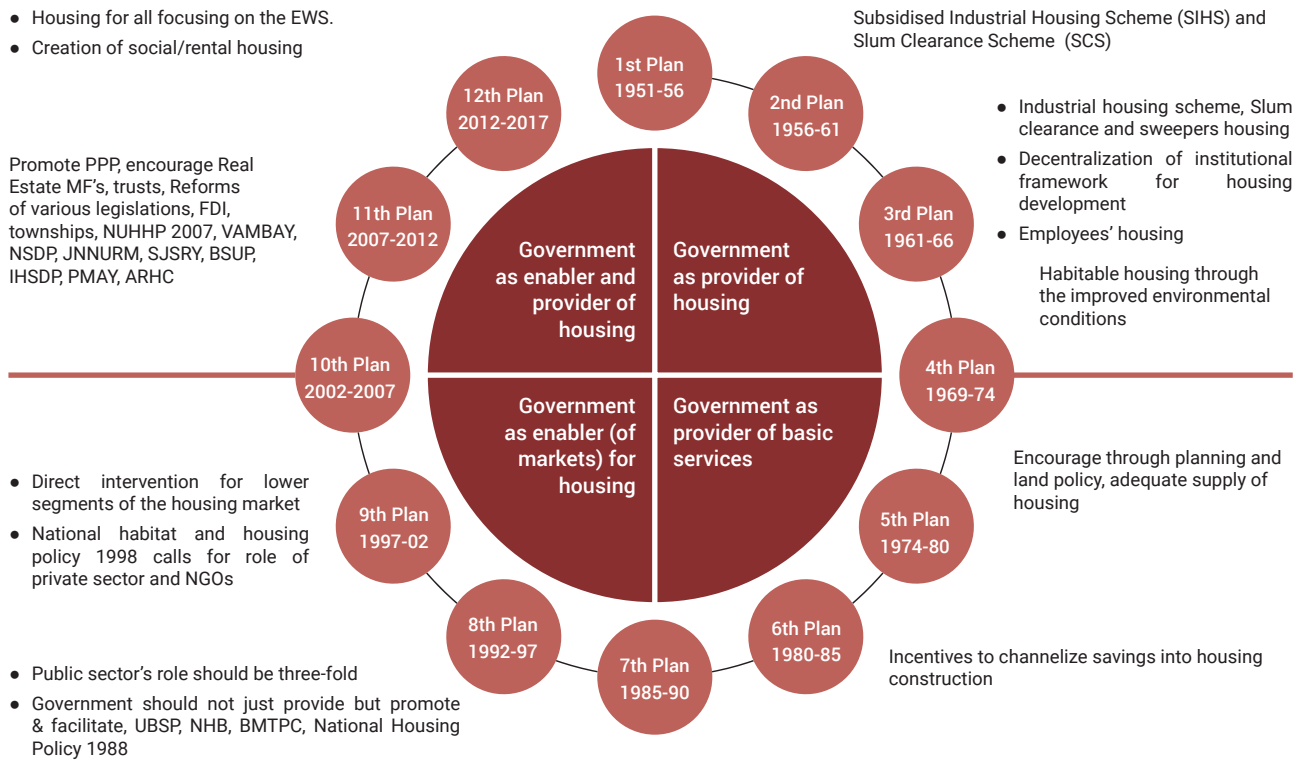


Figure 2: Government of India's shifting approach on the housing

Source: Authors

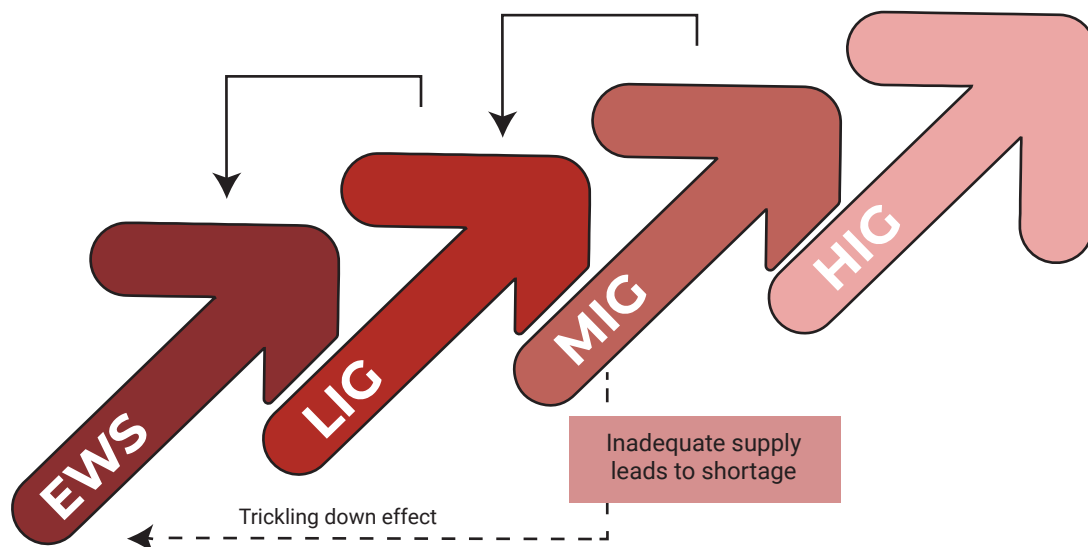


Figure 3: Housing Ladder showing the trickle down effect

Source: Visualised by Authors based on Hammam (2014)



1.2 THE NEED FOR INCLUSIONARY ZONING AND REGULATIONS

1.2.1 What is Inclusionary Zoning and Regulations?

According to World Bank (2019), “Inclusionary Zoning (IZ) is a means of using the planning system to create affordable housing and foster social inclusion by capturing resources created through the market. The term refers to a programme, regulation, or law that requires or provides incentives to private developers to incorporate affordable or social housing as a part of market driven development. This can be achieved either by incorporating the affordable housing into the same development, building it elsewhere, or contributing money or land to produce social or affordable housing in lieu of construction.”

IZ was first introduced in United States of America (USA) in the 1970s in response to the spatial segregation based on racial line and income, prevalent during that time. The main aim of IZ was to counter the exclusionary zoning laws like minimum lot sizes and restriction on multi-family housing which aimed at creating homogenous neighbourhoods and restricted certain developments to come up in affluent neighbourhoods with better schools and livelihood opportunities. The IZ encouraged the creation of mixed income neighbourhoods helping foster greater social and economic mobility and integration.

The concept of IZ was adopted by other countries for the creation of affordable housing units and inclusive cities.

In the literature, the terms “Inclusionary Housing,” “Inclusionary Regulation,” and “Inclusionary Zoning” have been used interchangeably. However, they are different and as the name would suggest:

Inclusionary Housing (IH) is a broader definition: inclusive of regulations, programmes, and laws, which can be used to incentivize or require private developers to create affordable housing or housing below the market price. E.g., Section 80IBA of the Income Tax Act 1961 of India provides a tax holiday to developers of affordable housing, or Section 106 of the Town and Country Planning Act 1990 of the United Kingdom (UK) that mandates developer contribution to creating affordable housing. These may be at the national or state level.

Inclusionary Regulations (IR) are the regulations, part of Development Control Regulations (DCRs) or building byelaws of a city or a region used to create affordable housing or housing below market price by private developers. E.g., Inclusionary Regulations in Johannesburg or Tamil Nadu. IR is implemented at the local level or city level.

Inclusionary Zoning (IZ) is spatial i.e., applied to a particular area or zone marked in a plan like the Development Plan (DP) or Master Plan (MP) of the city. E.g., the Residential Affordable Housing Zone of Ahmedabad outside the outer ring road, or Special Social Interest Zones (ZEIS, in Portuguese) of Sao Paulo, Brazil or New York City Inclusionary Zoning in the Bronx, Brooklyn, Manhattan, and Queens. It is enacted and implemented at the local level.

In the above, affordable housing or the below market rate housing can be defined through a price restriction, HH income restriction, Dwelling Units (DUs) size ceiling or one or more of these.

Apart from affordable housing, a project under IZ or IH may also have “market rate housing.” These housing units are developed to be sold directly in the market, and there is no income cap for the buyer of this kind of housing. The cost of producing affordable housing may be offset by selling market rate housing.

1.2.2 Why should Governments propose Inclusionary Housing?

IH policies and programmes link the creation of affordable houses to the construction of market-rate housing or commercial development. These policies leverage the new development's profitability to pay for the affordable housing units and support the creation of **more economically diverse and inclusive communities**.

According to Kontokosta (2014), IZ allows the poor and racially segregated population to benefit by increasing access to better neighbourhoods with access to better schools, jobs and avoid the stigma of living in a low income neighbourhood. It also counters gentrification. The 'Inclusionary' in IH or IZ comes from this aspect.

Apart from this, governments may propose IH or IZ because the **public agencies may not have the capacity** to deal with the challenges of providing Affordable Housing for all. It is particularly true in the neoliberal era, where **reduced public spending** results in a cut down on public housing projects. However, the cost of housing generating through IH can be relatively low for the governments due to the indirect nature of the subsidy. Further in IH, affordable housing stock is created through an indirect subsidy to residential developers, **including increased development capacity, which may increase the overall housing stock**.

Thus, there are two main reasons for the government to propose IH or IZR:

1. To foster inclusive communities with mixed income groups living in the same neighbourhoods.
2. To increase the supply of affordable housing without directly spending public money.

Box 1: Housing Affordability

Housing Affordability is function of the local land and labour markets. Thus, housing affordability can be defined by three parameters which the city needs to adapt to their local context (Woetzel, Ram, Mischke, Garemo, & Sankhe, 2014):

1. **Affordability threshold:** World over, research shows that the money spent on housing (as rent or EMIs) should not be more than 30 to 40 % of the monthly HH income (Woetzel et al., 2014) or the cost of the housing should not be more than three to five times the annual HH income (Misra, 2012).
2. **Income threshold:** The housing markets should be able to cater to HH earning incomes at least 80% of the city's median income.
3. Should meet the **basic standards** i.e., durability of structure, sufficient living space, access to safe physical infrastructure like water, sanitation, and security against eviction. Additional conditions like commute distance or travel time for job or livelihood may also be considered.



1.2.3 Critique of Inclusionary Housing / Inclusionary Zoning

There have been several debates on the success and impact of IH policies. According to (Schneider, 2018) the three main problems of IH or IZ that emerge in the literature are:

1. It distorts markets by 'taxing' the private developers and can reduce the overall housing production.
2. It does not adequately address the housing needs of the poor and is a 'band aid', not a cure.
3. It does not target the poorest of the poor.

The first criticism is addressed by several studies in the USA, where IH first started, which have tried to measure its **impact on the housing markets**. According to an estimate by MacDonald (2016), Oakland's new IZ policy would reduce housing unit production by 6% to 12% and reduce revenue from taxes and fees by 6% to 19%. **However, there would be an increase in the proportion of affordable housing being produced in the city from 4% to 11%.** A study by Hollingshead (2015) says that the IH policies can tax the development of housing supply and may stifle housing production and increase the price of market-rate units, reducing overall affordability but adds that IH may also increase the supply of affordable housing, which would place downward pressure on prices. The literature also aims on who should pay the cost of generating the affordable housing units: the developers or the end users of market rate housing (Hollingshead, 2015; Nzau & Trillo, 2020). **Although Jacobus (2015) says that developers in robust markets do not pass on the cost of creating affordable housing to the end users as local real estate markets set the price. The cost of producing affordable housing is absorbed by the decline in land prices or reduction in developer profit and may also be offset by the incentives provided under IH (Jacobus, 2015; Nzau & Trillo, 2020).** Jacobus (2015) also argues that it is fair to expect real estate developers to help create affordable housing because developers and landowners' profit from "the conditions that give rise to shortage of decent and well-located housing."

The other criticism of IH is that **it also does not generate enough units to fulfil the needs of the lowest income segments and it does not cater to the poorest of the poor.** A study concluded that IZ represented less than 0.1% of the affordable housing stock produced in the USA (Freeman & Schuetz, 2017). However, in UK almost 40% of the affordable housing stock is provided through their IH policy (Whitehead et al., 2005). The percentage of affordable housing created through IZ or IH depends on the bundle of strategies used to create affordable housing.

The other criticism of IH is that it also does not generate enough units to fulfil the needs of the lowest income segments and it does not cater to the poorest of the poor. A study concluded that IZ represented less than 0.1% of the affordable housing stock produced in the USA (Freeman & Schuetz, 2017). However, in UK almost 40% of the affordable housing stock is provided through their IH policy (Whitehead et al., 2005). The percentage of affordable housing created through IZ or IH depends on the bundle of strategies used to create affordable housing.

A study by Stromberg and Sturtevant (2016) in the USA found that only 2% of IZ programmes target HHs with the bottom 25% incomes in their jurisdictions. In the USA, the eligibility criteria for the beneficiary based on their HH income level. USA uses Area Median Incomes (AMI) to define affordable housing. The eligibility criteria can vary from 50% AMI to 120% AMI and is 80% AMI on average, thus does not target the poorest of the poor.

There are pros and cons of IZ which have been understood through literature study and so IZ should be considered as one of the constitutive sub-strategies within a comprehensive housing strategy that cities can use to deal with their affordable housing challenges across all income segments and submarkets (Nzau & Trillo, 2020; Sturtevant, 2016).

1.3 INCLUSIONARY HOUSING IN INDIA AND THE DEFINITION OF AFFORDABLE HOUSING

In India, several policies, laws, and programmes under the Government of India (GoI) enable the supply of affordable housing through the private sector at the national level. These are:

- The Affordable Housing in Partnership (AHP) a vertical under Pradhan Mantri Awas Yojna (meaning Prime Minister's Housing Scheme; PMAY), a national housing programme.
- Section 80IBA of the Income Tax (IT) Act 1961 - which is a tax holiday.
- Reduction of Goods and Services Tax (GST) for affordable housing, which is a tax discount.
- Infrastructure status is given to affordable housing projects - which is a part of a policy.

Table 1 explains these in more detail and shows how these IH implemented by the various departments and ministries of GoI have not converged the criteria defining affordable housing. CHAPTER 3: Section 3.5 will discuss the convergence of these IH with the IZR of Ahmedabad.

Several regulations and zoning at the state and city level are examined in CHAPTER 2: Section 2.3 The Indian Experience.

Box 2: AMI or Area Median Income

AMI is the median HH income for all cities across the USA is defined each year by their Department of Housing and Urban Development. This is then used to determine the eligibility of a HH for the various affordable housing programmes run by the government. Department of Housing and Urban Development calculates the median income for every metropolitan region in the country each year. They focus on the region instead of the city because HHs searching for housing are likely to look in the entire metropolitan region and not just the city.

As HH incomes differ by the number of people in the HH, a formula is used to adjust the AMI for families of different sizes. The income groups or bands are classified based on the percentage of AMI:

- | | |
|------------------------|-------------|
| • Extremely Low Income | 0 - 30 % |
| • Very Low Income | 31 - 50 % |
| • Low Income | 51 - 80 % |
| • Moderate Income | 81 - 120 % |
| • Middle Income | 121 - 165 % |

Source: (Housing Preservation and Development, n.d.; McCabe, 2016)

Table 1: Inclusionary Housing in India

	AHP vertical of PMAY-U	Income Tax Holiday	Reduction of GST	Infrastructure Status to Affordable Housing Projects
	AHP was launched under the PMAY-U Mission, being implemented by the Ministry of Housing and Urban Affairs (MoUHA) , launched on 25th June 2015 to address the housing shortage.	The Union Budget 2017-18 announced Section 80IBA of Income Tax Act, 1961 to boost Affordable Housing.	The GST Council decided in the 34th meeting held on 19th March 2019 regarding GST rate on real estate sector.	Ministry of Finance (Department of Economic Affairs) (Infrastructure Policy & Programme Section) Notification, New Delhi, 24th August 2020, F. No. 13/1/2017-INF.
DU Size Cap	30 sq. m.	90 sq. m. in non-metro cities 60 sq. m. in metro cities	90 sq. m. in non-metro cities 60 sq. m. in metro cities	60 sq. m.
DU Price Cap	Set by individual States/ UTs As per Government of Gujarat EWS: INR 0.6 Mn (USD 8,140) ^a	INR 4.5 Mn (USD 61,058) ^a	INR 4.5 Mn (USD 61,058) ^a	N/A
HH Income Cap	Set by individual States/ UTs As per Government of Gujarat EWS: up to INR 0.3 Mn (USD 2070) ^a	N/A	N/A	N/A
Other Conditions	The project should have a minimum of 250 DUs . 35% of the DUs should be for the EWS category.	Plot Size: 2,000 sq. m in non-metro cities & 1,000 sq. m in metro cities Commercial Component: 3% of the Total Carpet Area Floor Space Index (FSI) unitization of 80% & 90% in non-metro and metro cities, respectively. The project should get completed in 5 years . An individual cannot buy two DUs in the same project. Applicable for projects approved for after 01.06.2016 to 31.03.2022 (revised in 2021)	Commercial Component: 15% of the Total Carpet Area 80% of the inputs and input services (other than capital goods) shall be purchased from a registered person.	Plot Size: 50% of the total FSI/ Built Up Area (BUA) is used for DUs of area 60 sq. m.
Incentives	Central Assistance of 1.5 Lakhs per EWS DU.	100 % income tax exemption on the profits from the project to the developer.	Reduction of GST from 8% to 1% for Affordable Housing without Input Tax Credit (ITC). (GST on other residential projects is 5%.)	Priority sector lending and lower borrowing rates.

Here, metro cities mean – Delhi, Kolkata, Mumbai, and Chennai. All other cities are considered non-metro, including Ahmedabad.

Source: Authors

1.4 INCLUSIONARY ZONING AND REGULATIONS IN AHMEDABAD: RESIDENTIAL AFFORDABLE HOUSING ZONE AND REGULATIONS

1.4.1 City Profile of Ahmedabad

Ahmedabad is located on the banks of the Sabarmati River and is the largest city of Gujarat, both in terms of area and population. It is also the seventh largest urban agglomeration in India, with a population of 5.8 Mn in the municipal area and 6.3 Mn in the urban agglomeration area in 2011.

The city has a distinct ring and radial form, and it is expanding uniformly in all directions. It has the following distinct urban morphologies: The old city located on the eastern banks of Sabarmati, the industrial area further east of the old city, West Ahmedabad located on the western banks of Sabarmati, and the peripheral developments. The old city or the walled city is the historic core of Ahmedabad, established in 1411 AD by Ahmed Shah I of Gujrat Sultanate. It expanded further east due to industrialization. Gujarat Industrial Development Corporation (GIDC) Estates Naroda, Kathwada, and Vatva are all located in East Ahmedabad. It has high density development. West Ahmedabad, which started developing in the 1930s when it attracted the wealthy executive class and business families that were modernizing, began to move out of the old city. West Ahmedabad housed Gujrat University and the city's first hospital. Several elite institutes like the Indian Institute of Management, Ahmadabad, CEPT University, Ahmedabad University and new forms of commercial development are also located in West Ahmedabad. Post-2000, many gated communities and township developments have come on the western periphery of Ahmedabad (Mahadevia, Desai, & Vyas, 2014).

The city has witnessed rapid economic expansion in the 2000s. Thus, observing the same, the planning authorities have understood the need to reconsider and redirect the development and the growth patterns in the upcoming decade to increase opportunities and quality of life (Mahadevia et al., 2014).

1.4.2 Planning Institutions of Ahmedabad

The municipal area of Ahmedabad is under the jurisdiction of Ahmedabad Municipal Corporation (AMC), with an area of 466 sq. km. The main body responsible for urban planning in Ahmedabad is Ahmedabad Urban Development Authority (AUDA). In 1978, the Gujarat Government established AUDA using section 3 of Gujarat Town Planning and Urban Development Act 1976 (GTPUDA 1976), which allows establishing development authorities.

The prime objective of the AUDA's formation was to carry out the sustained, planned development of the area falling outside the periphery of AMC. It also regulates development within the AMCs boundaries. The Revised Development Plan of 2021 was prepared for the entire AUDA area for a geographical area of 1866 sq. km. The area under AUDA's jurisdiction comprises AMC, nagarpalikas (meaning municipalities) Bopal-Guma Sanand, and Bareja) and other 167 villages. The AUDA area boundary also consists of parts of four districts- Ahmedabad, Mehsana, Kheda and Gandhinagar.

AUDA carries out this planned development by formulating a Development Plan (DP) and Town Planning Scheme (TPS) sanctioned by the government and are statutory documents.

Apart from AUDA and AMC, the Town Planning and Valuation Department (TPVD) of Gujarat and Gujarat Real Estate Regulation Authority or GUJRERA are also planning and real estate institutions with jurisdiction over Gujarat and Ahmedabad. These have a minimal role in the case study.



1.4.3 Past Planning Efforts in Ahmedabad

The DP 2021 is the third DP chronologically. The first DP was sanctioned in 1987. It tried to reserve land under Green Belt and made land reservations for public purposes. However, in 1987 the DP was essentially a zoning plan with no effective tool of implementation at the micro-level. The TPS mechanism that is currently being used to implement a DP was not as effective as the legislation did not allow it to acquire land for making roads and right of ways in the draft stage rendering it a lengthener process than it is today^b.

The second DP was sanctioned in 2002. This DP altered the previous DP's policy of land reservation through zoning and Green Belt. It also saw the TPS mechanism being used to implement several projects such as Science City Park, SPRR and Eklavya Sports complex. The government appropriated land for public purposes through TPS, including land parcels reserved for the Socially and Economically Weaker Section (SEWS).

1.4.4 Role of the state legislation and local regulations in facilitating Inclusionary Zoning and Regulations in Ahmedabad.

The state plays an integral role in facilitating and enabling statutory framework for Gujarat. The government, through GTPUDA 1976, provides a supporting Urban Planning Regime within its statutory framework. GTPUDA does not enable the IZR directly. It provides various tools that comprehensively allow IZR to function in Gujarat. For the various components of the RAH zone of Ahmedabad to comprehensively function under a legal framework, statutory backing is ensured majorly through three statutory provisions within the GTPUDA 1976:

1. The ability of the statute to establish a need for such an Inclusionary zone **through the provision of undertaking Surveys under section 7(1)(iii) of the GTPUDA** which allows the development authority **“to carry out surveys in the development area for the preparation of development plans or Town planning schemes”**.
2. The ability of the **statute to enable conditional Land Use Zoning under section 12(2)(a) of the GTPUDA** which identifies the major components of a development plan, including the identification of **“proposals for designating the use of land for residential, industrial, commercial, [educational], agricultural and recreational purposes, [or such other purposes;]”**
3. The ability of **the statute to set regulations that enable incentives for developers such as Density Bonus through the sale of additional FSI above the base FSI under section 12(2)(m) of the GTPUDA** which identifies significant components of the development plan including **“provision for controlling and regulating the use and development of land within the development area, [including the imposition of charges at such rate as may be provided for the grant of Floor Space Index (FSI) or height and also the imposition of] conditions and restrictions in regard to open spaces to be maintained for buildings, the percentage of building”**. This provision ensures legal backing to the dynamic role of FSI as both a regulatory and fiscal tool. Therefore, it can be used as an incentive for developers to supply affordable units in the market.

The DP 2021 of Ahmedabad is the tool through which these provisions are enacted:

AUDA DP 2021 Part I establishes the need for an IZ. Through surveys and analysis of housing conditions existing at the time of DP preparation, it was identified that “there is a significant lack of housing for the LIG and lower MIG in the city.” (Refer to AUDA DP 2021 Part 1 page 150 – see Folder C Appendix B).

Therefore, the DP specifies an overlay zone of 1 km width outside the Sardar Patel Ring Road (SPRR), the outermost ring road in the city, where “affordable housing projects” may be constructed. This zone is called the Residential Affordable Housing Zone or the RAH Zone.

Additionally, a set of regulations corresponding to the RAH zone have also been recognized within the AUDA DP-21 (section 14.1, DCR Ahmedabad; see Folder C Annexure B). These are called the RAH Regulations and

are conceptualized to incentivize private developers to augment affordable housing supply through higher permissible FSI and relaxation in various other development regulations. These incentives are only provided if the developer constructs the DU size under 90 sq. m (Before Oct. 2020, DU size was restricted to 80 sq. m.) If the developers do not want to comply with this condition, they are free to follow the base zone regulations. This zone and corresponding regulation are discussed in detail in CHAPTER 3.

Thus, the Government of Gujarat provides an enabling statutory framework for the IZR to function by enabling the various tools that comprehensively constitute the IZR mechanism of RAH in Ahmedabad. A detailed analysis of various preconditions for IZR has been further discussed in CHAPTER 5: under part III of this case study.

Box 3: Overlay Zoning

The DP 2021 of Ahmedabad has base zones and overlay zones:

- Base zones: These are the conventional zones and determine the land use, FSI, ground coverage, margins, and other building regulations.
- Overlay Zones: These zones apply an additional layer of requirements or conditions to all areas within a defined overlay boundary, notwithstanding the underlying base zoning.

There are two overlay zone in Ahmedabad the Transit Oriented Zone or the TZ and the Residential Affordable Housing Zone or the RAH. The TZ is an overlay zone along the major public transport corridors i.e. along the metro and BRTS corridors in Ahmedabad. This Zone provides opportunity for mixed use and high-density development.

This case study will discuss the RAH zone in detail so the box will not give an explanation on RAH zone.

In Ahmedabad, the regulations of the overlay zones are not mandatory, and the developer is allowed to develop according to base zone. However, in most cases it would be more profitable for the developer to follow the regulations under the overlay zone.



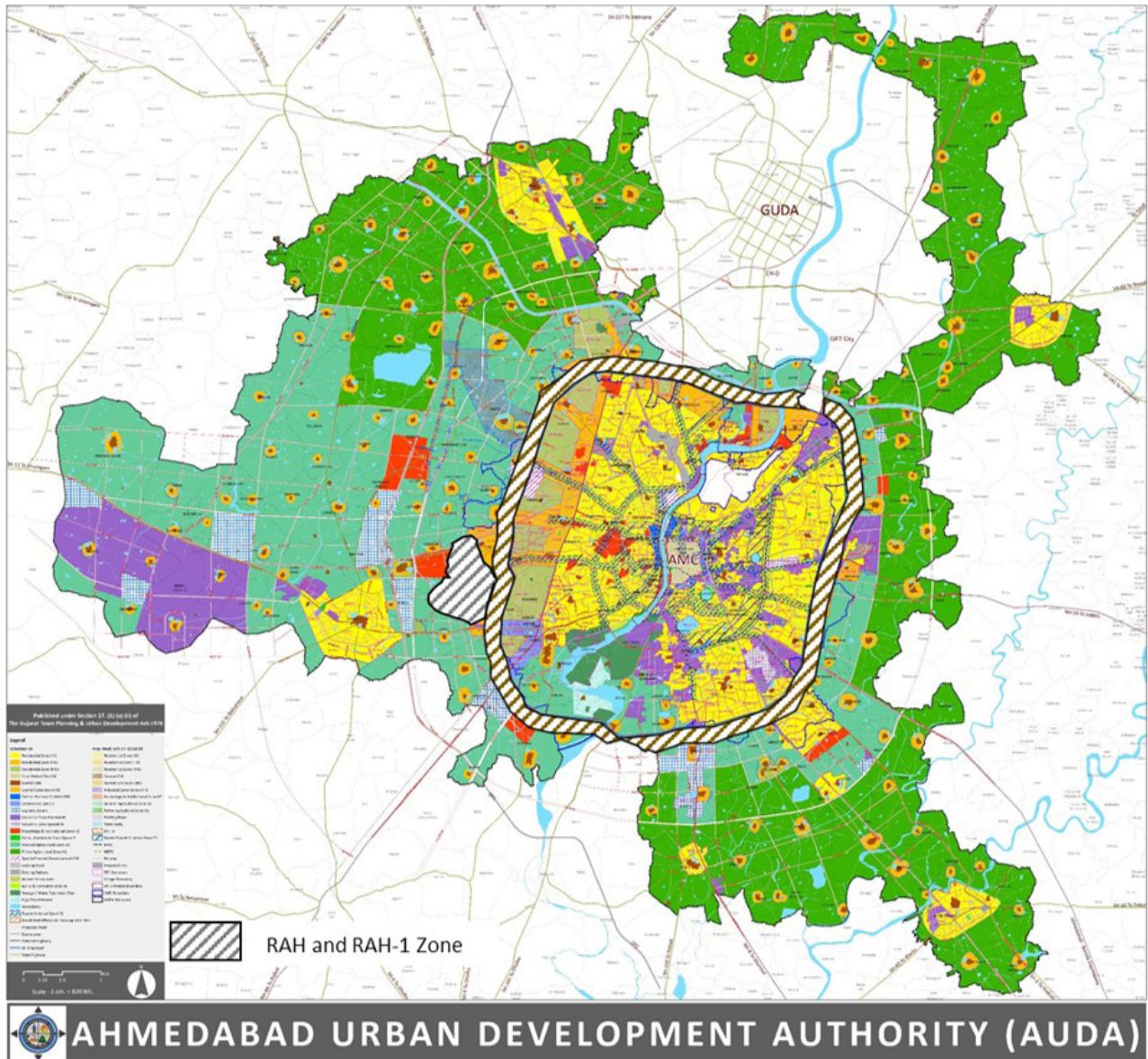


Figure 4 RAH Overlay Zone and RAH-1 Zone in Development Plan 2021 of Ahmedabad

Source: AUDA DP 2021



2

INCLUSIONARY HOUSING PRACTICES

2.1 EXPERIENCE OF USA

- The Developer Contribution
- The Developer Incentives
- Key Learnings

2.2 OTHER INTERNATIONAL PRACTICES

- United Kingdoms
- Brazil
- South Africa
- Singapore
- Key Learnings

2.3 THE INDIAN EXPERIENCE

- A brief chronology
- Inclusionary Housing programmes and policies at the national level
- Spatial tools for augmenting the supply of affordable housing at the state and local level
- The output of Inclusionary Housing in India
- Key Learnings

2.4 INFERENCES

2.1 EXPERIENCE OF UNITED STATES OF AMERICA

The policy of IH was first developed in the USA in 1970s as a response to the exclusionary and often racially segregated neighbourhoods in the cities. Montgomery county Maryland was one of the first to adapt IZ in 1974 through Moderately Priced Housing (MPH) Law. Since then, several states and cities have IH programmes and policies.

IH in USA has a few state level policies which are:

1. **The California State Density Bonus Law**, under Section 65915 of the California Government Code, offers incentives including up to a 35% increase in densities that are intended to encourage the development of affordable housing.
2. **California Senate Bill 35 (SB 35)**, a statute streamlining housing construction in California counties and cities that fail to build enough housing to meet state-mandated housing construction requirements.
3. **Chapter 40B is a state statute of Massachusetts**, which enables local Zoning Boards of Appeals to approve affordable housing developments under flexible rules if at least 20 - 25% of the units have long-term affordability restrictions.
4. **The State-wide Non-Residential Development Fee Act** of New Jersey, where municipalities are required to impose a non-residential development fee of 2.5% of the equalized assessed value to address the state's affordable housing needs.
5. **The 421-a tax exemption in New York State**, which is a property tax exemption that is given to real estate developers for building new multifamily residential housing buildings in New York City. The 421-a programme began in 1971, and the state government later added provisions to mandate the creation of affordable housing units for developers to qualify for the programme.

Of the above state level policies, The California State Density Bonus Law and New Jersey's State-wide Non-Residential Development Fee Act, both have locally adopted programmes based on the act/law with more stringent requirements.

Most of the IH programmes are at the local level. According to Wang and Balachandran (2021) there are **1,019 IH programmes in 734 jurisdictions** which are in 31 states and District of Columbia. About 75% of these programmes are in New Jersey (28%), Massachusetts (23%), and California (22%) which have state-wide mandates.

The following image (Figure 6) shows IH programmes in a state as well as the cities whose programmes we have studied in detail. These are Burlington VT, Cambridge MA, Fairfax City MD, Washington DC, Montgomery City VA, Davidson NC, Chicago IL, Boulder CO, Santa Fe NM, Santa Monica and Irvine CA.

2.1.1 The Developer Contribution

According to Wiener and Barton (2014) and from our research in the cities mentioned above, IZR programmes in the USA share several common characteristics. In the USA, the developers typically are expected to (Thaden & Wang, 2017; Wiener & Barton, 2014):

1. **Create the affordable housing units on the project site**, equivalent to a specified percentage of total housing units produced in the project.
2. **Create affordable housing units off-site** i.e., in a different plot and not on the same site as a project, depending upon the policy. The policy can specify a distance radius within which the alternate site can be located and increase the percentage of the affordable housing units.
3. **Donate land to local governments** that would then accommodate the public housing instead of creating affordable housing units.
4. **Preserve or rehabilitate** existing affordable housing/ social housing units.
5. **Pay an in-lieu fee to the local government** i.e., pay money instead of creating affordable housing, which will be used for affordable housing.
6. **Pay an Impact fee or Linkage fee**, i.e., the developer pays a fee for every unit area of real estate development. It initially started with linking commercial development but now in some jurisdictions applies to residential developments as well. Impact fee or linkage fee is different from in lieu fee as the developer is not expected to create affordable housing units in the impact fee model.

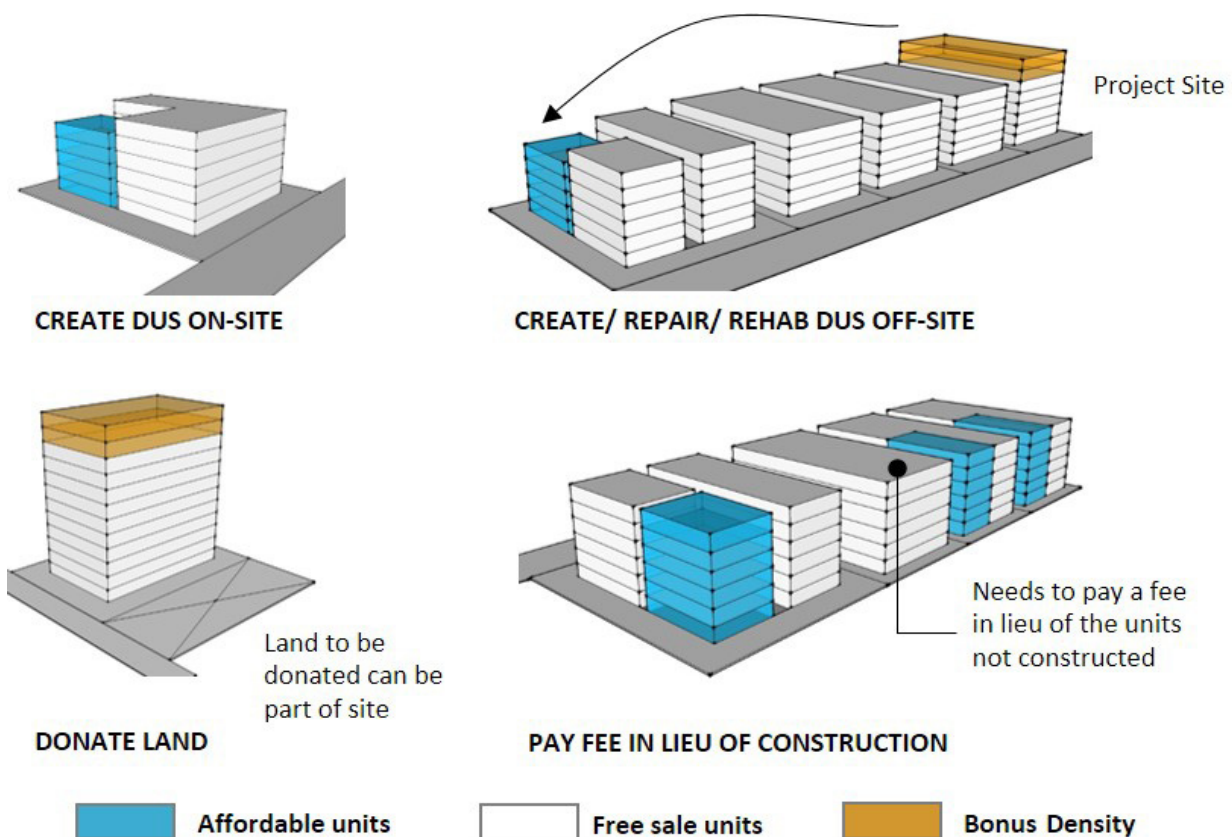


Figure 5: Typically seen Developer Compliance or Contribution in Inclusionary Zoning

Source: Authors



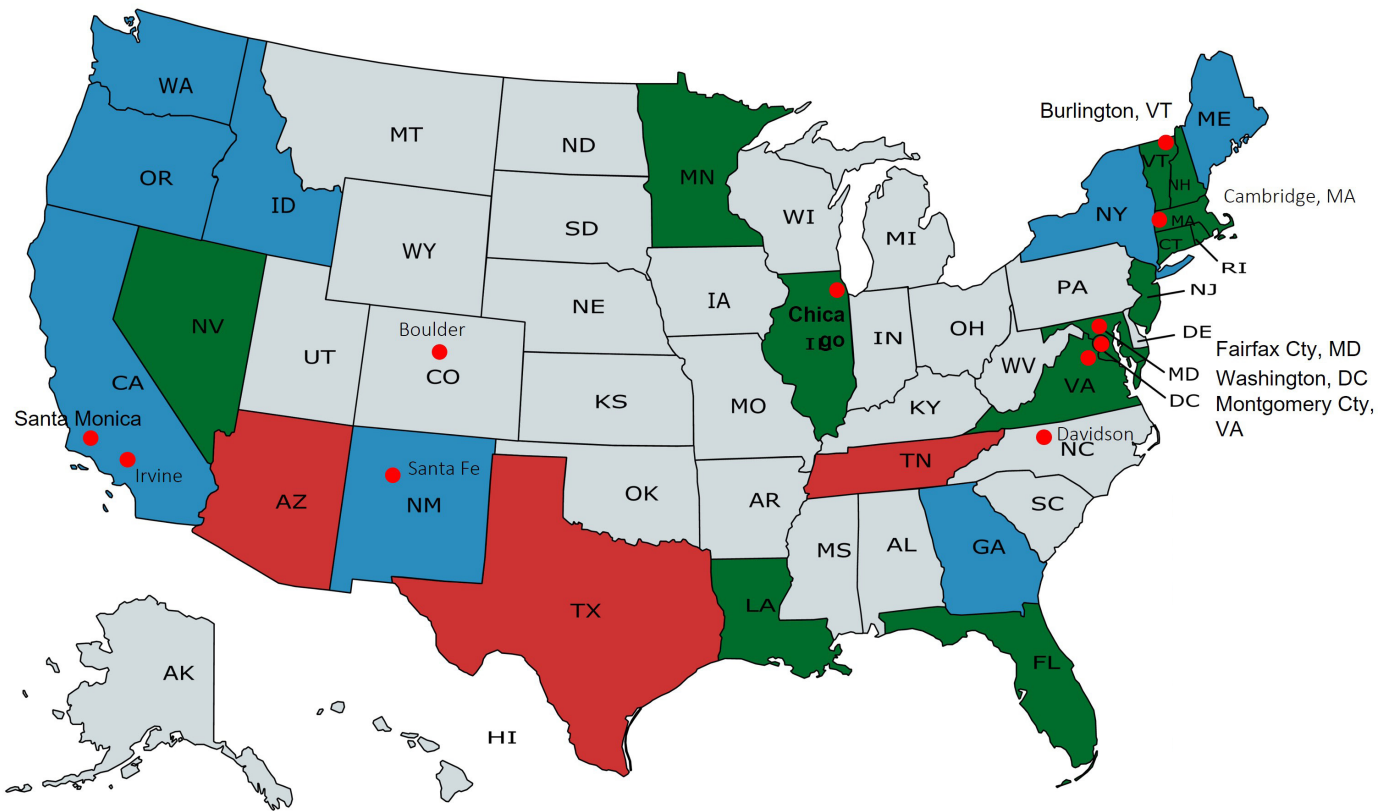
Table 2: Inclusionary Housing programmes in the USA: Development compliance, percentage unit to be supplied and the outcomes

Municipality/ County	Legislative Provisions	Tool (and applicability)	Development Compliance or Contribution	Total Units Supplied	
				2016	2011-16
Boulder, Colorado (1980)	No mandate at state level; Ordinance found in chapter 9-13, Inclusionary Housing, Boulder Revised Code, 1981.	Mandatory : Both rental and for sale in new developments of 5 DUs or more.	Create on-site DUs: 25%, Create off-site DUs: 25% Preserve or rehab existing housing: 25%, Pay in-lieu fee: Equivalent, Donate land: Equivalent	23,468	23,104
Irvine, California (2003)	California SB 35: Ordinance	Mandatory : Both rental and for sale in new developments of 5 DUs or more..	Create on-site DUs: 15%, Create off-site DUs: 15% Preserve or rehab existing housing: 15%, Pay in-lieu fee: Equivalent, Donate land: Equivalent	5,027	2,572
Montgomery County, Virginia (1974)	Moderately Priced Housing (MPH) Law in 1974 Montgomery County Code and Regulations: Chapter 25A	Mandatory : Both rental and for sale in new developments of 50 DUs or more Voluntary : For less than 20 DUs	Create on-site DUs: 12.5%, Create off-site DUs: 15% Preserve or rehab existing housing, Pay in-lieu fee: Equivalent Donate land: Equivalent	15,051	1,918
Chicago, Illinois (2003)	No mandate at state level; made through an ordinance	Mandatory : Both rental and for sale in new developments of 10 DUs or more	Create on-site DUs: 10%, Create off-site DUs: 10% Pay in-lieu fee: Equivalent	2,435	1,200
Santa Monica, California (1990)	California SB 35: Affordable Housing Production Program	Mandatory : For-sale: Fee for 2-4 DUs, 20% of DUs for 4-15 DUs 25% of DUs for 16 DUs or more Rental: 30% of DUs Affordable	Create on-site DUs, Create off-site DUs, Pay in-lieu fee Donate land	1,803	941
Fairfax County, Virginia (1990)	No mandate at state level; made through Affordable Dwelling Unit Ordinance	Mandatory : 12.5% of DUs in new developments of 50 DUs or more be Affordable rental / for- sale DUs. Voluntary : 20% DUs as Affordable DUs	Create on-site DUs, Create off-site DUs, Preserve or rehab existing housing, Donate land	3,123	758
Cambridge, Massachusetts (1998)	State Statute: Chapter 40B	Mandatory : Both rental and for sale in new developments of 10 DUs or more	On site DUs: 15%, Pay impact fee on commercial development	891	431
Santa Fe, New Mexico (2005)	No mandate at state level; made through an ordinance	Mandatory : Both rental and for sale in new developments of 2 DUs or more	Create on-site DUs: 15%, Create off-site DUs: 15% Pay in-lieu fee: Equivalent, Donate land: Equivalent		
Burlington, Vermont (1996)	Both rental and for sale in new developments of 2 DUs or more	Mandatory : Both rental and for sale in new developments of 5 DUs or more	Create on-site DUs: 15%, Pay in-lieu fee: Equivalent	270	70

Table continued in next pg.

Municipality/ County	Legislative Provisions	Tool (and applicability)	Development Compliance or Contribution	Total Units Supplied	
				2016	2011-16
Davidson, North Carolina (2001)	Create off-site DUs: 15%	Mandatory : Both rental and for sale in new developments of 4 DUs or more	Create on-site DUs: 12.5%, Pay in-lieu fee: Equivalent	64	10
Washington DC (2006)	Pay in-lieu fee: Equivalent	Voluntary : 8%-12.5% of the residential floor area be set aside for affordable rental or for-sale DUs depending on the zone	Create on-site DUs, Create off-site DUs	402	402

Source: Compiled by authors



Inclusionary Zoning Laws by State

- Prohibits Mandatory Inclusionary Zoning by Law
- Authorizes Inclusionary Zoning by Law
- No Statewide Authorization, but one or more major municipalities have adopted Inclusionary Programs
- No Authorization or Prohibition (authority dependent on home rule powers)
- Study Area

Figure 6: Inclusionary Zoning in the states of USA and the cities studied by the authors
 Source: Inclusionary Housing.Org, 2019

Table 3: Eligibility Criteria and other restrictions for DUs under Inclusionary Zoning and Regulations

Municipality/ County	Income Criteria for Beneficiary	Price or Rent of the DU	Lock in Period
Boulder, Colorado	HH with incomes under 60% (rental) and 80% (ownership) of AMI	The resulting monthly mortgage payment for low/moderate pricing may not exceed 28% & for middle income pricing may not exceed 30% of gross monthly HH income	Perpetual
Irvine, California	Multiple AMI tiers below 50% AMI - 33% units; 51%-80% AMI- 33% units 81% - 120% AMI - 33% units Not rigid	30% income towards housing for both renters and homeowners	30 yrs.
Montgomery County, Virginia	Buyer's First house in the last 5 yrs. HH with incomes Between 50% and 80% of AMI	Min mortgage is capped based on the income	15yrs/30 yrs.
Chicago, Illinois	HH with incomes under 60% (rental) & 120% (ownership) of AMI	A formula, based on the market price, assessments, and projected property taxes specific to each development determines the price.	30 yrs.
Santa Monica, California	Multiple AMI tiers For-sale under 100 % AMI Rental under 60% AMI	Price capped so that the monthly housing expenditure does not exceed \$2491 for 2BHK . Rent: 33% of the HH income	55 yrs.
Fairfax County, Virginia	Rental for HH with incomes under 65% AMI Ownership for HH with 70%-120% of AMI	Rent and sale prices to be approved by the city. A zoning permit is granted after that.	30 yrs.
Cambridge, Massachusetts	HH with incomes under 80% of AMI	Monthly cost to not exceed 30%	Perpetual
Santa Fe, New Mexico	Multiple AMI tiers below 50% AMI- 25% units 51%-65% AMI - 25% units 66%-80% AMI - 25% units 81% - 100% AMI - 25% units	Maximum target home price limits for each housing type in each Income Range are established by the County	Resale control: Perpetual Rent control: 15 yrs.
Burlington, Vermont	HH with incomes under 100% of AMI	Based on the (unspecified) Affordability threshold Rent: \$1,043 to \$1,909	Perpetual
Davidson, North Carolina	Multiple AMI tiers: below 50% AMI - 30% units; 50%-80% AMI - 50% units; 80% - 120% AMI - 20% units	Based on Fair Market Rent	99 yrs.
Washington DC	Multiple AMI tiers: 50% AMI - 60% AMI - 80% % AMI -	Limit on Rent/ Selling Price based on Housing Costs not exceeding 50% of the HH's Annual Income	Resale restrictions, are set out in deeds

Source: Compiled by authors

The percentage of DUs in a development required to be affordable or below market price in a IH programme could be as low as 5% and on average falls between 10-15% (Thaden & Wang, 2017). Studies show that this requirement is too low, as a result of which is the few affordable DUs are produced through IH. Thaden and Wang (2017) believe that the percentage should be increased to 20-25% instead of 10-15%.

The affordable housing units can be for sale or rentals. The definition of affordable housing is given in the various IH policies of the USA. It is defined as below market price DU and which income groups can afford it by paying rent or EMI not more than a fixed percentage between 25% to 50% of the corresponding AMI for that group.

The eligibility criteria for the beneficiary based on HH incomes in the city is measured through AMI. There is an income cap for these programmes, which varies from 50% AMI to 120% AMI and is 80% AMI on average. As a result, they do not target the most impoverished population. According to Wang and Balachandran (2021), in an attempt to better reach the poor, IH policies have started targeting multiple income groups (instead of single income groups) through:

1. **'Mixed income level approach'** which requires affordable units created to be allocated across multiple income groups (e.g., 25% of affordable units at 50% AMI and 75% of affordable units at 80% AMI)
2. **'Multiple-income targeting approach'** which offers developers different choices to serve lower-income residents, often tying the income requirements of the eligibility criteria to project size, incentives, or level of set-aside (e.g., In the same jurisdiction: 5% affordable housing set-aside at 30% AMI or 10% set-aside at 60% AMI).

In the tenure period for which the affordability requirements must be met, which could vary from 15 years to perpetuity. There are requirements that affordability remains in place longer for rental units than for ownership units and jurisdictions frequently increase these durations over time. (Thaden & Wang, 2017)

Voluntary vs. Mandatory Inclusionary Zoning and Regulations

The IH/IZR in USA can either be mandatory or voluntary i.e., the developer compliance is either compulsory where the developer has no choice but to comply with the IZ or in voluntary IZ they have a choice to comply and is given some incentives as a result. However, there has been a shift towards mandatory programmes and policies as voluntary programmes and policies have not worked.

Table 4 Need for changing from Voluntary Regulations to Mandatory Regulations.

Municipality/ County	Reason for Change	Result
Bolder, Colorado	In the 1980s and 1990s the city had a voluntary ordinance that proved ineffective at generating affordable housing	The mandatory ordinance went into effect in 2000 and within four years the programme created 300 DUs. In 2011-16 about 23,104 DUs were created.
Irvine, California	The voluntary programme caused confusion and uncertainty for over 20 years (since 1970). Developers initiated the change.	The new mandatory ordinance (adopted in 2004) is a concise programme with uniform expectations and incentives. Till 2016 DU supplied were 5,027.
Cambridge, Massachusetts	Ten years of voluntary IZ districts failed to generate any affordable housing	A new mandatory programme was adopted in 1991. In 2004 135 DU were created and 891 DU were created by 2016.

Source: Thaden and Wang (2017)



2.1.2 The Developer Incentives

Most of the programmes or policies include incentives that reduce or offset the developer costs of building the below market-rate units (Thaden & Wang, 2017). These are:

1. Density bonuses: Allows for the use of higher Floor Space Index (FSI) or allows for the same plot to have more DUs
2. Zoning variance such as a reduction in unit square design or parking concessions.
3. Fee waivers, reductions, or deferrals.
4. Tax reductions.
5. Expedited permit processing.

In cases where IH is mandatory, “these incentives not only mitigate costs but often make the adoption of IH programmes more politically palatable” (Wiener & Barton, 2014, p. 405). In places where providing units is voluntary, like Fairfax, Virginia, and Washington DC, these incentives may persuade developers to provide them.

Table 5: Incentives given in IZR by Local Jurisdictions

Incentives	Density Bonus	Zoning Variance	Fee reduction/ waiver	Expedited permitting	No incentives
Municipality/ County	<ol style="list-style-type: none"> 1. Montgomery County, Virginia 2. Chicago, Illinois, 3. Santa Monica, California 4. Fairfax County, Virginia, 5. Cambridge, Massachusetts, 6. Santa Fe, New Mexico 7. Burlington, Vermont, 8. Davidson, North Carolina, 9. Washington DC 	<ol style="list-style-type: none"> 1. Irvine, California, 2. Montgomery County, Virginia, 3. Santa Monica, California 4. Burlington, Vermont 	<ol style="list-style-type: none"> 1. Bolder, Colorado, 2. Montgomery County, Virginia, 3. Santa Fe, New Mexico 4. Burlington, Vermont 	<ol style="list-style-type: none"> 1. Montgomery County, Virginia 2. Santa Monica, California 	<ol style="list-style-type: none"> Denver, Colorado

Source: Compiled by authors

2.1.3 Key Learnings

One of the critical lessons to be learned from the case of the USA is that the proposed IZ needs to be legally supported. It is important to anticipate potential legal challenges as these challenges can take years to resolve, using up valuable public resources. Fairfax County, VA, had the first proposed IZ in 1971 (even before Montgomery County, MD), which courts struck down. They had to reformulate their IZ, which was implemented in 1990, almost 20 years after the first proposal. Outreach, dialogue and negotiation with all stakeholders can help communities build support for inclusionary zoning policies among a broad range of stakeholders, reducing the likelihood of litigation (Jacobus, 2015).

The IH programmes in the USA have some unique characteristics which we would like to highlight:

- The experience of Voluntary IZ has not been good which resulted in many local jurisdictions **switching from Voluntary to Mandatory IZ**.
- The affordable units can be provided in the form of below market price rentals or for sale units. Thus, **IZ can be used to create an affordable rental housing stock as well**.
- There is a restriction on the price or rent of the unit, but it is also not fixed and varies based on the income of the beneficiary household. There is a fixed formula, in some cities, limiting the housing expenditure under 25% to 50% of Annual HH income and in others, city managers may decide the price.

The US experience shows that IH or IZ alone cannot solve the housing crisis, the number of units produced through it are too low to be effective as a standalone strategy (Levy et al., 2012). Nevertheless, producing affordable units is not IZ's only goal. It was developed as a response to the spatial segregation based on race and wealth in the city. IZ is a tool for desegregation and it helps improve the prospects of lower income HHs' upward mobility (Schneider, 2018).

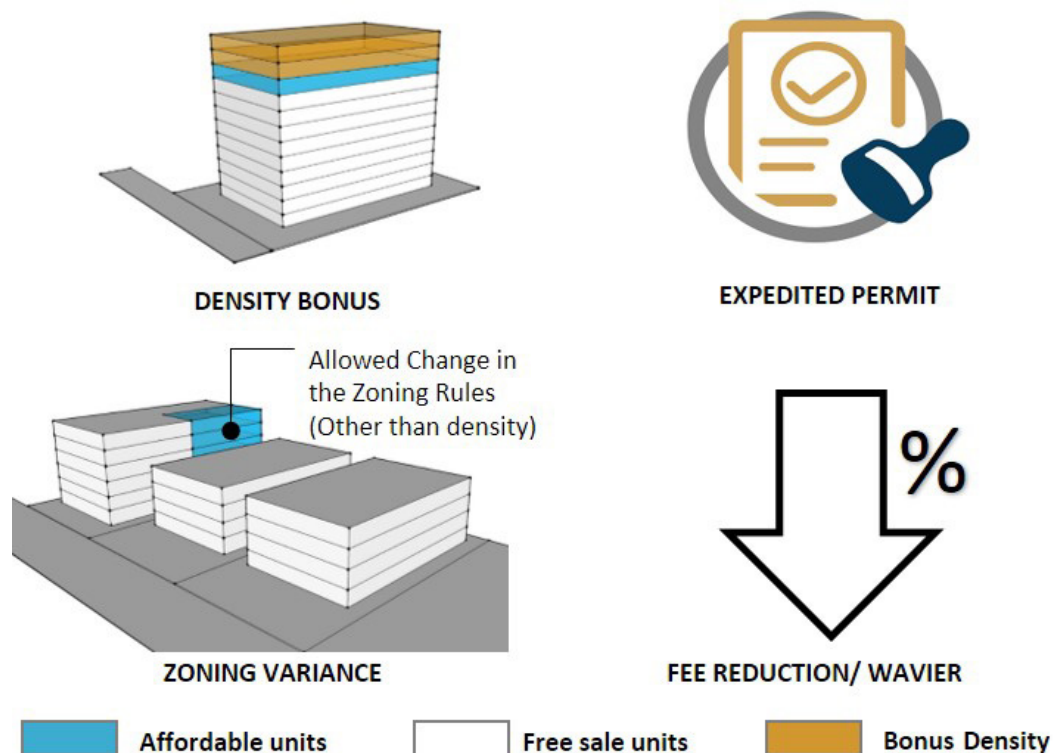


Figure 7: Typical Incentives given in IZR
Source: Authors



2.2 OTHER INTERNATIONAL PRACTICES

2.2.1 United Kingdom

IH was introduced in the UK in the 1990s because of the lack of government funding for affordable housing. IH was achieved in England and Wales through section 106 of the Town and Country Planning Act 1990, enacted at the national level, allowing local authorities to negotiate with developers to achieve their socio-economic objectives. It allows for the creation of affordable housing units to be taken up by private developers as a 'planning obligation', which is a part of planning permission conditions. The same is achieved through section 75 of the Town and Country Planning Act 1997 in Scotland and section 76 of the Planning Act 2011 in Northern Ireland. Another planning charge called the Community Infrastructure Levy (CIL) was introduced through the Planning Act 2008 for local authorities in England and Wales to help deliver infrastructure, including affordable housing, to support the development of their area. It came into force through the Community Infrastructure Levy Regulations 2010.

The 'Planning obligations' under Section 106 typically require new housing developments to provide a proportion of total units for affordable housing to low and moderate-income HHs. Section 106 "does not mandate a fixed percentage or pre-established requirement for affordable housing, as the technique is based on negotiation between the local authority and the developer" (Mishra & Mohanty, 2017). The legal foundation of the approach grants local governments considerable power in devising their own IH policy. Local authorities restrict the development of land in a way that requires new housing developments to provide affordable housing to lower income segments and "specify the type, location, number and timing of such housing and the financial contributions that the developer must pay for providing infrastructure and services" (Mishra & Mohanty, 2017).

Empowered by Section 106, the London DP (2002) mandates that 25% of the new residential developments should be affordable if provided on-site. If the affordable units are provided off-site, then the figure would be 33%. Payments-in-lieu will be the cost of providing the 33% affordable units off-site. No incentives are provided to the developers. The affordable housing units take the form of Rented Housing (Social Rental Housing and Affordable Rent Housing) for low-income groups and Intermediate Housing (Shared Ownership and Rent to own) for average income groups. The ratio between Rented and Intermediate Housing is around 7:3 or 6:4. The rent is about one third the market rent. The planning tools used in London are like the mandatory IH in the USA but without incentives.

According to (Whitehead et al., 2005), section 106 is responsible for creating about 40% of the affordable housing in the UK. However, the number of units delivered is substantially below the forecast figures. Numerous studies have detected problems in negotiations due to the inadequate negotiating capacity and lack of market awareness by local authorities^d. The CIL was introduced to bring more uniformity and transparency in collecting funds for infrastructure and simplifying tax implementation and operations. The CIL is applied to new developments that create a gross internal area of 100 sq. m or more or create new dwellings^d. Local Planning Authorities may choose to set CIL in their jurisdiction.

According to Wyatt et al. (2017, p. 5), 58% of the local authorities have CILs, "and these are concentrated to a large extent in more affluent parts of the country where market and land values are higher." CIL and a scaled back Section 106 planning obligations operate alongside where Section 106 is mainly used to provide affordable housing (Wyatt et al., 2017).

2.2.2 Brazil

Brazil has the Zona Especial de Interesse Social (ZEIS meaning Special Zone of Social Interest) mandated by the national law called The City Statute (Lei Federal no 10.257/01). ZEIS exists in the cities of Brazil with a population higher than 20,000 inhabitants.

The Master Plan 2002 of Sao Paulo designated some areas of the city as ZEIS. Legalizing land tenures and regularizing informal settlements, suburban development, enforcing the compulsory development of undeveloped or underused properties in the city centre, and providing affordable housing are the primary purposes of ZEIS. Accordingly, the ZEIS has four categories (modified to five in 2014).

Of these, ZEIS 3 and 5 can be considered as IZ. ZEIS 3 is set out in perimeters containing underused plots or buildings (Santoro, 2015). In these ZEIS's, 80% of the total built area in any development located in plots larger than 500 square meters must be used for affordable housing.

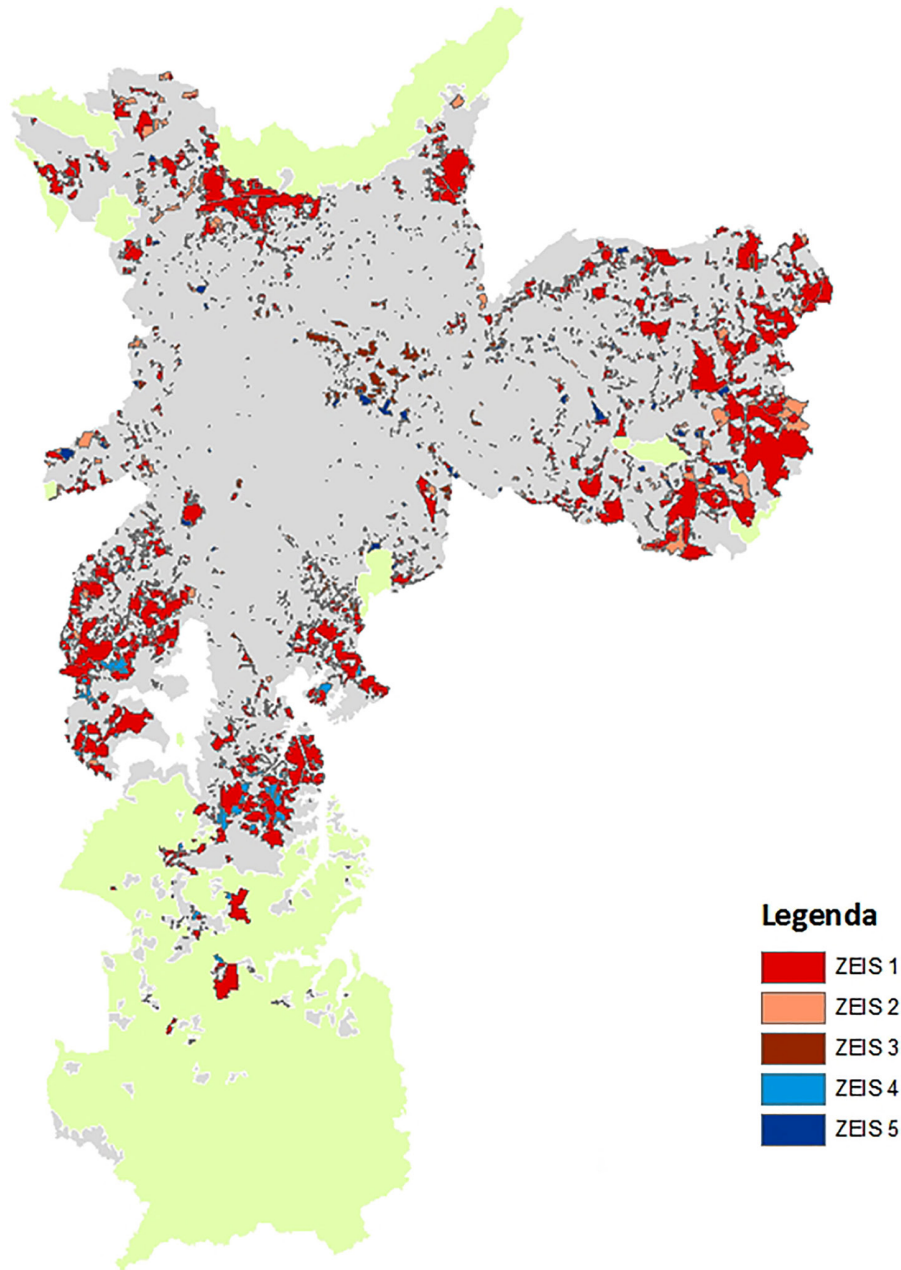
Here, affordable housing means social housing (HIS in Portuguese) and popular market housing (HMP in Portuguese). According to Master Plan 2002, an HIS is for HHs with a monthly income of up to six times the minimum wages and HMP for HHs earning a monthly income of between 6 to 16 times the minimum wages^d. The government of Brazil decides the minimum wage.

The Master Plan was revised in 2014 and the following revisions were made to the IZ. ZEIS 3 (dubbed Vacancy ZEIS) required a mandatory percentage of 60% (instead of 40%) of the built area for families with income up to three times the minimum wages, which cannot afford to pay for a home loan and represent the largest share of the housing deficit. New zone ZEIS 5 (dubbed Market ZEIS) was introduced to incorporate the request made by the real estate market to have ZEIS with a higher percentage of HMP delivered to families whose income ranges from 6 to 10 times the minimum wages. In ZEIS 3, housing is provided by public agencies and in ZEIS 5, the markets provide housing, and the developers get a density bonus as an incentive.

ZEIS has been successful in upgrading slums and informal settlements but not in creating new affordable housing. There is a shortage of land under ZEIS 3: about 1% of the total urban land. Some demarked areas under ZEIS were used entirely for institutional use instead of housing which was permitted by decrees issued after the master plan. Similarly, under some ZEIS 5, the market rate housing projects had no affordable housing. These were permitted either because they were approved under previous regulations or authorized by a special council. There are also some cases of conflicts between the identified ZEIS and the environmentally protected areas. The City Statute (Lei Federal no 10.257/01) is the legal basis of this ZEIS, but the lack of political will and distortion in planning makes its implementation difficult.

Another tool in Sao Paulo's Master Plan of 2014 implemented at the local level is Solidarity Share or Solidarity Quota. This instrument allows for 10% total floor area to be set aside for housing low income HHs in developments of over 20,000 sq. m This 10% is not counted in the additional (purchased) development rights. These housing units can be provided on-site or off-site in any part of the city. Land can be donated, or a fee can be paid instead of the construction of these units. The original intention of Solidarity Share was to create affordable housing at the same time and place as the new development. However, because of the alternatives provided to on-site construction and developers preference to not create units on the same site, the intention is defeated.





Legenda

■	ZEIS 1
■	ZEIS 2
■	ZEIS 3
■	ZEIS 4
■	ZEIS 5

Figure 8: Categories of ZEIS spatially located in Sao Paulo as per Master Plan 2014

Source: Ribeiro, Daniel, and Abiko (2016)

2.2.3 South Africa

According to Levenson (2021), South Africa, post-apartheid, has delivered more free, formal housing units than any other modern democracy. In South Africa, the housing delivery is mainly through the public sector: About 100,000 to 150,000 DUs per year getting delivered through the public sector vis a vis only 40,000 DUs per year through the private sector. Most of this housing is delivered in the peripheries, and the housing programmes consistently failed to coordinate with employment, transportation, and food security initiatives (Levenson, 2021).

Thus, there is the need for affordable housing to be located in better neighbourhoods and restructuring of segregated neighbourhoods through Inclusionary Zoning. As a result, 'Framework for Inclusionary Housing Policy' was drafted in 2007. The housing policy aimed for racial assimilation or social integration. It did not become legislation. So, there are no national-level policies for IH in South Africa (S. Patel et al., 2021). Local governments are attempting to make their own IH / IZR policy at the city level.

The IH was introduced in Johannesburg in 2019 to address social inequalities and the significant shortage of affordable housing for low income HHs. IH is mandatory for any development with 20 DUs or more in the entire

City of Johannesburg (CoJ) metropolitan municipality. There are four different options for the implementation of IH. In each option, at least 30% of the total units in the development in the same site must be set aside for lower income groups.

The affordable housing provided in Johannesburg, South Africa, needs to have the same outward appearance as market units and share the common spaces and facilities. Their sizes can be different from the market housing. CoJ gives different size caps to the different affordable housing categories and requires compliance with minimum design requirements.

These minimum design requirements are:

- Private bathroom.
- Minimum of 7 sq. m. of habitable space per person and minimum of 18 sq. m. per unit.

The IH policy is mandatory, and it gives several options to developers to provide affordable housing units on the same site at the same time as the other (market) development. It does have an option for off-site unit provision subject to negotiation with the city manager. Since the policy was introduced in 2019, it is too early to study its impact.

Table 6: Options for Inclusionary Housing compliance in CoJ along with its incentives

Option	Description	Incentive
1	The affordable units are in the form of: <ol style="list-style-type: none"> 1. Social Housing that complies with the Social Housing Act, 2008, and the Social Housing Regulatory Authority, 2. Units that qualify under the Finance Linked Individual Subsidy Programme (FLISP) that comply with the minimum design requirements. 3. Privately owned units with a rental cap that comply with the minimum design requirements. 	<ul style="list-style-type: none"> ● Increase in FSI equal to the percentage of inclusionary housing units (maximum of 50% increase). ● Increase in density to accommodate the inclusionary housing units (maximum of 50% increase). ● Inclusionary housing units subject to half of the parking requirements.
2	This option only applies to areas where a density of 60 DUs per hectare (or more) is supported: <ol style="list-style-type: none"> 1. 10% of the total residential floor area of the development must be small inclusionary housing units. 2. Size: Minimum 18 sq. m. Maximum 30 sq. m. 3. These units can be rented out or sold directly by the developer. 	<ul style="list-style-type: none"> ● Increase in FSI equal to the percentage of inclusionary housing units. ● Increase in density to accommodate the inclusionary housing units. ● Inclusionary housing units subject to half of the parking requirements.
3	This option only applies to areas where a density of 60 DUs per hectare (or more) is supported: <ol style="list-style-type: none"> 1. 20% of the total residential floor area of the development must be made up of inclusionary housing units which are 50% of the size of the average size of the market units in the development. 2. Size: Maximum 150 sq. m. 3. These units can be rented out or sold directly by the developer. 	<ul style="list-style-type: none"> ● Increase in FSI equal to the percentage of inclusionary housing units. ● Increase in density to accommodate the inclusionary housing units
4	A developer may negotiate with CoJ to provide off-site units if he can explain (in writing) why the above three options are not viable for him.	None/ Based on the negotiations if any.

Source: CoJ, 2019



2.2.4 Singapore

In Singapore, about 80% of the people live in government-built housing, unlike other countries where the market or the private sector provides housing to the majority. Consequently, Singapore has no IH where the market provides housing for the poor. Instead, there are schemes where the market is incentivized to provide housing for the middle class, which aspires for an even better quality of life. Schemes like Executive Condominium (EC) and the Design Build Select Scheme (DBSS).

EC was launched in 1999. The idea was to provide condominiums at a subsidized rate to a particular income segment decided by the government. These projects would be designed like the costly and exclusive private condominiums, a status symbol in Singapore, but they would be a hybrid of private and public housing. The government does not set DU size or price restrictions for the developer, and the DU price is less than the market price. In return, the developer gets an incentive in the form of subsidized land from the government.

The monthly HH income of the buyer cannot exceed S\$16,000 (USD 11820)^a, which is applicable for people who have applied for housing with Housing Development Board (HDB) before. However, priority is given to first time applicants. During the initial launch period of the project – up to one month, 70% of flat supply is set aside for them. There is a minimum occupancy period of five years.

The EC DU becomes private after 10 years and is subject to a resale levy of S\$5,500 (USD 4060).

DBSS was launched after EC in 2005. In this scheme, private developers build public housing with presumably better design choices for people. There is not any DU size or price restriction, but the unit price is less than the market. The developer gets an incentive in the form of land from the government for DBSS. The monthly HH income for buyers in this scheme must not exceed S\$14,000 or S\$21,000 (USD 10,340 -15,510) if purchasing with extended family. A minimum of five years of occupancy period and resale is subject to a levy of S\$50,000 (USD 36,935).

The difference between DBSS and EC is that DBSS is a form of public housing while EC is a hybrid of public-private. A DBSS DU remains as public housing, whereas an EC DU becomes private housing after 10 years. DBSS scheme was discontinued in 2012 because of its unpopularity.

2.2.5 Key Learnings

Section 2.2 discusses the International Experiences to understand better how different countries adapted the IZ or IH in their context. In each experience, we see:

- The need for IH may vary from spatial equality to the provision of affordable housing units.
- The tools used by the planners vary from mandatory regulations to negotiable to voluntary regulations. The experience of negotiable and voluntary regulations has been mixed.
- The incentives given to developers to offset the cost like density bonus, zoning variance, and fee waiver are not compulsory and some policies do not have these. In such cases, the provision of affordable housing is seen as a planning obligation.
- Incentives, however, make the IZR more palatable to the developers.

In all these experiences, we see the importance of the legislation. Each of these IZR programmes had a robust legal backing. However, some other issues can derail the implementation of IZR, these are:

- The inability or lack of capacity of the government to implement the IZR and poor governance. As observed in certain jurisdictions in the UK. The UK requires local authorities to negotiate with the developer. Therefore, local authorities need to have skills to negotiate and the latest market data. Some authorities do not have the capacity, leading to poor implementation of the policy.



- The lack of will by authority or government to implement the IH properly by authority or government and poor governance of IH policies. This was observed in Sao Paulo, Brazil, where the government flouted the ZEIS to build institutional buildings instead of affordable housing.
- NIMBY-ism: Landowners and developers are apprehensive about the implications of mixed income development on the value of their property. This fear makes them oppose IZ.

The case of Singapore, while not IZ, shows that there is also an aspirational aspect to housing developed by the private sector, especially for income groups who may not be able to afford it. Public housing is often associated with bad design and quality. Adjectives like 'cookie cutter and monotonous' have been used for public housing even in Singapore, an example of housing success. These aspirations should also be addressed when designing the IZR policy.



2.3 THE INDIAN EXPERIENCE

2.3.1 A brief chronology

IH in India started in 1985 but were largely confined to creating mixed income housing in brownfield projects such as the Prime Minister Grant Project for slum redevelopment in Mumbai. In the 1990s, greenfield projects such as new towns such as Gurugram, Haryana and Rajahat, West Bengal, developed under Public Private Partnership (PPP) also had a component of mixed income housing using the principal of cross subsidisation.

IH was also seen in the development of greenfield townships post 2005. The government allowed for 100% Foreign Direct Investment (FDI) in real estate in 2005. The guidelines for FDI in development of Integrated Township suggest reservation of a fixed percentage of plot or built-up area for EWS/ LIG. Following this every state in India had their own Township Regulations with reservation for EWS/ LIG. These regulations inspired the creation of IZR in many cities and states which were adopted for greenfield development by many states and cities in India through their Town Planning Legislation and DCRs, respectively.

These have not been adopted to just to address the spatial segregation but to augment housing supply for the lower income groups who are less catered to by the private market.

The various models of IH in India are as follows:

1. **IH policies and programmes at the National Level:** These are applicable nationally and could take the form of a national housing programme or be part of a policy or be tax rebates or holidays provided to incentives the private sector to provide housing.
2. IH through Spatial Planning tools at the local level:
 - **Land Management Tools** like Town Planning Schemes in Gujarat allow governments to appropriate private land for public use and can be used to reserve land for housing the poor and economically weaker section.
 - **Integrated Townships** - The guidelines for integrated townships specify reservation of land and DUs for EWS/ LIG. State township regulations like Gujarat Township Regulation 2009 reserve both land and built up area for the EWS.
 - **Inclusionary Zoning Regulations** like the Slum Redevelopment Schemes (SRS) of Mumbai and the Residential Affordable Housing Overlay Zone of Ahmedabad.

Also, in the Indian context, all housing programmes, including IH and IZR are generally conceptualized for beneficiaries falling within the various socio-economic groups identified by the central and state governments from time to time. For instance, the PMAY which is the flagship policy of the Government of India identifies various socio-economic classes such as EWS (less than INR 0.3 Mn per annum), LIG (INR 0.3 to 6 Mn per annum), MIG-1 (INR 0.6 to 1.2 Mn per annum) and MIG-2 (INR 1.2 to 1.8 Mn per annum).

2.3.2 Inclusionary Housing programmes and policies at the national level

The government of India has undertaken initiatives that intend to enable the markets in providing affordable housing at the national level. These initiatives are undertaken under the broad umbrella of the policy Housing for All (HFA). These are:

1. AHP vertical under the PMAY: This vertical incentivises the private developer to construct housing for the EWS.
2. Amendment in the Income Tax Act to provide tax holiday for affordable housing projects: Section 80 IBA of the Income Tax Act 1961 was amended to provide the developers with a 100% exemption on profits from selling affordable housing stock in the markets. Affordable housing is recognized as a development with DUs of 90 sq. m CA not exceeding a price of INR 4.5 Mn (USD 61,058)^a (including

stamp duty on registration). The entire development shall not exceed designated commercial floor spaces more than 3% of the total carpet area.

3. Reduction in the Goods and Service Tax (GST) on affordable housing projects: The CGST Act of 2017 has reduced the tax on the sale of affordable housing units from 5% to only 1% without Input Tax Credit (ITC). The affordable housing, in this case, like in the case of 80 IBA of Income Tax act is also recognized as DUs of 90 sq. m CA not exceeding a price of INR 4.5 Mn. However, the cap on the commercial development is capped at 15% of the total CA.
4. Infrastructure status to affordable housing projects for accessing priority sector lending incentives: Affordable housing was categorized as infrastructure by the government, making lending a priority sector for affordable housing projects. A 3-4% reduction in the borrowing rate in construction loans is a significant incentive given to the developer. In this case, the affordable housing projects are identified as projects using at least 50% of FAR/FSI for DUs with CA of not more than 60 sq. m

All these have been discussed in detail in CHAPTER 1 under section 1.3. Apart from undertaking the HFA policy laid down by the Government of India, the state government also adopts various spatial tools implemented locally. These include land management tools and the IZ or IR. The following section covers them in detail.

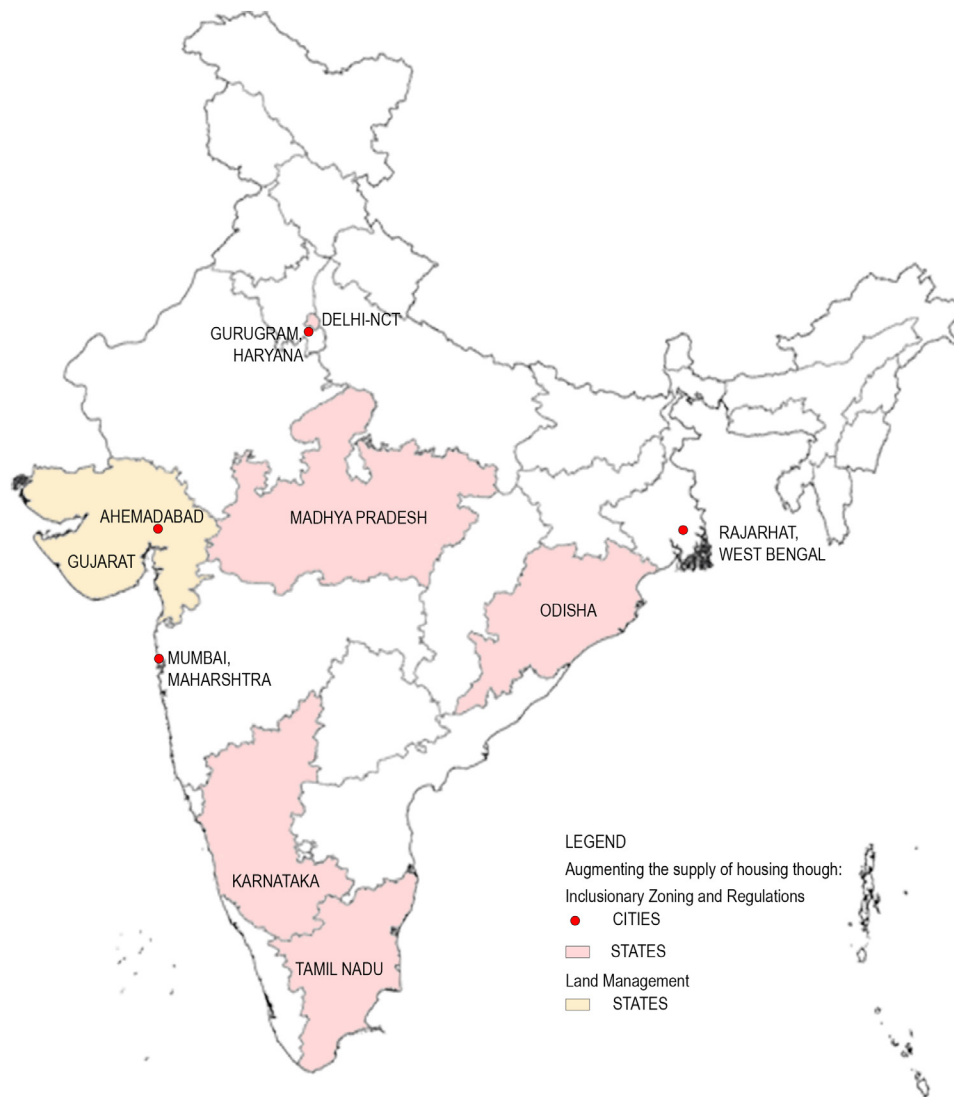


Figure 9: Study area: states and cities in India that use spatial tools to augment the supply of housing.

Source: Compiled by authors



2.3.3 Spatial tools for augmenting the supply of affordable housing: Land Management Tool – Town Planning Scheme

TPS is a planning tool that allows for land pooling and readjustment for planned development. Through TPS, private land is appropriated for public use. In Gujarat, through this process, a land bank is created by reserving plots for the SEWS.

The TPS of Gujarat is provisioned under GTPUDA 1976, Chapter V. The critical benefits of TPS are:

1. Serviced Land Delivery
 - A planned network of streets
 - Regular shaped plots
 - Provision of basic services
 - Land created for social infrastructure and public utilities
 - Provision of green spaces
2. Self-financed

As per section 40 (3) (j) of GTPUDA added in 1995, TPS also allows the creation of a land bank for housing for SEWS in the city by reserving up to 10% of the land in a TPS. The Urban Local Body (ULB) or Planning Authority may then provide the housing on these plots.

The TPS is implemented in stages. The flowchart on the left illustrates the process and shows the various stages of TPS (Figure 11). It has shown great success in appropriating land for public purposes. The table on the left shows the output as against the mandates (Table 7).

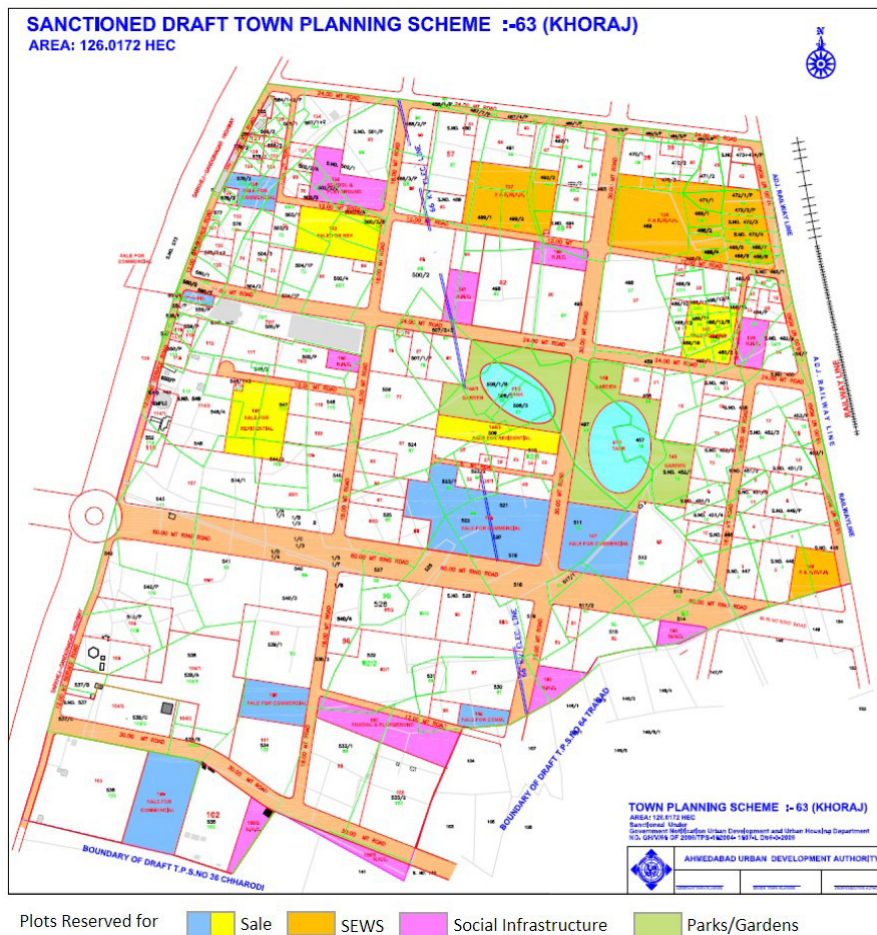


Figure 10: Town Planning Scheme with plots reserved for public purpose
Source: Government of Gujarat (2018)

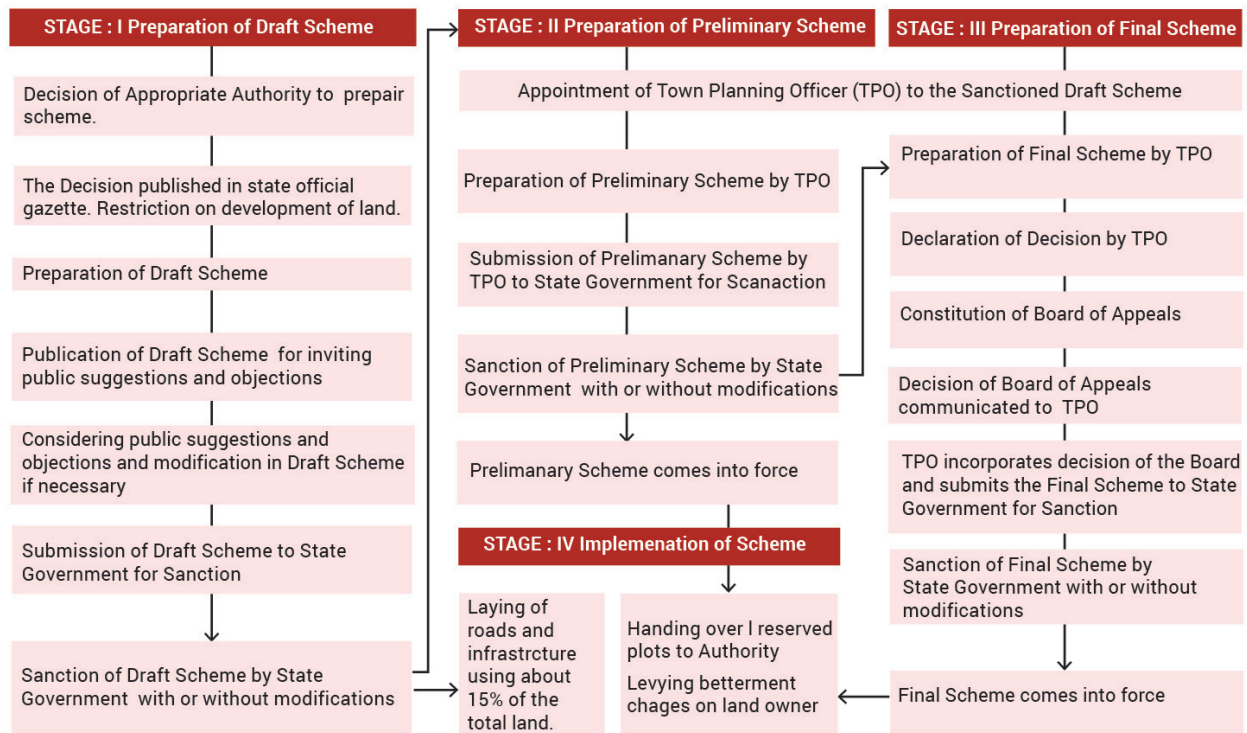


Figure 11: Process of Implementing Town Planning Scheme

Source: N. Patel (2019)

Table 7: Land Appropriated in Ahmedabad using Town Planning Schemes

Purpose	As per Legislation	Land Appropriated till 2010 (sq. km.)	
SEWS Housing	10%	4.5	3%
Green and Open Spaces	5%	4.5	3%
Public utilities + Social Infrastructure	5%	5.7	4%
Public Land Banks for Sale	Up to 15%	12.1	8%
Roads	15%	21.8	14%
Total Appropriated Area	40 - 50%	48.5	42%
Non-Appropriated		105.3	68%

Source: Ballaney (2013)

About 80,000 DUs have been created through the land bank generated by TPS under the various public housing schemes in Ahmedabad (Mahadevia, Pai, & Mahendra, 2018). As these TPS are dispersed all around the city, the SEWS plots and housing projects on them are not concentrated in one part of the city. They also benefit from the infrastructure created under the TPS.

Thus, TPS provides serviced land with proper streets, basic infrastructure, social amenities, and public utilities and allows for creating a land bank that can be used to create housing for the SEWS.



2.3.4 Spatial tools for augmenting the supply of affordable housing: The integrated township policy

The Integrated Township Policy aimed to mobilize the private sector for the supply of land for urban development including urban housing, infrastructure, and other public uses. A developer would assemble the land by paying private landowners the prevalent market price. The role of the state would be that of a facilitator of urban development instead of a provider of land and controller of urban growth. Many Indian states adopted an Integrated Township Policy including Gujarat.

The Gujarat Township Regulations 2009 aimed at addressing the rising demand in housing sector along with provision of infrastructure services, education, and health facilities. It also had provisions for affordable housing under these regulations:

- A township could be developed with a minimum area of 40 Ha within the limits of a development authority and 20 Ha in other towns.
- At least 60% of the land eligible for developing after deductions is put to residential use. These residences will have basic infrastructure services and social amenities.
- The developer shall make provision for the EWS in the form of 5% of the land and 5% consumed FSI, attached with other residential DUs.

These Township Regulations of 2009 led to the construction of the following townships in Ahmedabad:

The Gujarat Township Regulations 2009 are under suspension as of September 2021. But given that the regulations mandate reservation of land and BUA for EWS with in the project site, they promote inclusive, mixed income neighbourhoods with infrastructure and facilities.

Table 8: Townships in AUDA limits

Sr. No.	Township	Area in Ha.
1	Apple Wood, Sanathal-Sarkhej	43.11
2	Arvind, Moti Bhoyan-Khatraj-Vadsar	56.72
3	Arvind, Adhana-Nasmed	65.66
4	Arvind, Jethalaj-Karoli-Khatraj	97.83
5	Blues & Greens, Sanand-Vasna Iyava	185.67
6	Godrej, Jagatpur-Tragad-Chenpur	138.32
7	Ozone World, Santej-Vadsar	99.85
8	Safal Buildcon, Kaneti-Telav	101.88
9	Sahara City, Shela	40.25
10	Shanti Gram Township, Khoraj-Khodiya-Jaspur-Dantali	259.97
11	Shanti Krupa, Chekhla-Vasjada Dhediya	65.78
12	Smile City, Godhavi	244.56
13	Sterling, Khoda-Iyava	114.60

Source: AUDA (2013) DP 2021 part-1, pg. 149

2.3.4 Spatial tools for augmenting the supply of affordable housing: The Inclusionary Zoning and Regulations at the state and local level in India

IZR adopted in India was conceived from the fundamentals of inclusionary housing practices established in the global north. The discourses on IZR in the Indian context began with the large-scale shift from state provisioned housing to the developer entity in the market in the 1980s and 1990s. This transition, especially in the bigger cities, resulted from a lack of government's capacity to meet the housing demand of the large-scale migrating population from rural to urban and from smaller towns to larger urban cities. Initially, these focused on brownfield sites. Later IZR were adopted for greenfield development by many states and cities in Indian through their Town Planning Legislation and DCRs, respectively.

The Integrated Township Scheme in 2006 due to the government of India allowing for 100% Foreign Direct Investment (FDI) in real estate in 2005 allowed for reservation of BUA for housing the EWS. This reservation was adopted into the Integrated Township Scheme in all the states of India. The National Urban Housing and Habitat Policy (NUHHP) 2007 suggested IZR as a spatial initiative. The NUHHP 2007 required that 10–15% of the land in every new public/private housing project or 20–25% of FSI reserved EWS/LIG housing. The Jawaharlal Nehru National Urban Renewal Mission (JNNURM) also tried to promote IH and IZ as an optional reform. It stipulated earmarking 20-25% of developed land in all housing projects (public and private) for EWS and LIG HHs (Ahluwalia & Kanburand, 2011).

Most states and cities adopted IZR after NUHHP 2007 and JNNURM (Ahluwalia & Kanburand, 2011; Mishra & Mohanty, 2017) through their Town Planning Regime and were supported by various national policies and programmes. In this section, as part of the case study, the IZR adopted by various cities and states of India (see Table 9) have been reviewed in detail.

Box 4: Provisions for Inclusionary Zoning and Regulations under NUHHP and JNNURM

The provisions for IZR under JNNURM:

Under Optional Reforms

“Earmarking at least 20-25 per cent of developed land in all housing projects (both public and private agencies) for EWS and LIG category with a system of cross subsidisation” Government of India MOUD MOUEAPA (2005, p. 13)

The provisions for IZR under NUHHP:

Under Spatial incentives

“Innovative spatial incentives like relaxation of Floor Area Ratio (FAR) for ensuring that 20-25 % of the FAR is reserved for EWS / LIG and issuance of Transferable Development Rights(TDR) for clearance of transport bottlenecks in the inner-city areas and availability of additional FAR in Outer Zones will be promoted with a view to meeting the housing shortage amongst EWS / LIG” Government of India MOUPA (2007, p. 14)



Table 9: Inclusionary Zoning and Regulations implemented at the state or city level in India

City/ State	Legislative Provisions	Tool	Developer Compliance	Income Ceiling (pa)
Mumbai, Maharashtra 2012 (Draft)	Greater Bombay Development Plan 1991 Regulation 9.1(c)	Mandatory	Net Density 325 DU per Ha 50% of the DU as tenements 10% of these to be purchased by corporation	EWS: up to INR 0.3 Mn LIG: INR 0.3 - 0.6 Mn MIG: INR 0.6 - 0.9 Mn
Mumbai, Maharashtra 2018 (2013)	Revised Draft Development Plan 2036; Greater Mumbai Regulation 15 (and Notification No. TPB 4312/CR-45/2012/(2)/UD-11; UDD dated 8th November 2013)	Mandatory Minimum plot 4,000 sq. m.	Create on-site/ off-site DUs: 20% BUA DUs to be transferred to ULB or Land Donation: 20% of plot given to ULB	EWS: < INR 0.1 Mn LIG: INR 0.1 – 0.2 Mn
Madhya Pradesh, 2012	Madhya Pradesh Nagar Palika (Registration of colonizer, terms and conditions) Rules, 1998 Rule 10	Mandatory For Plotted Development Minimum Plot: 20,000 sq. m.	Create on-site DUs/ Reserve Plots:15% of total DUs/ Plots or Pay in-lieu fees	EWS: up to INR 0.3 Mn
		Mandatory Group housing development Minimum Plot: 10,000 sq. m.	Create on-site DUs:15% of total DUs or Pay in-lieu fees	EWS: up to INR 0.18 Mn LIG: INR 0.18 – 0.36 Mn
Delhi, 2013	Delhi Master Plan 2021	Mandatory: Minimum plot: 3,000 sq. m.	Create on-site DUs: 15% of BUA 50% to these DUs be transferred to Local Body/ Delhi Development Authority.	EWS: INR 87,600 to 0.15 Mn LIG: INR 0.15 – 0.3 Mn
Delhi, 2021 (proposed)	Delhi Master Plan 2041		Create on-site DUs: 15% of BUA for EWS/LIG Housing (as before) 15% housing to be sold at market rate	EWS: INR 87,600 to 0.15 Mn LIG: INR 0.15 – 0.3 Mn No income restriction for market rate housing
Ahmedabad, 2013	Ahmedabad Development Plan 2021	Voluntary, Liberal	Create projects within a delineated overlay zone with DU size 80 sq.m. BUA	Not Applicable
Ahmedabad, 2017	Gujarat Common Development control regulations			
Ahmedabad, 2020	Notification		Projects can be created pan city in all residential zones.	EWS: up to INR 0.14 Mn LIG: INR 0.14 – 0.22 Mn

Table continued in the next spread.

DU size	DU Price Ceiling	Lock-in Period	Incentive
Tenements 16.75 sq.m.			Corporation to pay cost of construction +15%
EWS: Developed Plot: 30-40 sq.m. DU 25-35 sq. m. BUA LIG: Developed plot: 41-96 sq. m. DU: 36-48 sq. m. BUA	Developed Plot: Total area of plot x prevailing collector guideline rates DU on Developed plot: cost of Developed plot + cost of construction (@7000/sq. m. of BUA) DU in Group Housing: cost of the plot on which DU's are built + cost of construction (@10,000/sq. m. of BUA)	-	Density Bonus: 20% Or Equivalent TDR certificate
EWS: 25 to 40 sq. m.	50% stock sold by Developer entity at market prices 50% sold by DDA/local Authority through the lottery EWS - INR 1.0 to 1.9 Mn	10 years	Density Bonus: 15%
EWS: 21-30 sq. m. CA LIG: 31-60 sq. m. CA	EWS: INR 0.55 – 0.79 Mn LIG: INR 0.81 – 1.58 Mn	10 years	
Plotted Development: EWS: up to 54 sq. m. LIG: 54 sq. m. to 108 sq. m. Group Housing: EWS: 25 – 30 sq. m. CA LIG: up to 50 sq. m. CA	-	DDA Scheme 2014: 5 years	Density Bonus: 15% 50% of affordable DUs to be retained by Developer Entity and sold at market cost
Group Housing: EWS: 25 – 30 sq. m. CA LIG: up to 40 sq. m. CA Market Rate: 40 to 60 sq. m.	-	-	Density Bonus: 15% 50% of affordable DUs to be retained by Developer Entity and sold at market cost for EWS/ LIG housing
Up to 80 sq. m. BUA	Not Applicable	Freehold	Density Bonus: Higher FSI Zoning Variance – 10% commercial use allowed, reduced parking norms, Reduction in cost of Purchasing FSI
Up to 90 sq. m. BUA			



City/ State	Legislative Provisions	Tool	Developer Compliance	Income Ceiling (pa)
Karnataka, 2015	Regulations made by Govt. of Karnataka u/s 13-E, 12(2)(iii), 73 and 76K of the Karnataka Town and country planning Act 1961	Mandatory For Plotted Development Minimum Plot: 4,000 sq. m.	Create on-site DUs/ Reserve Plots: 10% of total DUs/ Developed Plots or Pay in-lieu fees	
		Mandatory Group housing development Minimum Plot: 1,000 sq. m.	Create on-site DUs 15% of the total DUs	
Odisha 2015	Provisioned under "Policy for Housing for All in Urban Areas, Odisha, 2015"	Mandatory Group housing development Minimum Plot: 2,000 sq. m.	Create on-site DUs: 10% of total BUA or Create off-site DUs: 10% of total BUA or Pay in-lieu fee	
		Voluntary: additional incentives for additional BUA constructed	Create on-site DUs: exceeding mandatory requirement of 10% of total BUA	
Chennai, 2017	In 2017: Establishment -CMDA –APU – Constitution of "Shelter Fund" for promoting public housing and Affordable Housing for EWS and LIG categories (Office Order No. 9 /2017)	Mandatory: All Developments Min BUA: 4,000 sq. m.	Impact Fee/ Linkage Fee: 75% of the Infrastructure & Amenities Charges or Create on site DUs: 10% BUA	As per TNHB EWS: up to INR 0.14 Mn LIG: INR 0.14 – INR 0.22 Mn
Tamil Nadu, 2020	Under the "Tamil Nadu Town and Country Planning (Levy of Shelter Charges and State Shelter Fund) Rules, 2020"	Mandatory: All Developments Min BUA: 3,000 sq. m.	Impact Fee/ Linkage Fee: Shelter Fund to the Planning Authority per sq. m. of BUA Commercial Building: 1.2 to 3% of guideline value Residential and Industrial Buildings: 1.1 to 3% of guideline value Institutional buildings: 1 to 3% of guideline value or Create on site DUs: 10% BUA	

Source: Compiled by authors

DU size	DU Price Ceiling	Lock-in Period	Incentive
EWS: up to 30 sq. m. LIG: 30 – 60 sq. m.	-	-	Density Bonus: Exemption of reserved plots from the computation of FSI
	-	-	Density Bonus: 15%
	-	-	Density Bonus: 10% Or Equivalent TDR certificate
	-	-	Density Bonus: BUA exempted from FSI calculation: 100% BUA for EWS 50% BUA for LIG Or Equivalent TDR certificate
	-	-	Exemption from paying towards the shelter fund in If DUs are created
EWS: 30 sq. m. LIG: 60 sq. m.	-	-	Exemption from paying towards the shelter fund in If DUs are created



2.3.3 The output of Inclusionary Housing in India

Eligibility Criteria

In India, the eligibility criteria for the beneficiary are the HH income and whether they currently own a formal house. The income group they belong to is a significant determinant. The income groups are EWS, LIG, MIG, and HIG. Typically, the EWS and LIG are targeted by the policies. The state governments set the income range for these income groups based on the guideline values set at the national level. They also set the DU size and price based on the income groups (Table 8).

Result of Inclusionary Housing

There is no data on the output or outcome of the above IH and IZR available in the public domain. There is also a research gap in the literature on the Indian Experience of IZR concerning their outcomes. One of the objectives of this case study is to try and fill that gap by sharing the experience of IZR in Ahmedabad, including its output and outcome.

Studies conducted for the affordable housing project under Public Private Partnership (PPP) with housing for mixed income groups within the same development may give us some idea of IH's outcomes in India.

According to Kaur (2013), the IH in Rajarhat, Kolkata through PPP mandated 50% of DU to be reserved as below market price units with 25% for LIG and 25% for MIG; the remaining were sold at market price. In practice, LIG units were only 16%, while the MIG units increased to 34%. The study also stated how the DUs meant for LIG were allotted by the authority to higher income groups. Around 10% of the respondents themselves reported earning more than the income limit set. Others had assets like cars and air conditioning, which indicated that they did not belong to LIG. Thus, the mandates have not been followed during implementation. The targeted beneficiaries are not allotted houses meant for them. The beneficiaries have under-reported their income to receive the benefit of the scheme.

Role of the developer and the incentives provided to them

The IZR are typically mandatory (Table 8). The developers typically contribute a percentage of BUA which varies from 10% to 20% of the BUA in the project by creating DUs for the EWS and the LIG on the project site. Alternatively, they may have the option as per the regulation to create the DUs in another location, donate part of their plot to local authority, or pay fee in-leu of the DUs.

Developers are incentivised in return through density bonus in the form of increase in FSI in the same project or equivalent Transfer of Development Rights (TDR) to be used in a different project location. The density bonus is provided to the developers as an incentive in Mumbai, Madhya Pradesh, Odisha, Delhi, and Karnataka. In the case of Mumbai, TDR is also used as an incentive in place of the density bonus.

The IR of Tamil Nadu, 'Shelter Charges' follows the Impact fee/ Linkage Fee model where all developments, including commercial and institutional use, have to pay a fee per unit area on the development which is used by the local authority for housing.

2.3.4 Key Learnings

In Indian states and cities, the IZR typically mandates or incentivizes developers to include affordable housing units in new residential developments. In exchange for the supply of such affordable housing units in the market, the private developers receive additional development rights either through density bonus, TDR, or zoning variances. Governments attempt to reduce the cost of affordable homes by reducing the cost of the land component. Some key learnings from the Indian experience of IZR so far are

1. The eligibility criteria (i.e., classification of various income groups) for identifying beneficiaries is generalized throughout India based on the national or state government's policy guidelines. Compared to that, the US has a more specific local level focused eligibility criterion. IZ housing prices and beneficiaries' incomes are computed based on the AMI calculated at the metropolitan area level in the USA. Hence, such income group classification at the central or state level may not reflect the characteristics that are unique for a particular city in India and require a localized approach for IZR. The policymaker needs to have data on the local real estate markets and the socio-economic condition of the city since housing affordability is a function of local labour markets.
2. The conceptualization of IZR in Indian states and cities focuses more on the production of quantum of affordable units than the practices in the USA, where the IZR involves the integration of socio-economic groups. Ironically, in many states and cities across India, the developer may get away from providing affordable housing by paying a fee or a penalty for not constructing affordable units. Therefore, the government's intent of producing a quantum of affordable housing is not fully realized.
3. Although there is not enough evidence as part of comprehensive research and documentation of supply of such housing across various cities in India, however, from the limited research on IH we have access to, we understand that the mandates are not followed during implementation and the targeted beneficiaries are not allotted houses meant for them instead they are allotted to a higher income group. The beneficiaries also under-report their income which makes the allotment process difficult (Kaur, 2013).
4. The IZR policies in the Indian context have also refrained from alternatives to the traditional ownership models. Options for rental housing as an alternative to the traditional ownership model can be explored.



2.4 INFERENCES

From the above global and national experiences, we have arrived at the following inferences:

The IH policy evolution shows a shift in priority from mixed income neighbourhoods to the creation of affordable housing. Only the policies that address segregation are in the USA and South Africa, countries with a history of racial segregation. In the USA, the DUs under IZR must not appear different from the market rate DUs. In Johannesburg, South Africa, the DUs reserved under IR are smaller in size than the market rate DUs, but it is mandated to be indistinguishable outside. Compared to these experiences, separate buildings, separated plots under land donation, and separate sites are allowed in India. These allow segregation and do not allow the envisaged “mixed income neighbourhood” that share facilities to form.

One of the key learnings from the US case study is that when designing an IZ policy at the local level, the planners must reduce legal risks. Thus, we suggest that policymakers audit existing state Town Planning Legislations. Upon studying the UK case, planners and the decision-makers need to propose a more straightforward IH/ IZ policy with a transparent process.

NIMBY-ism is a phenomenon observed in the USA, Brazil where land and property owners try to counteract the IZR policies and programmes. They fear that the availability of affordable housing through IZR will reduce the land and property rate. NIMBY-ism needs to be addressed for the success of any proposed IZR policy.

Typically, the IZ is successful by leveraging the land cost. The zone under IZ is an area of high property rate due to its proximity to workplaces or its connectivity through public transport or other desirable infrastructure.

Identification of beneficiary groups is essential for the success of IH and IZR. This identification must be based on the local incomes. The definition of Affordable Housing to be provided can also be helpful here. The IZR in the USA typically uses AMI to identify the beneficiary groups and define affordable housing. Since AMI is local and periodically updated data, the identified beneficiary groups are better targeted.

Rental stock creation is also possible through IZR. There is a focus on rental housing during the COVID-19 pandemic. This avenue can be further explored.

The success of IH or IZ depends not just on the programme design and implementation but also on local housing market conditions, corporation from developers, alignment with other (national level) IH policies and the support through legislation.

In CHAPTER 3: we will explore in detail the case of IZR in Ahmedabad, focusing on:

- Its inception and the political rhetoric surrounding it.
- The design of IZR, its evolution and its implementation.
- The output of the IZR and Housing market response.
- Alignment with other IH policies.
- The outcome from the perspective of end users.

PART - 2 AHMEDABAD EXPERIENCE

3

INCLUSIONARY ZONING AND REGULATIONS IN AHMEDABAD

3.1 INCEPTION OF RESIDENTIAL AFFORDABLE HOUSING ZONE AND REGULATIONS

3.2 MANDATES OF RESIDENTIAL AFFORDABLE HOUSING ZONE

- Developer Incentives

3.3 DELIVERY OF SERVICED LAND AND HOUSING FLOW ANALYSIS

3.4 UNDERSTANDING THE SUPPLY MECHANISM, PROJECT CYCLE AND PROJECT COST BREAKUP

- Serviced Land Delivered
- Flow Analysis

- Supply Mechanism and Project Cycle
- Project Cycle and Cost Breakup
- Findings and Inferences

3.5 CONVERGENCE WITH NATIONAL INCLUSIONARY HOUSING POLICIES

3.6 UNDERSTANDING THE END USERS AND THEIR AFFORDABILITY

3.1 INCEPTION OF RESIDENTIAL AFFORDABLE HOUSING ZONE AND REGULATIONS

In the previous chapter, we discussed the various models of IH and IZ worldwide and in India. IZR of Ahmedabad presents itself as a unique case as it is voluntary and takes a liberal market-driven approach. The uniqueness is due to the background discussed in Chapter .

Need for Residential Affordable Housing Zone in Ahmedabad

Housing in Ahmedabad is largely provided through the markets. The DP allows for provision of housing under the various residential zones and the TPS provides serviced land on which these projects can be constructed. The TPS also reserves land on which housing can be constructed for the SEWS, defined under various public housing schemes. These affordable housing provided through the public sector focused on the lowest socio-economic groups that often resided in informal settlements and had a higher urgency for state intervention.

Thus, a limitation in the supply of affordable housing was observed for certain income groups (LIG and MIG-1) which are neither catered to by the public housing nor by the markets. The Ahmedabad DP 2021 also, makes a note of this observation in their housing analysis. The Residential - Affordable Housing Zone or RAH zone included in the GDCR as per DP 2021 (Second Revised) dated February 2013, is the proposed a tool that would enable markets to be more responsive to the demand of the LIG and MIG socio-economic groups.

Location of Residential Affordable Housing Zone

The RAH zone was delineated as a 1 km wide overlay zone along the outer edge of SPRR with approximately 71 sq. km the area as an Overlay Zone in the Development plan. The location was selected due to spatial triggers like the GIFT-City in the north, GIDC industrial estates in the east and Dholera expressway in the south. SPRR was also created through TPS, and so some land parcels around SPRR in the RAH overlay zone were already under TPS.^c The land in the overlay zone in 2011, when the DP was being prepared, was vacant. It also had a low cost. Due to the construction of Sardar Patel Ring Road, this zone had good road accessibility and connectivity with the rest of the city.^c

The RAH-1 (Figure 12) zone consists of areas from villages like Bopal, Ghuma, and Shela. These were under TPS when DP was being prepared and so they were also included as part of the RAH zone. RAH and RAH-1 together add to an area of 86 sq. km.

In 2017 the DP was amended to allow housing projects under RAH regulations in all the zones outside the Overlay Zone (except Industrial Zone, Restricted Zone, Residential 3 Zone and Agriculture Zone.) It is believed to have done at the request of the developers who are keen to avail the Density Bonus and zoning variance (Refer to Folder C: Case Archives Appendix B).

Our study is focused on the overlay zone because it was initially the spatial planning tool as part of IZR to provide affordable housing to the less catered. In this chapter, we answer the question of how IZR works and what can be the results of IZR by taking the case of the IZR of Ahmedabad.

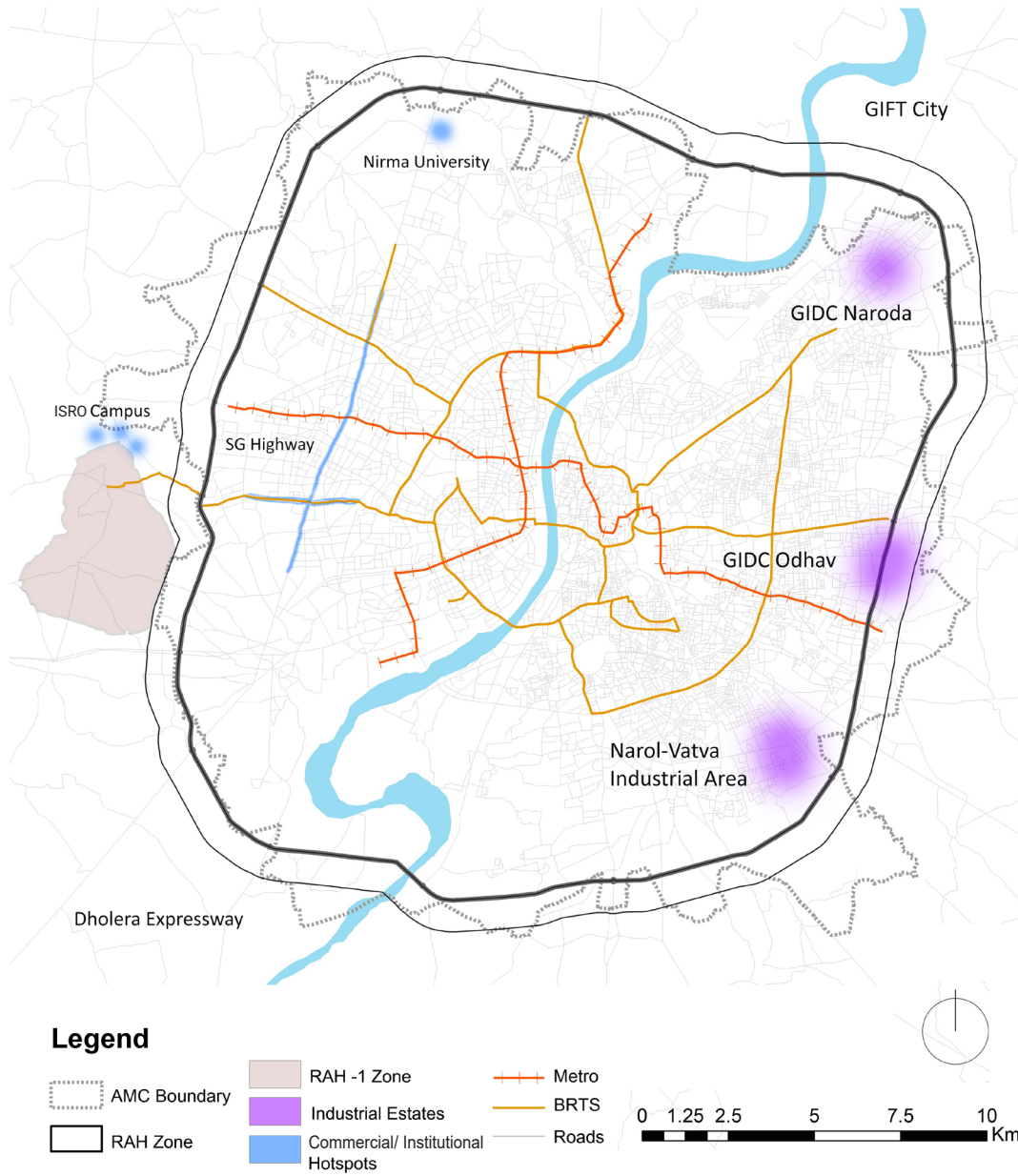


Figure 12: Spatial Triggers for RAH zone

Source: Compiled by Authors



3.2 MANDATES OF RESIDENTIAL AFFORDABLE HOUSING ZONE

The RAH aimed to incentivize the market to provide 'affordable housing' to the previously 'less catered' income groups.

'Affordable housing' was defined as DU with BUA of 80 sq. m (revised to 90 sq. m in Oct. 2020; refer to Folder C: Case Archives Appendix B) to be constructed and sold by the developer at market rate. There is also no HH income restriction on end users.

According to Ahmedabad Urban Development Authority (AUDA) (2012), the RAH Zone of Ahmedabad will accommodate 1.5 Mn DUs, have a net density of 225 DU per hectare, and deliver physical infrastructure needs serve a density of 500 PPH. To support the vision for this zone, the DP also extends fast-paced delivery of serviced land through TPS and connectivity with public transport.

3.2.1 Developer Incentives

The IZR of Ahmedabad is voluntary. It is the developer's choice to build their projects under the RAH regulations. Several incentives – direct and indirect are given to the developer for their compliance: The Direct incentives include the Density Bonus, Zoning Variances and Reduction in the fee for chargeable FSI. The mandates to deliver a fast-paced supply of serviced land through TPS, Physical Infrastructure development and connectivity to public transportation in the future indirectly incentivise the developers.

Direct Incentives to developers which support the Mandates:

The following are the mandates of RAH which act as the direct incentives for developers:

1. Density Bonus

As per the DCR there is a maximum permissible FSI under the various base zones.

However, due to the RAH overlay zone, a base FSI of 1.8 is permissible. A further 0.9 FSI could be purchased i.e., the maximum total permissible FSI of 2.7 can be utilized, allowing for a greater density of built units.

Due to a base FSI of 0.1, the area under base zone A1 could benefit the most because of the overlay. The area under base zone R3 and R2 could also benefit from the overlay since FSI is 0.3 and 1.8, respectively, is the maximum FSI permissible. On the other hand, R1 benefits the least because a maximum of 2.25 FSI is already allowed.

2. Zoning Variance

These are modifications allowed in the building regulations to reduce the land cost component in the overall cost of the housing unit and incentivise the developer. The following zoning variances are allowed as per the DCRs:

- i. Ancillary Commercial use allowed : A maximum of 10% BUA is allowed for commercial use due to the overlay of the RAH on any of the base zones i.e., A1, R1, R2, R3, GME, LZ, or KZ. This zoning variance allows developers to cross-subsidize the housing by selling the commercial component in the project. The ancillary commercial use also promotes mixed-use development.

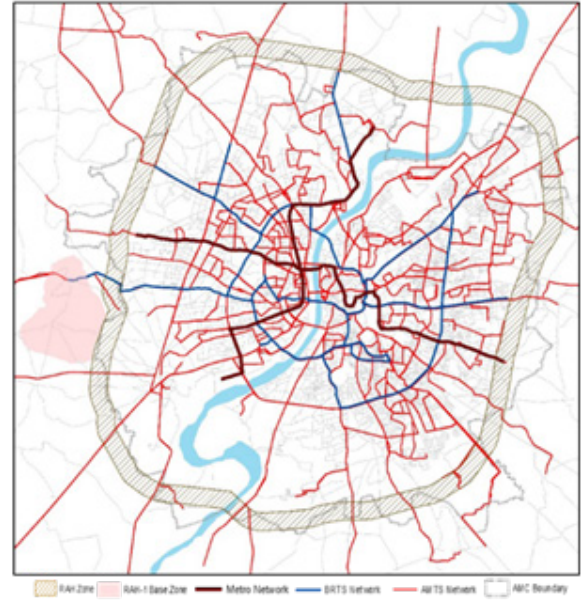


Figure 13: Provision of serviced land and access through public transport in RAH zone

Source: Data AUDA website; compiled by Authors

Table 10: Comparing the FSI under Base Zone and RAH Zone

Base Zone in RAH Overlay Zone	Zone Colour codes (as per DP 2021)	Net Area % in RAH zone	FSI under Base Zone		FSI under RAH Zone	
			Base	Maximum	Base	Maximum
General Agriculture (A1)		55%	0.1		1.8	2.7
Residential 2 (R2)		15%	1.2			
Residential 1 (R1)		14%	1.8	2.25		
Residential 3 (R3)		8%	0.3			
Gamtal Extension (GME)		4%	1.2			
Logistics Zone (LZ)		3%	1	1.5		
Knowledge & Institutional Zone (KZ)		1%	1.8			

Source: DCRs Ahmedabad; Compiled by the authors



- ii. Reduction in parking: Reducing the mandatory parking requirements (Table 11) help reduce the cost. This mandate is helpful since it is expected that there will be less ownership of private vehicles in the RAH. Also, if such a land parcel has good connectivity via public transport, thus reducing the need for vehicle ownership.

Table 11: Reduction in Parking Requirements

No.	Type of use	Minimum Parking Required	Visitor's Parking
1	Affordable Residential Apartments with dwelling units of BUA up to 66 sq. m	10% of utilised FSI	An additional 10% of the required parking space shall be provided as visitors parking
2	Affordable Residential Apartments with dwelling units of BUA more than 66 sq.m	20% of utilised FSI	10% of the required parking space shall be provided as visitors parking
3	Commercial Use	50% of utilised FSI	20% of the required parking space shall be provided as visitors parking

- In case the maximum permissible FSI is not utilised, for any extension or in the future, additional parking shall have to be provided as required for additional utilised FSI.

Source: DCRs Ahmedabad; Compiled by the authors

- iii. Ground coverage: As per DP 2021 dated 01.02.2013, In R1, R2, and RAH zone, apart from the roads, common open areas, and margins, the restrictions on ground coverage have been removed. This relaxation could help in achieving the highest and best use of a particular land parcel.
- iv. Passages: The common lobbies or the common passage areas in the building is not counted when calculating the BUA for FSI, allowing developers to give adequate shared passages and lobbies in the housing.

3. Incentive through Cost Reduction

This incentive offers a substantial percentage reduction in the premium for purchasable FSI based on the Jantri rates. Developers are therefore motivated to build optimally, ensuring profits in their future affordable housing projects.

Min. FSI 1.8 to max. 2.7

Built-up area	Additional FSI charge
< 50 sq. m	10% of Jantri rate
50-66 sq. m	20% of Jantri rate
66-80 sq. m	30% of Jantri rate

Indirect incentives to developers which support the Mandates:

The following are the mandates of RAH which act as the indirect incentives for developers:

4. Fast-track provision of serviced land through TPS

The provision of serviced land indirectly incentivises the developer to building housing. It accelerates the pace of conversion of land to BUA. In turn, how fast an affordable housing project is executed affects the inflow and the profit a developer could potentially make.

5. Connectivity through Public Transportation

The overlay zone is mandated to be well connected with public transport. The end user preference for well-connected housing influences the location of the land parcel chosen by the developers for their housing

project. The land parcel better connected via public transport are preferred. Thus, the developers are indirectly incentivised by the public transport systems connecting the RAH zone.

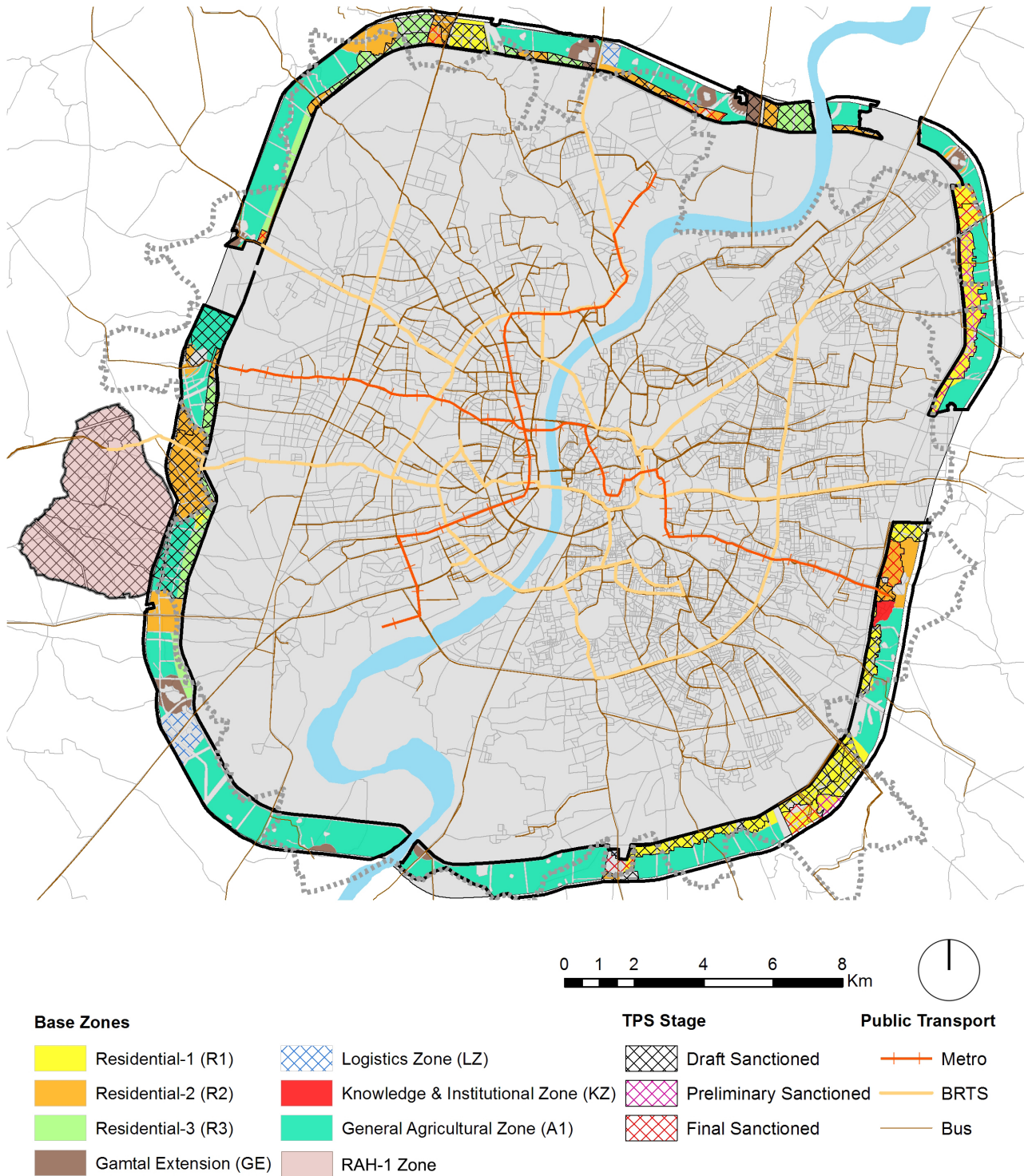


Figure 14: Serviced land provided to the RAH Zone through TPS

Source: Compiled by the authors using TPS data available on AUDA website

3.3 DELIVERY OF SERVICED LAND AND HOUSING FLOW ANALYSIS

3.3.1 Serviced Land Delivered

Out of the total land under the RAH overlay zone and RAH-1 zone of 86 sq. km. about 38 sq. km., 44% of the land, is under TPS. This 38 sq. km. comprises 52 TPS. Out of these 52 TPS, 40 TPS are sanctioned as Draft TPS, four as preliminary TPS and eight as Final TP Schemes (refer to Folder C Case Archives: Appendix D).

Within these TPS, a Total of 1.59 sq. km. of land has already been reserved for the construction of SEWS housing. These plots are intended for the provision of Affordable Housing for the SEWS by the public sector. Considering the net density and Permissible FSI, these SEWS plots can potentially supply about 55,560 - 1,23,000 DUs.

3.3.2 Flow Analysis

Since the inception of the RAH zone in 2013 in Ahmedabad, the market has responded reasonably to these regulations. Many affordable housing projects were initiated in the different locational micro-markets in this zone. Three methods were deployed to investigate the supply and flow of affordable housing projects in the RAH zone:

Method one investigates the satellite imagery of the RAH zone to identify areas that have realized development over the past years since its inception. The RAH Zone is currently supplying anywhere between 23,625 and 31,500 DUs of 80 sq. m through this investigation. This supply is almost 1.6% -2.1 % of the estimated supply of 1.5 Mn DUs by 2035.

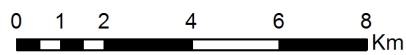
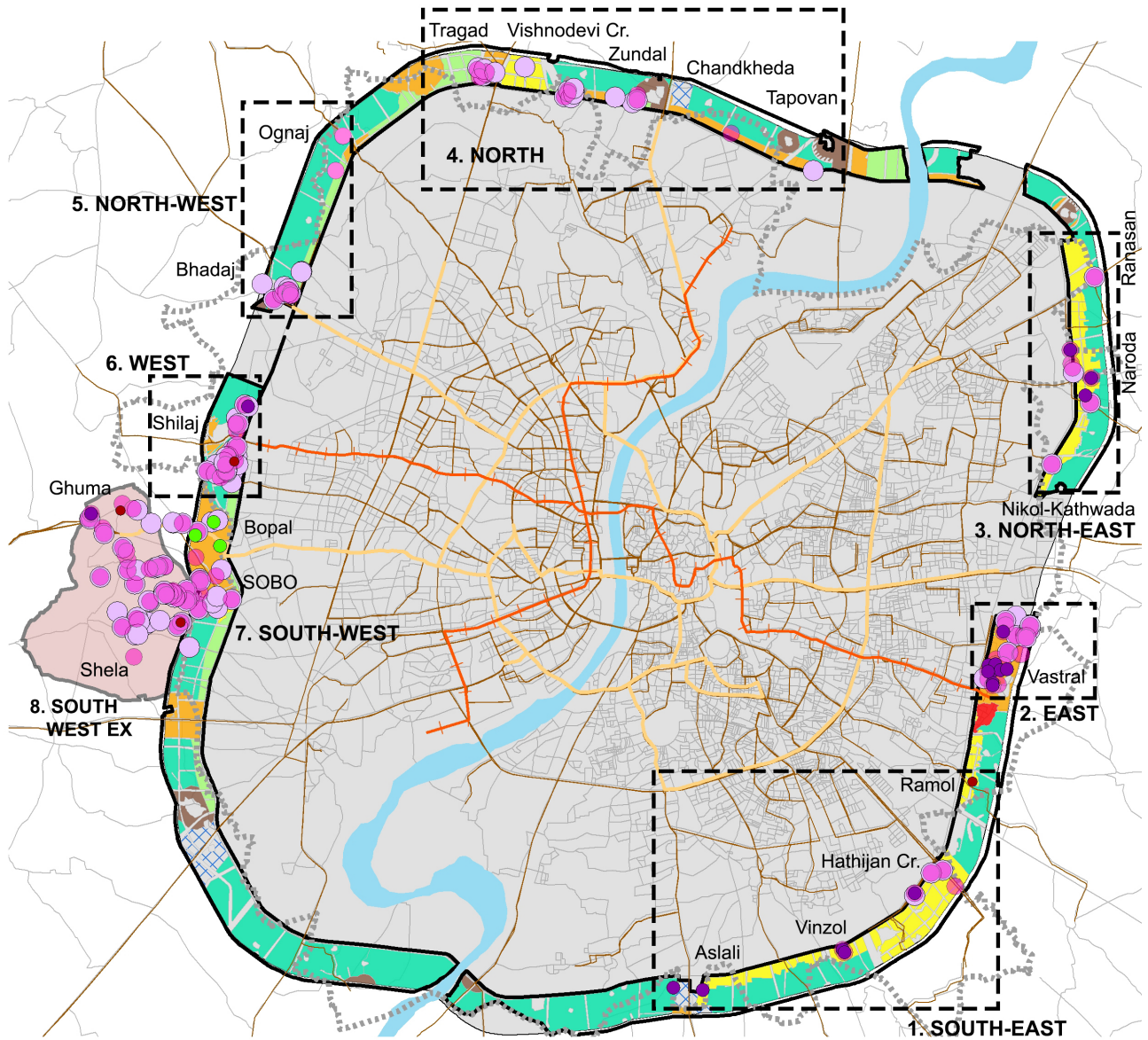
Further, method two involved interviews with eminent Developers currently working on projects to supply affordable housing in the RAH zone. Such interviews reveal that the current projects and projects in the pipeline for the RAH zone can create around 150,000 DUs in the future.

However, to comprehend the numbers obtained through methods one and two and quantify the flow of affordable housing in various micro-markets of RAH, method three, which involves a detailed analysis of data from the GUJRERA, was undertaken (refer to Folder C Case Archives: Appendix D).

200 affordable housing projects with 31,033 DUs and a BUA of 221 hectares have been registered with GUJRERA in the RAH zone. Thus, about 2% of the 1.5 Mn supply projected by 2035 has been generated in seven years of implementation.

The DUs created in the RAH zone include 1-Room-Kitchen (1RK), 1-Bedroom-Hall-Kitchen (1BHK), 1.5-Bedroom-Hall-Kitchen (1.5 BHK), 2-Bedroom-Hall-Kitchen (2BHK), and 3-Bedroom-Hall-Kitchen (3BHK). The predominant supply of DUs is under the 3BHK, accounting for almost 42% of the sanctioned DUs in the RAH Zone followed by 2BHK, with almost 38% of the sanctioned DUs. The 1RK, 1BHK, and 1.5BHK constitute around 20% of the sanctioned units or 6,022 DUs in the RAH zone (Figure 15).

Since land economics play a dynamic function and varies in each location, the flow of housing and their affordability itself behave dynamically. Therefore, to understand the market response in different locational micro-markets, the entire RAH zone in Ahmedabad was divided into eight micro-markets and further analysed (Figure 17, Figure 18, and Figure 19). These micro-markets are: the south-east, the east, the north-east, the north, the north-west, the west, the south-west and the south-west extension



Base Zones

- Residential-1 (R1)
- Residential-2 (R2)
- Residential-3 (R3)
- Gamtal Extension (GE)
- Logistics Zone (LZ)
- Knowledge & Institutional Zone (KZ)
- General Agricultural Zone (A1)
- RAH-1 Zone

Housing Projects

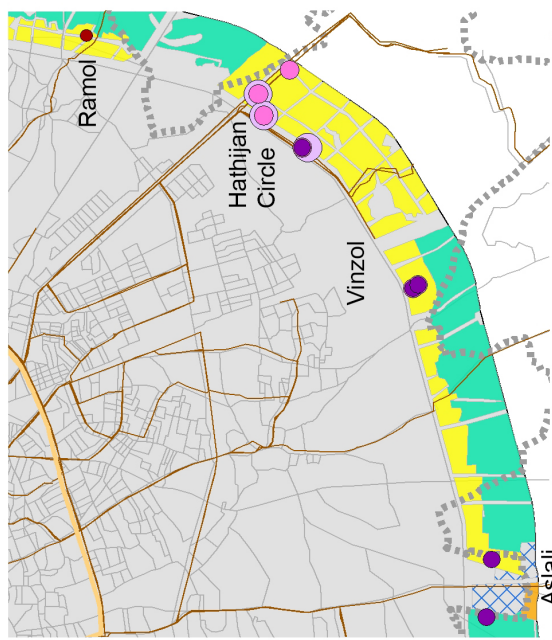
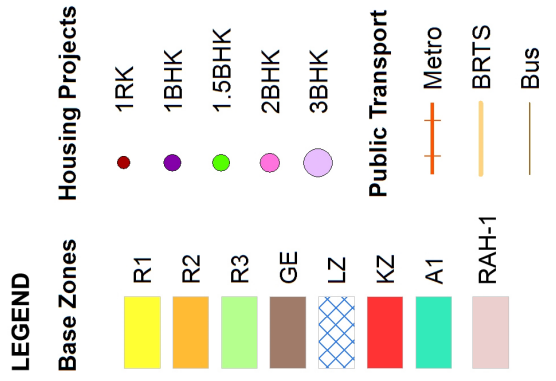
- 1RK
- 1BHK
- 1.5BHK
- 2BHK
- 3BHK

Public Transport

- Metro
- BRTS
- Bus

Figure 15: Location of Housing Projects marked on RAH Zone

Source: Compiled by authors using data from GUJRERA website accessed on Sept 2020



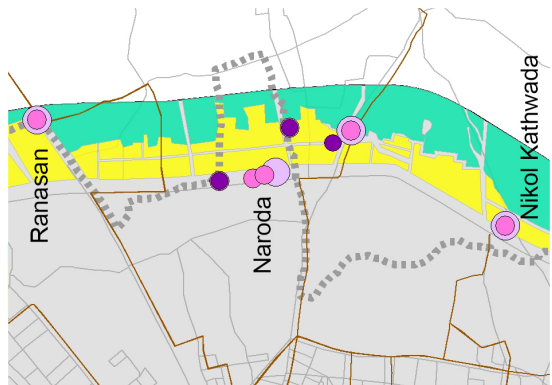
1. South-East

Land Rate : INR 25,700 per sq.mt.
 Avg. Ticket Size (INR)
 1RK : 0.9 Mn
 1BHK : 1.3 Mn
 2BHK : 2.0 Mn
 3BHK : 2.8 Mn
 Average HH Income (INR)
 0.25-0.3 Mn
 Total Projects:10
 Total DUs : 1,750 (6%)
 DU Distribution:



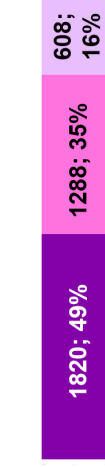
2. East

Land Rate : INR 64,500 per sq.mt.
 Avg. Ticket Size (INR)
 1BHK : 1.6 Mn
 2BHK : 2.8 Mn
 3BHK : 3.8 Mn
 Average HH Income (INR)
 0.25-0.3 Mn
 Total Projects:29
 Total DUs : 5,976 (17%)
 DU Distribution:



3. North-East

Land Rate : INR 24,200 per sq.mt.
 Avg. Ticket Size (INR)
 1BHK : 1.6 Mn
 2BHK : 2.6 Mn
 3BHK : 3.3 Mn
 Average HH Income (INR)
 0.25-0.3 Mn
 Total Projects:10
 Total DUs : 3,716(12%)
 DU Distribution:



Key Map



Figure 16: Micro-markets in RAH zone: South-East, East, and North-East

Source: Compiled by authors using data from GUJRERA website accessed on Sept 2020

The housing demand in the three eastern micro-market comes from the city's main industrial labour force who work in the GIDC Industrial area near the micro-markets and have an annual HH income of about INR 0.3 Mn or the EWS.

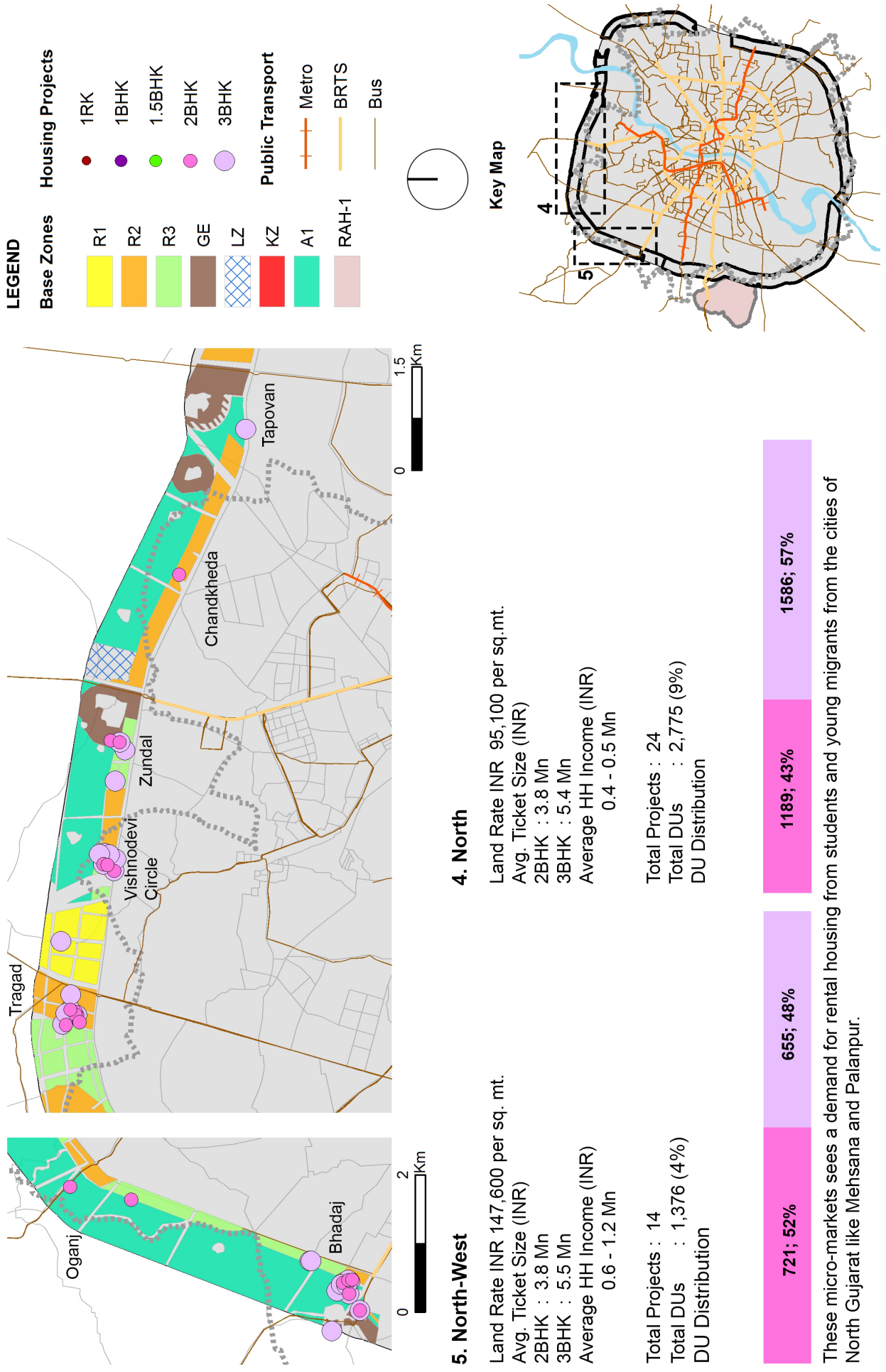


Figure 17: Micro-Markets in RAH zone: North and North-West

Source: Compiled by authors using data from GUJRERA website accessed on Sept 2020

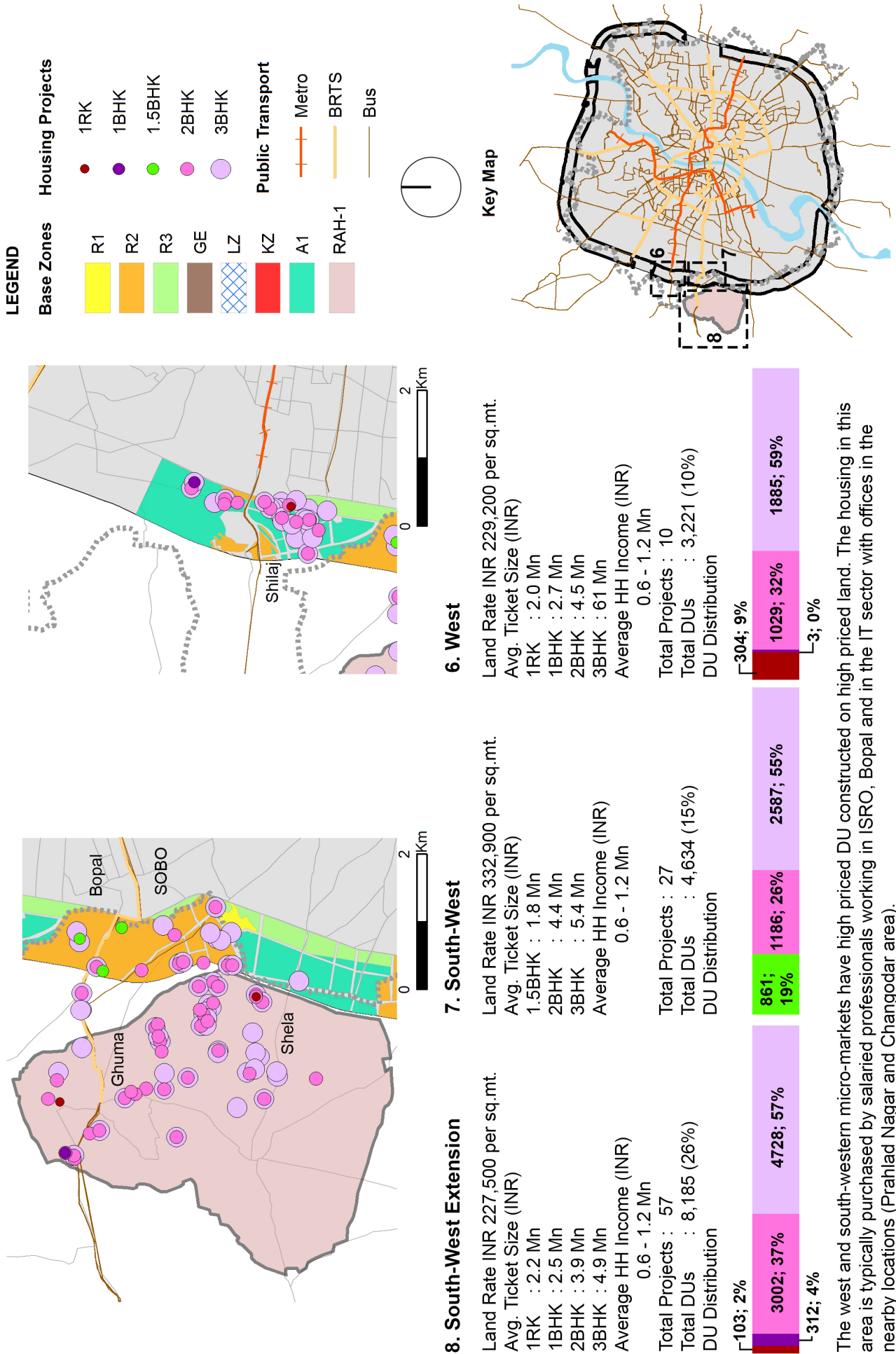


Figure 18: Micro-markets in RAH zone: West, South-West, and South-West Extension

Source: Compiled by authors using data from GUJRERA website accessed on Sept 2020

The west and south-western micro-markets have high priced DU constructed on high priced land. The housing in this area is typically purchased by salaried professionals working in ISRO, Bopal and in the IT sector with offices in the nearby locations (Prahlad Nagar and Changodar area).

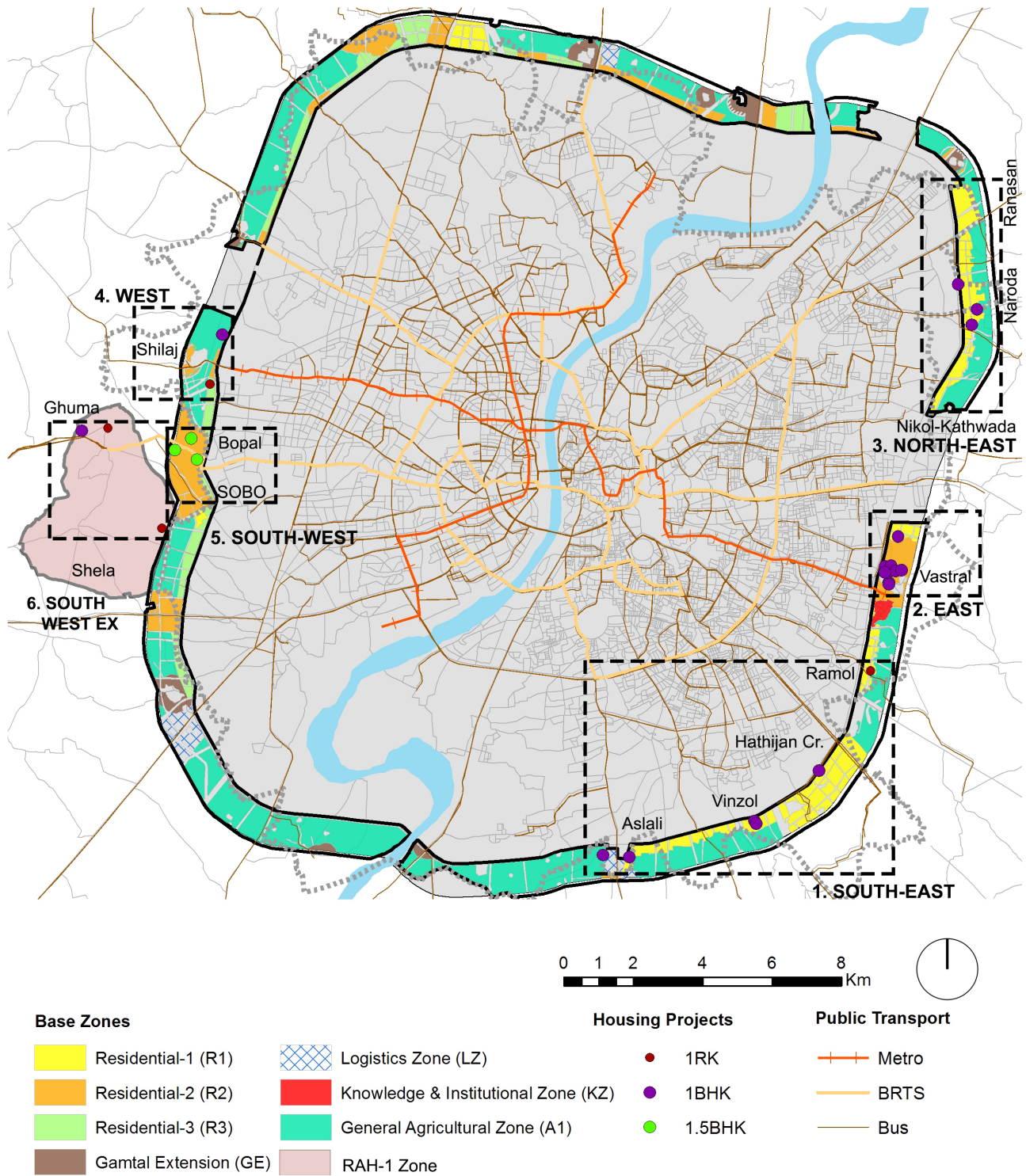


Figure 19: Map showing location of projects with smaller sized DUs

Source: Compiled by authors using data from GUJRERA website accessed on Sept 2020



Zone Wise Supply in RAH Zone

The predominant supply of DUs is on the R2 and R1 base zones, with almost 50 % of the DUs. The RAH-1 base zone in the southwest and southwest extension micro-market also constitutes about 26% of the total DUs sanctioned. However, the A1 and R3 zones constitute around 12% and 9% of the total sanctioned units.

Base zone A1 is 42% of the total net area and is also the most incentivized, given the maximum allowed FSI 0.1 for base zone A1 increases to 2.7 FSI under RAH regulations, yet A1 has only 12% of the DUs.

RAH-1, on the other hand, has 23% of the total area but 26% of the DU. The southwest and southwest extension micro-markets are clustered in this zone. R2, R1, and R3 are 12%, 11% and 6% of the total area, respectively but have 28%, 23%, and 9% of the DUs.

Supply of Smaller Sized Dwelling Units in Residential Affordable Housing zone

The micro-markets in the north and west predominantly supply 3BHK and 2BHK, whereas the demand of 1BHK is observed predominantly in the micro-markets on the eastern side of the city. Subsequently, the ticket prices on the eastern side are also significantly lower than the western or northern sides of the city. The supply of 1BHK typology is predominant in all three micro-markets in the eastern side of Ahmedabad. 2287 DUs out of 2602 DUs (87%) of 1 BHK typology are in the eastern micro-markets. The 1RK and 1.5BHK typology together only constitute around 5% of the total DUs sanctioned in the RAH zone. The supply of 1RK is evident in both the eastern micro-market and the western micro-markets. However, this typology is predominantly present in the western micro-markets, with almost 80 % of the DUs sanctioned in the west. The 1.5BHK typology is only supplied in the western micro-market and constitutes around 20% of the units supplied in this micro-market.

Table 12: Supply of DUs based on the Base Zone

Base Zone	Net Area (Ha)	Tot. No. of DU's	Total 1RK units	Total 1 BHK units	Total 1.5 BHK units
R1	751 (11%)	7064 (23%)	112 (0.5%)	2366 (7.6%)	-
R2	796 (12%)	8804 (28%)	-	1486 (4.7%)	861 (2.7%)
R3	404 (6%)	2746 (9%)	304 (0.9%)	3 (0.2%)	-
A1	2883 (42%)	3769 (12%)	-	435 (1.4%)	-
RAH -1	1546 (23%)	8073 (26%)	143 (0.5%)	312 (1.0%)	-
GE	218 (3%)	577 (2%)	-	-	-

Source: Compiled by authors using data from GUJRERA website accessed on Sept 2020



Figure 20: Projects in RAH zone

Source: Authors

3.4 UNDERSTANDING THE SUPPLY MECHANISM, PROJECT CYCLE AND PROJECT COST BREAKUP

To understand the supply of housing, especially the smaller sized DU, we are studying the typical diverse supply mechanisms prevalent across the RAH of Ahmedabad, which enable the market to supply these units. This study was mainly done through a case study approach whereby we identified relevant projects in each micro-market. Accordingly, appointments were sought with the developers for a personal meeting at their offices or site offices. Some were met via walk-in without a prior appointment. Interviews with local real estate experts^d of Ahmedabad also helped identify the trends concerning the supply mechanism in the RAH zone.

The case studies were done to understand the developer's motivation to pursue affordable housing projects, the difficulties they face regarding the incentives and the convergence of the incentives, and their suggestions for these various incentives along with the role land and its price play in the project's feasibility. The developer strategies for risk mitigation are also a point of inquiry.

According to the developers of Ahmedabad, of the three direct incentives, bonus density and zoning variance, particularly allowing 10% BUA of the project for ancillary commercial use to cross-subsidise the housing component in the project has been the most helpful incentives. TPS has indirectly incentivised the developers by providing serviced land, which they use to augment the housing supply. The developers also aim to maximise their profits and minimise risks in this process. To do so, they have developed innovative supply mechanisms and a value chain. These have been broadly classified as the following: (Chudgar, 2021).

1. Historically owned land (the case of a project in North-eastern locational sub-market): The connotation of the historically owned land is land purchased before the publication of the second draft revised DP in 2012 jointly prepared by AMC and AUUDA. The premise here is that the developers had owned the land beforehand without necessarily knowing that they would be using it for the project.
2. In partnership with landowners : The premise is that the collaboration between developers and landowners is a win-win situation since the developers do not have the capital to invest in land. In contrast, the landowners do not have the aptitude for planning and executing a project on their own.
3. On low-cost land in partnership with friends and family (the case of Eastern locational sub-market): Here the premise is that trust between friends and family coming together to do a project stands them in good stead in mitigating the risk involved in the project. This case is chosen since it offers the least priced DUs across the RAH, catering to the labour market.
4. Hostel / Studio apartment – Rental housing (the case of Western locational sub-market)
5. Here the premise is that an educational institute, a developer, and a contractor work in collaboration with an innovative rental housing model augmenting 1RK / Studio apartment typology, taking advantage of incentives offered for augmentation of affordable housing and conformity with the GDCR. There is potential for this model to morph into affordable rental housing. This case is chosen because it is interesting how the high capital value of land is negotiated using an innovative model, which is a win-win for the client, developer, and end user.

3.4.1 Supply Mechanism and Project Cycle

The following cases elaborate these innovative practices in detail through flowcharts describing conceptually the three aspects of the projects: planning, execution, and sales. The planning aspect is shown in dark red, the execution aspect in salmon, and the sales and marketing aspect in pink.

Historically owned land

The case of Shiv Ugati City, Naroda by Shiv Developers

Micro-market: North-east | Zone R1
 Plot Area: 31,585 sq. m | BUA: 48,605 sq. m
 (Project details at Folder C Case Archives Appendix D)

Findings and inferences:

- The investment by developers during the development of SPRR before publication of DP was speculative. They envisaged that they would get the development control.
- Historically owned land gives the advantage of cheaper land cost and eventually lower the proportion of land capital to the price of the DU and increase profit margins.
- The developers took the radical decision to demolish a phase of the project (Figure 22) due to location issues and unsold inventory. They are contemplating a sub-division of land and selling it at Rs.50,000/- per sq. yd It goes to show the importance of the right product mix and the location of the site.

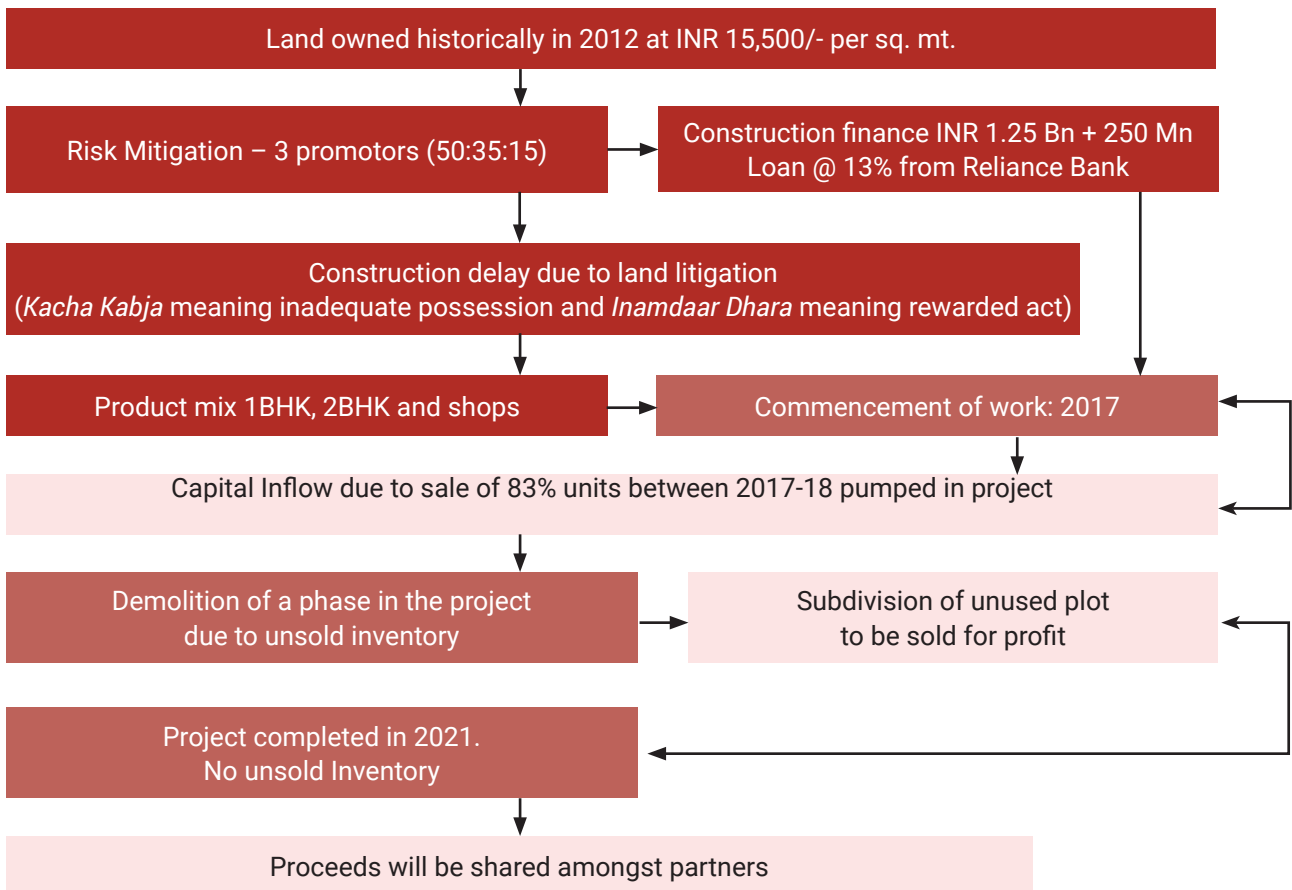


Figure 21: Project Value Chain

Source: Chudgar (2021)





Figure 22: Demolition marked in the Site Plan
Source: Chudgar (2021)



Figure 23: Images from the site showing (L) commercial building (R) residential blocks of Shiv Ugati City, Naroda
Source: Compiled by authors

In partnership with landowners

The case of XYZ project

Micro-market: West | Zone R2

Findings and inferences:

- Potentially a win-win situation as the developer may not have the capital to buy land, and the landowner may not have the acumen to mobilize a project.
- Profit/loss sharing percentage worked out as per mutual understanding before envisaging the project.
- This model is typically used when the cost of the land is so high that the developer cannot to purchase it.

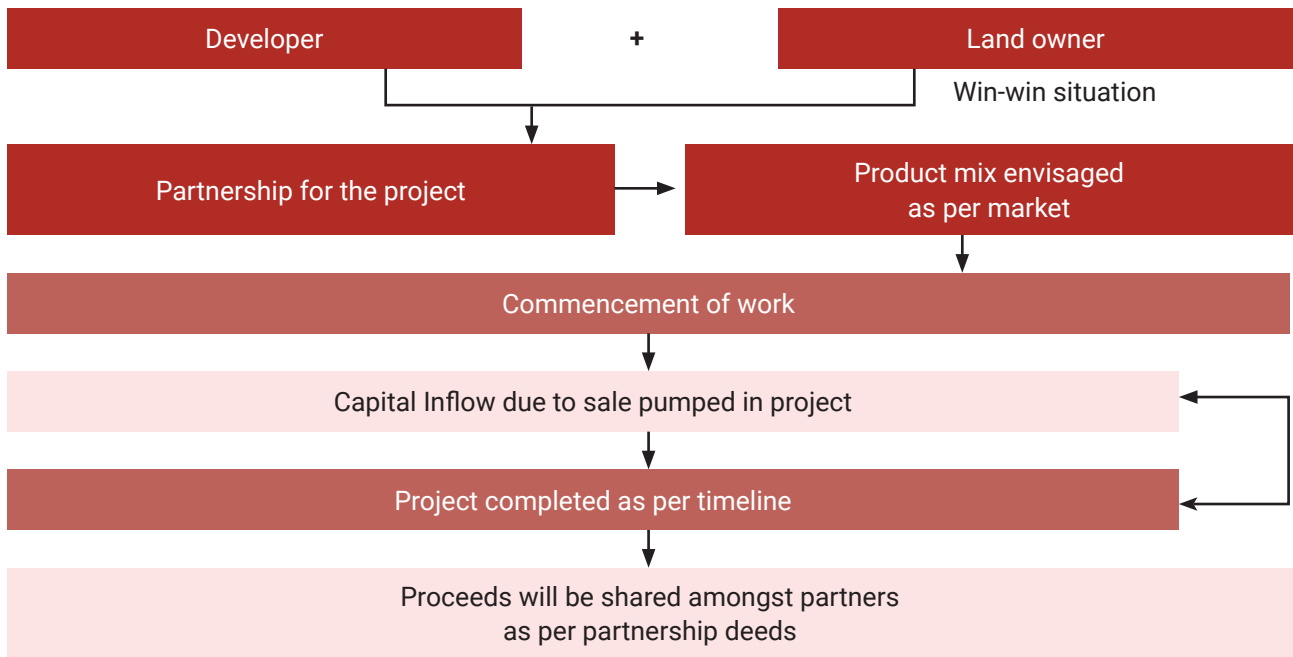


Figure 24: Project Value Chain

Source: Chudgar (2021)



On low-cost land parcels in partnership with friends and family

The case of Om Residency at Vastral by Om Shakti Developers

Micro-market: East | Zone R2
 Plot Area: 607 sq. m | BUA: 1637 sq. m
 (Project details at Folder C Case Archives Appendix D)

Findings and inferences:

- The product mix caters to the low-income segment in Vastral, eastern micro-market in the RAH of Ahmedabad, which brings in high demand for housing. As a result, the developers are confident that there will be no unsold inventory due to the product mix.
- Minor litigation in land title acts as an advantage in the land price correction, much to the developers' advantage and increases developer profits.
- The risk is shared by eight partners, their mutual trust is the foundation of the partnership.



Figure 25: Project Value Chain
 Source: Chudgar (2021)



Figure 26: Images showing (L) the project (R) a shop in Om Residency, Vastral
 Source: Compiled by authors

Hostel (Rental Housing model)

The case of RK Sandipani, Shilaj by Rashmi Engicon and Dobaria & Co.

Micro-market: West | Zone R3
 Plot Area: 2,821 sq. m | BUA: 7,459 sq. m

(Project details at Folder C Case Archives Appendix D)

Findings and inferences:

- Developers have taken advantage of incentives offered for affordable housing and have innovated a 1RK/ Serviced apartment rental housing model.
- Pantry/kitchen platform is shown in the permission drawings but to be built accordingly only at the request of the students or their parents.
- An investor could invest in a unit for INR 2 Mn (USD 2,714)^a and, in return, get a rent of INR.11,000 (USD 150)^a/month increasing by 15% every three years.

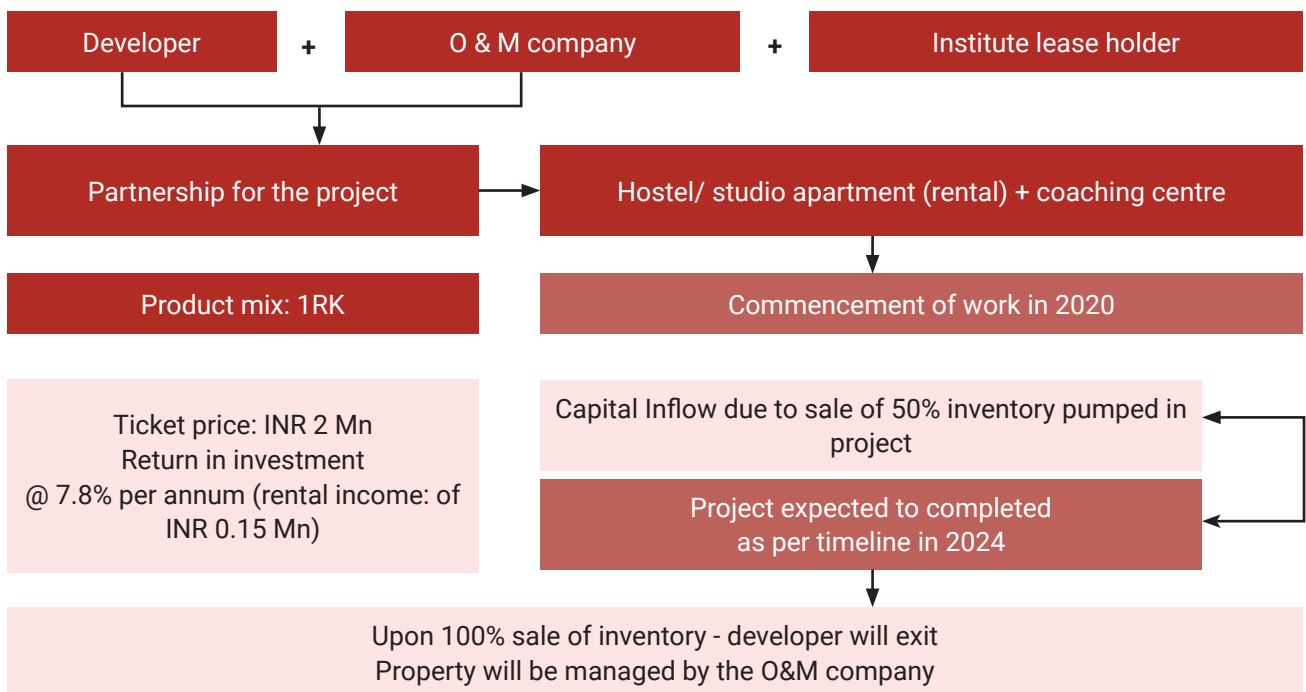


Figure 27: Project Value Chain
 Source: Chudgar (2021)

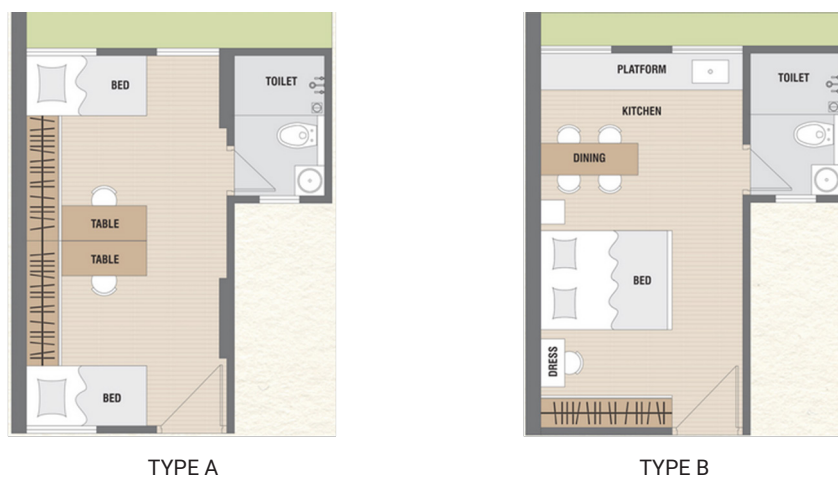


Figure 28: Typical apartment layouts in RK Sandipani
 Source: RK Sandipani website (2020) ^a



Figure 29: Image from the site for RK Sandipni, Shilaj

Source: RK Sandipani website (2020) ⁹

3.4.2 Project Cycle and Cost Breakup

Om Residency by Om Shakti Developers, Vastral in Eastern locational sub-market has the least priced ticket sizes across all micro-markets in the RAH and RAH-1 zone of Ahmedabad. We will study the project in detail to better understand how they have achieved such low prices (Chudgar, 2021).

Project details

Address - Behind Sanidhya Arcade, Near Reliance petrol pump, S P ring road, Vastral

Town planning scheme - TPS 113 Vastral; FP - 123/2; Survey no. 1139/33; Mouje - Vastral; Taluka - Vatva;

District - Ahmedabad; Plan approving authority - AUDA

Base zone: Residential 2 with maximum FSI of 1.8

Project type - Mixed development (38 Residential + 6 shops)

FSI applicable - 1.8 base + 0.9 purchasable = 2.7; FSI used - 2.7

Plot area - 607 sq. m.

Product mix - 6 units 1RK, 31 units 1BHK, 1 unit 2BHK, 6 units shops

Other Incentives availed - Reduced GST rate for affordable housing of 1%, Finance - Equity partnership

Project structure

The project is planned and executed in a single phase. The product mix caters to a low-income consumer base with unit sizes - 1RK and 1BHK. About 6% of built-up is under commercial use. The developer chose not to utilize the full 10% BUA for commercial use allowed under the RAH regulations due to the shape and size of the plot and the frontage requirement of the shops.

Modus operandi for partnership

There are eight partners. Each partner pools in money as per their stake in the project. After providing for all the expenses related to the project, the partners share the profit or bear the loss.

Table 13: Partnership in the Project

Partner no.	Profit/Loss Share
1	15.00 %
2	15.00 %
3	15.00 %
4	15.00 %
5	12.50 %
6	12.50 %
7	10.00%
8	5.00%
Total	100.00 %

Source: GUJRERA website accessed in Sept. 2020

Project cost

Land cost: Construction cost: Profit for the project is 17:45:38

Typically, Land cost: Construction cost: Profit in Ahmedabad is 40:40:20

The profit percentage is 38%. This profit percentage augurs well for the feasibility of the project.

Sales velocity

2019	None		
2020	1 RK	5 out of 6 sold	83.00%
	1 BHK	5 out of 31 sold	16.12%
	2 BHK	1 out of 1 sold	100.00%
	Shops	3 out of 6 sold	50.00%

There is an optimism about sales and developer expects no unsold inventory.

Developers' motivation to enter the segment

The developers' prime motivation is the profit percentage. They assess the final ticket price and calculate if the land cost is feasible for them to take up the project.

The low price of the land, in this case, was the game-changer. Land component on the total price of the unit is low. One reason for the low land price was that land was under minor litigation. Developers took advantage of that and negotiated the price. There was a risk associated with that land, but due to the partnership, the risk was shared.

Table 14: Project cost break up

		INR in Mn		
Land Cost	Land cost	6.98	14%	17%
	Purchased FSI	0.87	2%	
	Transaction cost	0.41	1%	
Construction Cost	Construction cost	22.50	44%	45%
	Architect	0.49	1%	
	Overheads	0.25	0%	
	Advocate	0.12	0%	
Project Cost		31.62		
Total Turnover		50.80	38%	38%
Gross Profit		19.18		
Net Profit		12.46	25%	

Data Source: GUJREERA website accessed in Sept. 2020



3.4.3 Findings and Inferences

According to interviews with various developers from Ahmedabad (Chudgar, 2021):

- The typical ratio of land cost to construction cost to developer profit in the western part of RAH Ahmedabad is 40%:40%:20% or 50%:40%:10%. The reducing profit margins demotivates developers from entering the affordable housing segment due to high land costs.
- The reducing profits also lead to innovation in the supply mechanism or value chain by developers across the RAH zone. We observed:
 - » Stakeholders employ a partnership with friends and family or partnership between landowner and developers to mitigate risk.
 - » The creation of rental model of housing is also a way of increasing profits.
- The project profits are being generated from the sale of the commercial component.
- The disparity in the ticket price of an affordable housing unit of the same size can be seen as a function of land cost. This principle holds when land prices are compared across locations, i.e., city centre versus periphery and when the land prices are compared in the east and west Ahmedabad. This scenario is more predominant in the western sub-markets of Ahmedabad, where the upcoming commercial areas near SG Highway has provided the option to the people working there to reduce their trip lengths by opting to invest in the western RAH zone micro-markets.
- The profit margin in Ahmedabad at which developers typically work ranges from 30% to 35 %. Post the introduction of RERA; this has gone down to 20 to 25%. For the micro-markets in the RAH zone, i.e., for the developers in the affordable housing segment, selling large volumes in less time is the primary way of procuring profits, with profit margins going as low as 15% to 20%.

Cash component

The cash component plays a vital role in the entire process of conversion of land to build space. Whenever any commodity is scarce, the black market comes into being and operation. Serviced land being a scarce resource, the cash component gets added to the official price of the land as per the jantri rate. Often the jantri rates are not revised for years, and there is a disparity between jantri and market rates of which the money paid over and above the jantri rate is paid in cash.

The cash component further gets added in the purchase of materials for construction and payments to labour as developers try to find a loophole in the GST mechanism (Chudgar, 2021).

Eventually, the cash component also reflects onto the ticket price of a unit. Typically, in Ahmedabad, the cheque to cash ratio is 60:40. This use of the cash component is another way developers try and qualify their projects under the 'affordable housing' definition by managing the cheque component of the ticket price within INR 4.5 Mn (USD 61,058)^a. Leading to the actual increased cost of the aforementioned 'affordable housing' unit (Chudgar, 2021).

3.5 CONVERGENCE WITH NATIONAL INCLUSIONARY HOUSING POLICIES

In section 3.2, we have explained the incentives offered to developers in the RAH of Ahmedabad and Chapter 1 section 1.3 explains the incentives offered under the various national IH programmes, policies, laws across India.

The Best Possible Convergence Scenario

Suppose the developers try to get the benefits of all the incentives together i.e., GST, IT section 80 IAB, Infrastructure Status for affordable housing projects, AHP vertical of PMAY, and incentives for IZ, to make affordable housing projects in the RAH zone Ahmedabad. In that case, the following convergence is obtained in the current scenario:

1. Incentives to the developers:

- » 1% GST on affordable housing.
- » 100% Tax exemption on the income/ profit from the project.
- » Easier borrowing with Lower lending rates by about 2-3% i.e., instead of the usual rate of lending at 12 - 15% developers will get a loan at the rate of 9 - 11 %.
- » AHP vertical allows for central assistance of INR 0.15 Mn (USD 2,035)^a for every EWS DU in the project.

2. Conditions for the convergence:

- » DU price should not be more than INR 4.5 Mn (USD 61,058)^a.
- » Commercial Component should be 3% or less of the total CA.
- » The remaining 50% of FSI to be used for DUs not more than 60 sq. m. BUA.
- » 35% of DUs affordable for the EWS category and with 30 sq. m. BUA.
- » Remaining 50% of the DU have to be 90 sq. m. BUA. or less.
- » Minimum 250 DUs to be augmented per project.
- » Minimum plot area to 2000 sq. m.
- » 80% of the FSI has to be utilised in the project.
- » 80% of the construction cost (excluding the capital cost) i.e., purchases of goods and services needs to be from a registered person.

According to our interviews (Chudgar, 2021) with various developers and studying various projects in RAH we have arrived at the following conclusion:

Popularity of Incentives	Incentive
Most Common	RAH + GST
Common	RAH + IT section 80 IAB + GST
Rare	Convergence of GST, IT, and Infrastructure status incentives with RAH
Not yet come across	Convergence of all five



The following explains why the observed policy convergence holds:

Goods and Services Tax

It is the most common incentive used because it allows up to 15 % of the carpet area to be used for commercial purposes. The price cap, however, can be a deterrent for the developers.

Income Tax section 80 IAB

One deterrent could be a minimum plot size of 2000 sq. m in the non-metro area. This incentive is used when the developers are convinced that they do not need over 3% commercial BUA in the product mix. Price cap also is a deterrent for the developers.

Infrastructure Status of Affordable Housing

This incentive is used only when the product mix is conducive to having 50% of FSI not more than 60 sq. m units. Most developers are not aware of incentives under the Infrastructure Status of Affordable Housing. Even Officials working for Housing Finance Corporation are not clear about the incentives.

Affordable Housing in Partnership, Pradhan Mantri Awas Yojana

This incentive can be only used for large scale projects, and the income cap affects the sale velocity.

The developers have come up with some suggestions in order to make the convergence better (Chudgar, 2021):

- Streamline the definition of affordable housing.
- Incentives should be stable and coherent.
- Make the unit of measurement as CA for all incentives.
- At least 10% CA should be allowed for commercial uses, 3% does not work out for the feasibility.
- Served land supply needs to be provided at an expedited rate.

3.6 UNDERSTANDING THE END USERS AND THEIR AFFORDABILITY

It is pertinent to know the perspective of end users regarding the housing augmented for them. For this, interviews of the end users of 27 HH have been undertaken (Chudgar, 2021) so far across all locational sub-markets of the RAH of Ahmedabad with the aim to:

- Understand their affordability.
- Find out if the housing provided is decent as per standards and conventions.
- Find out if the DUs are decent and end users have access to basic services like water supply, sanitation and social infrastructures like schools and medical facilities.
- Understanding the connectivity of the end users living there through roads as well as public transport.

Housing Affordability

We measure housing affordability through the Price to Income Ratio or PIR calculated for each project studied. Affordability is the outcome of the price of the housing and the income of the HH buying it or living in it. The PIR should be between three and five; if higher than five, it shows that the HH is financially burdened in purchasing the DU (Misra, 2012; UN Human Settlements Programme, 2004).

In the eastern micro-markets, the prices of 1BHK projects range from INR 1.5 to 1.8 Mn (USD 20,350 to 24,425^a), but the HH incomes here are also low. The PIR ranges from 4.7 to 10.0. The figures show that while these DUs are affordable for some HHs, for others, they are still expensive and perhaps 1RK, which are priced at (INR 0.8 to 1.0 Mn or USD 10,850 to 13,570^a), would be more affordable for them (Chudgar, 2021).

Through our end user interviews, we find that many times, the HHs purchase a larger DU even if they have to stretch their budgets to pay for it. The HHs see this as planning for the future: as an investment and asset creation. HHs are not averse to take up larger loans if they are eligible.

Housing Decency

By and large, the DUs are found to be decent from the point of view of householders. There is no congestion observed, i.e., more than one married couple is not observed to be sharing the same room. These projects are recently constructed, and multigenerational families wanting to make adjustments will not be found here. Through our end user interviews (Chudgar, 2021), we find that HHs shift here because of:

- More space and privacy: Typically, the couple with their parents and/or children are living in cramped spaces and do not have privacy from one another. So, they choose to move for having more space and privacy.
- Aspiration for a brand-new house - The aspiration to move in freshly constructed units and being the first owners/occupiers is a major reason for the choice to move to the RAH dwelling units.

Access to basic and social services



Basic services

Basic services like water supply, sanitation and electrical connection are provided (Chudgar, 2021).

Social services

TPS allows for the reservation of land for social infrastructure. Social services like schools and hospitals are created through TPS. Social infrastructure is a major factor in making housing choices. Based on semi-structured interviews of end users (Chudgar, 2021), the following show how social infrastructure has influenced the end user to make a housing choice:

- Better locality: Better amenities in the new project, vicinity to civic centres
- Vicinity to children's education/workplace: The Young parents in the age group of 30-40 interviewed do not mind commuting longer distances to their workplaces if the chosen units are nearby the education/workplace of their children.

Connectivity

- Minimum trip length - 1.5 km - Radhe Hills, Vinzol to Vinzol
Trip time (one-way) - 5 mins
Mode of transport - Two-wheeler
This HH chose to move to the DU because it was in the vicinity of their workplace and their children's school.
- Maximum trip length - 35 km – Krishna Heights, Bhadaj to Kerala GIDC
Trip time (one-way) – 1 hour
Mode of transport – Two-wheeler
Earlier, this HH was staying in Bavla, a municipality near the respondent's workplace. They wanted to shift to Ahmedabad and liked the flat in Krishna Heights, Bhadaj, and it was within their budget. The respondent does not mind commuting to his workplace (in Kerala GIDC), 35 km away, every day. The HH has two children and the parents consider their current locality to be a better environment for the children with better amenities and schools. (Chudgar, 2021).

The HHs make trade-offs by compromising on the trip lengths as long as they could avail of affordable housing.

Table 15: Analysing Micro-market wise Housing Affordability through PIR

Mico-market	1 BHK			2 BHK			3 BHK		
	DU Price INR in Mn	Annual Income INR in Mn	PIR	DU Price INR in Mn	Annual Income INR in Mn	PIR	DU Price INR in Mn	Annual Income INR in Mn	PIR
East	1.8	0.18	10.0						
	1.8	0.24	7.5						
Northeast	1.7	0.36	4.7	2.0	0.12	16.7			
				2.6	0.60	4.3			
				2.1	0.18	11.7			
				2.5	0.48	5.2			
Southeast	1.5	0.25	6.0						
				2.7	0.60	4.5			
North				3.4	0.78	4.4	4.2	0.60	7.0
Northwest				3.4	0.60	5.7			
				4.0	0.60	6.7			
Southwest							5.5	0.42	13.1
							6.0	0.48	12.5
							7.0	1.20	5.8
Southwest- EX							6.1	0.90	6.8
West				4.2	0.80	5.3			
				3.3	0.25	13.2			

Source: Chudgar (2021)







4

DISCUSSIONS AND LEARNINGS

4.1 DISCUSSION ON THE MANDATES OF RESIDENTIAL AFFORDABLE HOUSING ZONE AND REGULATIONS

4.2 ANALYSING THE OUTPUTS AND OUTCOMES

- Creation of Dwelling Units vis a vis the mandate
- Impact of Incentives
- Analysing the Affordability

4.3 4.3. LEARNINGS FROM THE CASE STUDY AND STRENGTHENING INCLUSIONARY ZONING AND REGULATIONS IN AHMEDABAD

4.1 DISCUSSION ON THE MANDATES OF RESIDENTIAL AFFORDABLE HOUSING ZONE AND REGULATIONS

Legal Challenge

There are no legal challenges faced by the RAH zone and regulations of Ahmedabad. The zone and regulations are implemented through the DP of Ahmedabad, which is a statutory document and is supported by GTPUDA 1976, which is the state of Gujarat's Town Planning Legislation. As already explained in chapter 1, section 1.4: GTPUDA 1976 allows for IZR by establishing a need for affordable housing through surveys, through the DP enabling conditional land use, and allowing developers incentives through FSI.

Further, section 40(j) of GTPUDA states that "the reservation of land to the extent of 10%; or such percentage as near thereto as possible of the total area covered under the scheme, to provide housing accommodation to the members of SEWS," which means the act also supports reservation of land for affordable housing. Thus, IZ cannot be challenged on legal grounds in Gujarat. The RAH zone of Ahmedabad cannot face litigation or challenge in court, unlike Fairfax County, Virginia, in the 1970s.

Definition of Affordable Housing

The RAH of Ahmedabad mandates the creation of 1.5 Mn 'affordable' DU. Here affordable is defined in the DCR as a DU with BUA not more than 80 sq. m. As previously mentioned, this was based on the past conventions and in 2020 developer lobby were able to get it increased to 90 sq. m for convergence with the definitions of the IT Act and GST. (Note: the RAH defines 90 sq. m BUA instead of CA) There is no restriction on the price of the unit or the income of the end users.

The price is expected to be reduced due to the size reduction. The argument does not consider the varied land cost in different micro-markets. When we break the project cost, we find it has dependent on the cost of land, cost of construction and developer profit. The construction cost is size-dependent, given that the rate of construction (material and labour charges) is uniform all over Ahmedabad. The cost due to land varies according to size as well as location. Affordability for housing provided by the market will always be dependent on the demand and supply. Some locations may see a higher demand. Thus, the price of a 1BHK in the south-western micro-market of Ahmedabad cannot be compared with 1BHK in the eastern micro-market.

The previous section explains PIR and affordability as a function of DU price and HH income in detail. Both factors are dependent on the local land and labour market. Across the world, affordable housing or below market rate housing is defined through the price and target income group. In their study, Wang and Balachandran (2021, p. 10) "exclude policies and programmes which do not establish a maximum HH income level."

However, the prevalence of cash in the economy and the use of 'cash component' in the real estate market makes it difficult to implement a price restriction for housing and ascertain the incomes of the HHs in the city. Further, from the mixed-income housing experience in Kolkata, we have learned that even schemes with clear income restrictions may not follow their mandates during implementation. The beneficiaries can also under-report their incomes which is difficult to verify (Kaur, 2013).

Increase in the Housing Stock

The RAH zone being in the periphery has lower land rates than the rest of the city. These rates reflect on the housing prices in the zone and the success of the RAH zone in providing 'affordable' (as per the DCR) housing compared to the rest of the city. Thus, the main aim of the IZR of Ahmedabad is to increase the housing stock of DU with BUA up to 90 sq. m.

The IZR of Ahmedabad is focused on creating DU for a market that is 'less catered.' These are not the poorest of the poor but a certain segment that was not catered to by the market because of its risk. This would be possible through expedited delivery of serviced land and allowing other direct incentives. The entire project has 'affordable' housing i.e., DUs less than 90 sq. m and at the same time, the DUs are sold at market price. This liberal approach is unique to Ahmedabad.

The main criticism against IH and IZR in the literature is that it cannot produce a substantial quantity of DU to serve the less catered effectively. Studies show that IZR policies ideally should reserve 20 – 25% of the total DUs for affordable housing. However, on average (in the USA and India), they reserve 10 – 15% DUs. Meanwhile, with no reservation, Ahmedabad has been able to augment over 31,000 DUs, of which 20 % DUs are small sized, i.e., 1RK, 1BHK, and 1.5 BHK.

No Inclusionary aspects to the mandates of Residential Affordable Housing

The RAH zone does not mandate the creation of mixed income neighbourhoods. The inclusionary aspect in the planning of Ahmedabad come from the reservation of land for SEWS in TPS.

The fostering of inclusive communities with mixed income groups living in the same neighbourhoods is an important objective of IZ. An argument can be made that the RAH zone at the city's periphery pushes a section of the population outside the city. However, as Ahmedabad follows a liberal approach to IZ in RAH, this argument would be incorrect. The market creates housing in the RAH zone, and the end users are free to buy or rent these. Nobody is forcing them to move. It is a choice and moving to the city's periphery is a trade-off made by these HHs to live in affordable housing.

Ahmedabad can do this because TPS already spatially includes SEWS by reserving land for them.

Aspirations of the End User

The RAH zone and regulations cater to the 'less catered' income groups. These groups previously had no choice. They would be considered lucky if they were living in public housing. The other options were living in poorly constructed informal housing, old, dilapidated housing, or living in congestion. These people also aspire to live in private gated societies with facilities and amenities like water treatment plants, clubs, swimming pools, etc. Thus, RAH is like the Executive Condominiums programme in Singapore but without the price limit on housing and HH income restriction for end users.

Rental Housing Creation Not Mandated in Residential Affordable Housing Zone

IZR in the US has also been used to create rental housing stock combined with the strategy of rental vouchers to cater to the poorer section of society. RAH has been more focused on ownership housing.

'Not In My Back Yard' not observed in the Zone

NIMBY is a major deterrent to IZR. NIMBY-ism has been observed in the USA, Brazil where land and property owners try to counteract the IZR policies and programmes. In India, during the formulation of the TPS, landowners are hesitant to accept their readjusted land if it is next to a plot reserved for EWS housing. However, since the RAH regulations are voluntary and the overlay zone relies on a market-based approach for creation of affordable DUs, NIMBY-ism has not been observed in the RAH zone.



4.2 ANALYSING THE OUTPUTS AND OUTCOMES

4.2.1 Creation of Dwelling Units vis a vis the mandate

In Ahmedabad, around 31,000 DUs have been sanctioned in the last seven years. This supply is about 2% of the 1.5 Mn DUs projected by the planners for 2035. If the rate of providing housing remains the same, then by 2035, only 86,800 new units will be added, and a total of 117,800 will be created in 2035, about 8% of the total projected DUs. To achieve the target, at least 10,50,000 DUs need to be added each year. However, increasing land and construction costs and reducing developer profits may make the achievement of this target challenging.

Increasing Land Rates

According to the interviews with developers and planners, we find that despite increasing land rates, the property rate has remained the same over the last five years. However, this has led to a reduction in developer profit and developer may (Agrawal, 2019; Chudgar, 2021):

1. Look at alternative models like hostels and co-living spaces instead of the mandated DU.
2. Look for land with low land prices even if it leads to higher risk.
3. Look for a partnership with the landowner.
4. Not be motivated to construct affordable housing⁹.

The increase in land rates is a disturbing trend. In literature, IZ reduces land rates, property rates, and developer profit (Hollingshead, 2015; Jacobus, 2015; Nzau & Trillo, 2020). It may be because the IZR in Ahmedabad is voluntary, and the developer can choose to follow the RAH overlay zone or the base zone regulation that the landowners are practising speculative land banking. The RAH zone being an overlay zone may also lead to landowners speculating that the land under the A1 base zone may be re-zoned in the next DP.

The speculation about zoning can provide one explanation for why only 12 % of the DUs are in the A1 zone, which is 42% of the net area under the RAH zone and RAH-1 zones. The A1 zone gets the maximum incentive under density bonus out of all base zones. The RAH-1 base zone, on the other hand, has 23% of the net area but 26% of the DU. Furthermore, Zones R2, R1, and R3 are 12%, 11%, and 6% of the net area, respectively but have 28%, 23%, and 9% of the DUs. These statistics show that residential base zones: R1, R2, R3, and RAH-1 all have more housing projects compared to the A1 zone.

4.2.2 Impact of Incentives

Importance of Delivery of serviced land

Another explanation of the above phenomenon could be that TPS (of status draft sanctioned and above) is not in the A1 zone. As seen in the map (Figure 14), few TPS in the area is zoned under A1 in contrast to land zoned in RAH-1, completely under TPS. The development in the zone is dependent on serviced land provided through TPS. The direct incentive of density bonus that developers (in their interviews) have considered the most important direct incentive plays second fiddle to delivering serviced land.

The mandate of expedited delivery of serviced land is important. So far, only 44% of the zone is under TPS, of which a good percentage is due to the creation of SPRR in 2004. The creation of the projected 1.5 Mn DUs and the continued reduction in housing prices depend on the efficient delivery of serviced land.

Commercial use of Built-Up Area to offset costs.

Zoning variance, particularly the 10% BUA allowed for commercial purposes, is also an important incentive. It allows the developer to offset the cost of constructing housing. The 10% allowed use does converge with the conditions under section 80 IBA of the IT Act, which only allows for 3% CA under commercial use.

Need to Incentivize Smaller Sized Dwelling Units

The developers do not find the reduction in premium FSI to be a lucrative incentive as the discount amounts to less than 1% of the project cost. However, this is the only direct incentive under the RAH that incentivizes a smaller size construction. The predominant DU size is 3BHK, followed by 2BHK. 1RK, 1BHK, and 1.5 BHK form about 20% of the total DU and 2BHK would make 58% of the DUs. These percentages show that the RAH zone has a good mix of DU sizes. Over the past five years, the number of DUs for 3BHK has increased, and with the increase in allowed BUA from 80 sq. m to 90 sq. m (in October 2020) it is expected that the numbers of 3BHK would increase further. Through semi-structured interviews, we have discovered that most people do not prefer buying 1RK and 1BHK; they would prefer to stretch their expenses to afford a 2BHK or a 3BHK (Chudgar, 2021). This revelation leads to the questions:

- Is there a demand for 1RK and 1 BHK in the rental housing market?
- Would the end user prefer to rent in the periphery of the city?
- There is, nevertheless, growing demand for 1RK and 1BHK DUs, given their price which can be ascertained through the sale velocity observed in these projects.^f

Connectivity and Public Transport

Most residents of the RAH zone use their own private vehicles – preferred mode being motorized two-wheelers. There are cases where the work trips are short. But in most of the cases the trade-off has been a higher travel time for work trips in order to live in a larger, more affordable and newly constructed house.

The connectivity with public transport system is poor. The case with the longest work trip of 30 km, and travel time of 1 hour uses the transport mode: motorbike.

4.2.3 Analysing the Affordability

Consider the DU prices of 1RK and 1BHK in the RAH zone. The HH income groups are identified considering the affordable PIR as 3.4. The median income of Ahmedabad has been considered as INR 0.35 Mn (USD 4,750^a; based on AUDA DP 2012 after adjusting for inflation; see Folder C Case Archives Appendix E).

Table 16: Income groups for which RAH zone is affordable

Unit size/ Location	Average Price (INR)	HH Incomes (INR)	Income as percentage of Median Income
1RK unit in eastern micro-markets:	0.85 Mn (USD 11,530 ^a)	0.25 Mn	70% of the median income of Ahmedabad.
1BHK unit in eastern micro-markets:	1.40 Mn (USD 19,000 ^a)	0.40 Mn	114% of the median income of Ahmedabad
1RK unit in western micro-markets:	1.75 Mn (USD 273,750 ^a)	0.50 Mn	140% of the median income of Ahmedabad.

Source: Chudgar (2021)

The analysis shows that 20% of the DU, which are small sized (1RK, 1BHK, 1.5BHK), augmented through the RAH of Ahmedabad, cater to the population earning 70 – 140 % of the city's median income and is affordable to not just LIG and MIG-1 but the EWS as well.



4.3 LEARNINGS FROM THE CASE STUDY AND STRENGTHENING INCLUSIONARY ZONING AND REGULATIONS IN AHMEDABAD

Key Learnings

The goal of any IH policy or programme is creating affordable housing stock at a minimum cost to the public sector and for social inclusion. The IZR of Ahmedabad – the RAH zone and regulations focused on creating affordable housing stock for income groups previously less catered by the housing market. This income group was defined in DP 2021 as LIG and MIG-1. Our study shows that the IZR of Ahmedabad has been successful in this respect.

About 20% of the housing stock comprising of smaller sized DUs (1RK, 1BHK, 1.5 BHK) are affordable to HH earning INR 0.25 Mn (USD 3,400a), 70% of the median HH income of the city that can be categorised as EWS and LIG. It even caters to HH with incomes as low as INR 0.18 Mn (USD 2,450a). These DUs have formal, secure land tenure, are built as per the design and construction standards set by the government and are registered with real estate authority – GUJRERA. These have basic services like water and sanitation and have good road connectivity.

These DUs are provided by the markets without any direct public subsidy and have neither price nor income ceiling; only size restriction of BUA less than 90 sq. m yet have shown measurable outputs compared to the traditional PPP mixed income housing. Thus, the liberal approach of IZR in Ahmedabad through the RAH Zone can be considered a good case to understand how to implement IZR in a city in the global south with a cash-dependent economy.

Strengthening Inclusionary Zoning and Regulation in Ahmedabad

Despite the success of RAH zone and regulations the following areas require strengthening for the RAH zone and regulation Ahmedabad to continue being effective:

1. Prioritizing areas with existing or proposed public transport connectivity i.e., Metro and BRTS station within 0.5 to 1 km in the RAH zone through:
 - Fast-track delivery of serviced land through TPS, allowing more affordable housing projects to come into the area.
 - Change of base zone from A1 to RAH-1 for the land under TPS to counter the speculative land banking.
2. Providing better incentives to the developers for creating smaller sized DUs (1RK and 1BHK.) The developers could be given a higher degree of incentive like an increase in the percentage of BUA used for commercial purposes for creating a product mix with smaller sized DUs. The developers could also develop these into Rental Housing Complexes in collaboration with interested industries or organisations. The local government can play the role of facilitator here.
3. In addition to the pan city RAH, an IZ can be created by identifying areas with a high land value where the poor cannot afford to house, which do not have SEWS plots- these could be areas in the proposed CBD in the TOD zone. These DUs would act as a replacement for the SEWS housing that would have been created through the TPS.



PART - 3 ADOPTING INCLUSIONARY ZONING AND REGULATIONS IN OTHER INDIAN CITIES

5

RECOMMENDATIONS FOR POLICY FORMATION

5.1 NECESSARY PRECONDITIONS FOR INCLUSIONARY ZONING AND REGULATIONS

- Preconditions for Residential Affordable Housing Zone of Ahmedabad
- Other requirements for Inclusionary Zoning

5.3 THE POSSIBLE FORM OF INCLUSIONARY ZONING AND REGULATIONS IN OTHER CITIES OF INDIA

- Mixed Income Group Neighbourhoods vs Quantum of affordable units
- Pan City vs dedicated zones for IZR
- Definition of affordability for IZR
- IZR as mandatory, voluntary, or negotiable requirement
- Incentivising the developer
- Paying a fee in-lieu of providing affordable units
- Off-site construction of Affordable units
- Lock in period for affordable units

5.2 AUDIT OF TOWN PLANNING LEGISLATION

- Establishing Need for Inclusionary Zoning and Regulations and Preparing Land Use Zones
- Establishing rules and regulations that may incentivize private developers

5.1 NECESSARY PRECONDITIONS FOR INCLUSIONARY ZONING AND REGULATIONS

The IZR requires certain preconditions for its efficacy particularly in the context of Indian cities. Since the tool itself is designed to meet the housing demands of only a particular socio-economic section of the society, it is integral that it responds to the localized characteristics of affordability in these real estate markets. Some of these preconditions have been explained below.

- 1. Presence of a healthy and competitive housing market:** For IZR as a tool to generate greater affordable DUs in the market, the local market must not be a monopoly of only a few developers of real estate. Since IZR as a tool principally attempts to achieve a higher supply of affordable housing from the private sector, it is integral that the localized market has healthy competition in the supply of affordable housing from private real estate developers.
- 2. Significantly high market prices of land:** In all local markets where ownership of land or developable plots, especially in the LIG and MIG sections, is potentially possible to construct single-family DUs, the landowners seldom rely on real estate developers for the construction of housing. The plot owners in this section may even seek other avenues for ensuring affordability, including self-monitored construction of their DUs. Therefore, IZR can only function in markets where plot ownership for constructing a single-family DU is not affordable for the LIG and MIG socio-economic sections. Therefore, in such situations, the affordability in accessing housing can only be achieved through a multi-family DUs or an apartment typology construction where the cost of land is borne by multiple stakeholders and construction cost per DUs is borne by individuals. Since multiple stakeholders pay for common facilities and services, the cost of housing per family significantly reduces hence increasing affordability, especially in the LIG and MIG sections. Since the construction of such typology is more complex and requires higher expertise, an efficient supply of such DUs is majorly facilitated through real estate developers, which is also an integral precondition for IZR (Jacobus, 2015).
- 3. Supporting Urban Planning Regime and Statutory Framework:** The state's urban planning regime and statutory framework supporting IZR is essential. They enable legal backing and support to all elements that comprehensively make IZR function; without it, IZR can be challenged in courts.

5.1.1 Preconditions for Residential Affordable Housing Zone of Ahmedabad

In Ahmedabad's Residential Affordable Housing (RAH) zone, it is evident that the mechanism uses components of spatial planning and development regulations comprehensively as tools to incentivize more developers to supply higher affordable housing DUs in the market. The RAH zone of Ahmedabad also follows various preconditions necessary for IZR to function. Ahmedabad, being the commercial capital and the most urbanized city of Gujarat, has experienced a **dynamic increase in land prices** over the past few decades. There is a **healthy competition amongst various real estate developers** to meet these increasing housing demands. Additionally, since land is a state subject under the seventh schedule of the constitution of India, planning tools such as the RAH zone of Ahmedabad, which deals with land, must be backed legally under relevant statutory provisions of the state governments. The RAH zone of Ahmedabad is **enabled under the Gujarat State Government's Act: GTPUDA 1976**.

Section 3 of the GTPUDA 1976 allows the State government to constitute AUDA. AUDA is mandated to prepare a DP and allocate land use through zoning and development regulations for the area under its jurisdiction. The RAH zone is delineated as one such land use zone (as an overlay over the base zones) under the AUDA DP-21. Additionally, a set of regulations corresponding to the identified RAH zone have also been identified within the AUDA DP-21. For the various components of the RAH zone of Ahmedabad to comprehensively function under a legal framework, statutory backing is ensured majorly through three statutory provisions within the GTPUDA 1976:^b

1. **The ability to establish need for such an Inclusionary zone:** The need for an intervention by the state for inclusionary and affordable housing solutions is ideally established as a direct result of an existing gap in the demand supply dynamics of the housing market in a city. Usually, socio-economic studies and surveys of a city's housing market are undertaken by the government from time to time. Such surveys and studies act as the benchmark for preparing a framework for cities to identify gaps in the housing market and subsequently identify various comprehensive proposals through plans, policies, and projects. If conducting such surveys and studies is enabled within the statutory and legal framework of the state government, the need for establishing an inclusionary zone as a proposal shall be construed as legally justified. Currently, the provisions under **section 7(1)(iii)** of the GTPUDA 1976 allows the development authority **"to carry out surveys in the development area for the preparation of development Plans or Town planning schemes"**. Due to the broad scope of components under surveying, the qualitative surveys, including socio-economic surveys, can also be undertaken by the appropriate authority, which could establish the need to supply affordable housing within the development plan area. Therefore, in the case of Ahmedabad, the need for establishing such IZR is statutorily backed within the legal framework.
2. **The ability to enable conditional Land use zoning:** There should be provisions enabling the development authority to regulate the **'use of land'** statutorily. As an essential element of statutory planning in India, this is usually legally backed in every state, including Gujarat. The provisions under **section 12(2)(a)** of the GTPUDA 1976 identifies the major components of a DP, including the identification of **"proposals for designating the use of land for residential, industrial, commercial, [educational], agricultural and recreational purposes, [or such other purposes;]"**. Therefore, in the case of Ahmedabad, the spatial designation of the RAH zone as an overlay zone is legally backed by the statute.



3. The ability to set regulations that incentivize developers to build affordable Housing: These regulations are conceptualized for providing incentives to the suppliers (Real Estate Developers) by enabling them with more development rights (i.e., construction of higher floor spaces). Generally, construction of such higher floor spaces is chargeable at a premium payable to the appropriate authority. Therefore, the incentives are usually enabled to provide developers with a discount in the rate at which the premium is payable on additional FSI. Principally, for enabling such incentives, the use of FSI takes a paradigm shift from just a regulatory tool towards a market commodity that the authority could sell. Therefore, such **commodification of FSI** should be statutorily backed under the legal framework of the state government. Under the provisions of section **12(2)(m)** of the GTPUDA 1976, the major components of the development plan have been identified, which includes **“provision for controlling and regulating the use and development of land within the development area, [including the imposition of charges at such rate as may be provided for the grant of Floor Space Index (FSI) or height and also an imposition of] conditions and restrictions in regard to open spaces to be maintained for buildings, the percentage of building”**. This provision ensures legal backing of the dynamic role of FSI in both a regulatory and monetary role. Therefore, it can be used as an incentive for developers to supply affordable units in the market.

The case of the RAH zone in Ahmedabad provides a great understanding of how IZR can be adopted locally as part of the city's DP. Since a robust real estate market and the land price dynamics of any particular city is a local phenomenon, an IZR policy could be adopted in the specific context. However, regardless of the local context, a supporting urban planning regime and statutory planning framework is an essential precondition for any Indian city. Therefore, it is essential to audit the town planning legislation and its effectiveness for enabling IZR in any Indian city that intends to adopt it within its planning regime.

5.1.2 Other requirements for Inclusionary Zoning

Connectivity through public transport: It is important that the proposed zone is well connected to the rest of the city through public transport. Public transport offers an affordable mobility option for the beneficiaries or target group of the zoning and by providing connectivity with the rest of the city the transport also provides them socio-economic opportunities. Further, IZ around the public transport stations add to the ridership of the public transport making these compatible with each other.

Supply of serviced land through land management tools: Land management tools like TPS described in the case study can also be adapted for the effective and fast delivery of serviced land. The supply of serviced land is important for greenfield IZR as the developer providing affordable DUs cannot be burdened with creation of infrastructure. In absence of serviced land, the developer may not build the project.

Integrated Township Policy: Initiatives like Township Regulations 2009 which allow 100% FDI can incentivise the private sector to mobilise funding from foreign investment and create infrastructure as well as mixed income neighbourhoods. This would however work in regions which see FDI.

5.2 AUDIT OF TOWN PLANNING LEGISLATION

Although the implementation of IZR in Indian cities is dependent on the various preconditions discussed in the previous section, the most essential amongst them is that of a supporting urban planning regime and statutory framework of the state. This section intends to explore the efficacy of the urban planning regime and statutory framework in various states and cities in India and explore the possibilities of its augmentation to enable IZR. As discussed in section 5.1.1, there are majorly three provisions essential for enabling the statutory requirements of the IZR in Indian cities. The statute's ability to establish a need for such an inclusionary zone, enable conditional land use zoning and set regulations that incentivize developers to build affordable housing.

5.2.1 Establishing Need for Inclusionary Zoning and Regulations and Preparing Land Use Zones

In most states in India, the town planning legislation has provisions for undertaking surveys that establish a need for IZR and preparing conditional land use zoning. Like in the state of Maharashtra, the Maharashtra Regional and Town Planning (MRTP) Act of 1966, under Sections 22(1), has the provision for undertaking surveys, hence establishing the need for IZR, and Section 22(a) provides a legal framework for and preparing conditional land use zoning. Similarly, other states such as Odisha, Tamil Nadu and Kerala also have similar provisions as follows:

1. **Odisha:** The Odisha Development Authorities Act (ODAA) 1982 has provisions for both Survey under section 9(1) and for regulating the use of land under section 9(2)(a) and 10(2)(a).
2. **Tamil Nadu:** The Tamil Nadu Town and country planning Act (TNTCPA) 1971 has the provisions for undertaking surveys in both the metropolitan development areas under section 9-C(1)(i) as well as the local planning areas under section 12(1)(b)(i). The act also provisions controlling land use under section 17(2)(a).
3. **Kerala:** The Kerala Town and Country Planning Act (KTCPA) 2016 has the provisions to undertake a situational analysis for which surveys can be undertaken under section 34(2)(d). The act also provisions controlling the use of land under section 34(1).

5.2.2 Establishing rules and regulations that may incentivise private developers

The critical element of IZR is the incentives that the private developer receives against the provision of affordable units for sale in the market. Therefore, the incentives, i.e., higher development rights and discounts in purchasing such additional development, constitute an integral element. As discussed in section 5.1.1, FSI takes a paradigm shift from just a regulatory tool towards a market commodity that the authority could sell. Therefore, the **commodification of FSI** should be statutorily backed under the legal framework of the state government. Although the need for undertaking surveys to establish the need for IZR and prepare conditional land use zoning is provisioned under the planning act of most states, the provision for sale of FSI as a commodity or use additional FSI to incentivize the developers may not be directly provisioned in the planning act. Therefore, it may be necessary to audit various rules, orders, and various plans and policies prepared from time to time by the state government for legally backing such commodification of FSI. Apart from the state of Gujarat (section 5.1.1), Maharashtra also provisions the commodification of FSI directly under section 14(1) of the MRTP Act 1966. However, states such as Odisha, Tamil Nadu, and Kerala do not have such provisions in their planning Act. The commodification of FSI is, however, incorporated within various rules and regulations

of the state government:

- 1. Odisha:** Although the sale of additional FSI is not mandated within the ODAA 1982, under section 124 of the Act, the authority can make **regulations regarding planning and building standards**. Under this provision, the Bhubaneswar Development Authority (BDA) prepared the Bhubaneswar Development Authority (planning and building standard) Regulations in 2018. Regulation 35(5) enables the commodification of FSI.
- 2. Tamil Nadu:** The TNTCP Act 1971 does not provide for the commodification of FSI; however, similar to the case of Odisha, the TNTCP Act 1971 under **section 17(2)(I)** gives power to the authority to **make regulations under a masterplan**. The state government, under this provision, prepared the Local Planning Area Development Control Regulations in 2010, which allows the provision of **Premium FSI** for specific developments under **Regulation 6**. The state government of Tamil Nadu also recently prepared the Tamil Nadu combined Development and Building Rules in 2019. These Rules allow the **collection of a premium at the rate of 50% of the guideline value** on premium FAR permissible based on Road width under **Rule 49**.
- 3. Kerala:** The KTCP Act 2016 also does not directly provide the commodification of FSI. However, the Kerala Municipal Building Rules prepared by the state government in 2019 provides various regulations, including the FSI value permissible under various occupancies. **Rule 49(2)** allows **additional FSI by paying** an additional fee (INR 5,000 per sq. m), thus making the **commodification of FSI** legal within these Rules.

Although the provision for “**Commodification of FSI**” is considered within the various rules and regulations of the state government, it is generally understood that such statute within the planning act itself is the more substantial backing for legal considerations. Hence the state of Gujarat and Maharashtra have a more substantial perceived legal backing for such “commodification of FSI” as compared to states of Odisha, Tamil Nadu, and Kerala, where such commodification of FSI may be construed legitimate only for the period under which the plan and regulations are legitimate. Therefore, for cities and state governments to enhance the legal backing for such commodification of FSI within their planning jurisdictions, it would be highly appropriate to amend such provisions within the planning act of the state itself.

5.3 POSSIBLE FORM OF INCLUSIONARY ZONING AND REGULATIONS IN OTHER CITIES OF INDIA

The case provides evidence to establish that no one IZR policy could be directly adopted in another city. The real estate dynamics, including housing demand and land prices, vary from city to city. Additionally, the end user's socio-economic profiles and aspirations may also differ in different cities. Therefore, such localized characteristics require a contextualized approach to preparing an IZR policy for a city. This section includes some key points that are necessary to be addressed in order to design a context specific IZR policy. Answers to some key questions may provide us with indicators necessary to move forward with the policy design. Therefore, some key questions would be discussed in detail to evaluate the policy as a whole.

Key Questions include:

- Should the IZR policy focus on creating mixed income group neighbourhoods or focus on creating a quantum of units?
- Should IZR be applicable to pan city or only targeted to specific zones of the city?
- Who will the IZR policy include and how would their affordability be defined?
- Should the IZR policy be mandatory or voluntary or negotiable?
- Should the developers be incentivised?
- Should developers be allowed to pay a fee instead of providing affordable units on-site?
- Should developers be allowed to provide the required affordable units at off-site locations? Should the affordable units produced be regulated for a certain number of years to remain affordable?

5.3.1 Mixed Income Group Neighbourhoods vs Quantum of affordable units

It is integral to answer what the IZR intends to achieve for the city. Although the inception of IZR in the USA was intended to promote mixed income neighbourhoods, the increasing rate of urbanization, especially in the Indian cities, has opened up discourses on producing a quantum of affordable units to meet the increasing housing demand. An integrated approach may also be conceptualized based on the purpose of IZR in a particular city. However, if IZR is conceptualized to create a mixed-income neighbourhood, it would require certain “set aside” regulations for affordable units that developers must create.

5.3.2 Pan City vs dedicated zones for Inclusionary Zoning and Regulations

The purpose of IZR will also determine whether the policy is conceptualized for the entire city, or it is focused on a few dedicated zones. If the purpose of the IZR is to create mixed income neighbourhoods, it is evident that the policy would require delineating specific zones where such character is envisioned. The policy may also be integrated with other visions for the city, like creating high density mixed land use zones, transit-oriented zones, high intensity station areas, which would require bringing the actual users closer to the transit infrastructure and could be achieved by integrating IZR with zones that envision such character. Alternatively, a pan city IZR policy would focus on creating a higher quantum of affordable units.

5.3.3 Definition of affordability for Inclusionary Zoning and Regulations

Since every city has its unique characteristics, the definition of affordability may also be unique to the context. Since IZR intends to focus only on supplying housing for a specific spectrum of the demand, the affordability of this spectrum may be unique to every city. Therefore, based on the target income group, the IZR policy may attempt at context specific definitions of housing affordability.



5.3.4 Inclusionary Zoning and Regulations as mandatory, voluntary, or negotiable requirement

The IZR could be either a mandatory requirement, voluntarily, or negotiable for developers. The mandatory IZR has shown a better outcome in the case of the USA. However, voluntary zoning and regulations is an important tool and is used in states where IZR is not backed statutorily or faces great opposition from the developer lobby. Negotiable IZR is seen in UK where lack of transparency leads to uncertainty, delay, and increase in prices. The smaller authorities in UK are unable to take advantage of IZR due to a lack of capacity to negotiate and the policy is only favourable to large developers.

5.3.5 Incentivising the developer

Principally it is understood that if a developer helps to reduce the economic impact of providing affordable units to the state, they merit some form of incentives or cost offsets. However, the incentives must be designed to be highly lucrative to the developer, especially if the requirement is voluntary. Even if the requirement is mandatory and the incentives or cost offsets provided to the developer cannot be marginal, otherwise developers may fend off from meeting the requirements.

5.3.6 Paying a fee in-lieu of providing affordable units

Developers may be given an option to pay money or a fee instead of construction of units. The government can then use this fee to provide affordable units in the city. However, if the government machinery for the supply of affordable housing is limited, providing affordable units may still not be served. Therefore, it is principally understood that the developers should be allowed to pay a fee in lieu only when the government can match the supply expected from the private sector.

5.3.7 Off-site construction of Affordable units

The construction of affordable units at a different location becomes a key deliberation if the IZR is intended to be applicable on a dedicated area or is intended to promote mixed income neighbourhoods. In such a case, the provision of off-site construction of such affordable units would be highly impractical and should not be allowed. However, there may be certain cases where the provision of units on the same site may experience difficulties. In such cases, upon consideration by appropriate authority and personnel, off-site construction of affordable units may be allowed only if the off-site construction is considered in the same neighbourhood or zone.

5.3.8 Lock in period for affordable units

The deliberation for ensuring the prolonged affordability of the units requires regulating the real estate prices of such units. Therefore, a lock-in period may be envisioned for a certain period when the unit sale is prohibited or strategies for selling the units to a similar beneficiary profile in the future. In both these cases, the units need to be regulated strictly. Alternatively, a liberal, market-friendly approach could be adopted with no lock-in period. In such a case, the markets would be allowed to function more liberally, and the end users may even monetize their units.

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END NOTE

- a. As per currency exchange rate from xe currency dated 19th September 2021 <https://www.xe.com/currencyconverter/convert/?Amount=500000andFrom=INRandTo=USD>
- b. Interview with Town Planner, AUDA and part of DP 2021 team on 11th March 2020.
- c. Interview with Retired Chief Town Planner TPVD Gujarat on 28th May 2020
- d. Findings from the Round Table held on 30th April 2021
- e. Interview with Town Planner, AUDA on 27th Feb 2020
- f. Interviews conducted between May and July 2020 (Refer to Folder C Appendix A for further details.)
- g. Retrieved from <https://www.rashmiengicon.com/rk-sandipani/>
- h. Interviews conducted between Jan. and March 2021 (Refer to Folder C Appendix A for more details.)

FOLDER-C: TEACHING NOTES AND CASE ARCHIVE

ENABLING MARKET TO SUPPLY AFFORDABLE HOUSING THROUGH INCLUSIONARY HOUSING POLICIES

LEARNINGS FROM AHMEDABAD





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TEACHING NOTE

1.1 CASE OVERVIEW

The case study titled: 'Enabling markets to augment the supply of affordable housing through Inclusionary Zoning' takes the case of Residential Affordable Housing Zone of Ahmedabad that covers the idea behind Inclusionary Housing (IH), Inclusionary Regulation (IR), and Inclusionary Zoning (IZ), the need for these, the tools, and incentives used around the world through which private developers provide affordable housing within market-driven developments. It also details the tools and incentives used by the Ahmedabad Urban Development Authority (AUDA) to implement Inclusionary Zoning and Regulations (IZR) in Ahmedabad and the output and outcomes of these discussed with respect to the global discourse. Finally, we look at the implementation of IZ in other Indian cities based on the learnings of Ahmedabad. The case study in its current form is structured for housing policymakers, key decision-makers for cities, urban planners, and housing sector experts. Therefore, the case study can be taught across several sessions, or three parts based on the distinct learning outcomes. The instructor can choose the teaching sessions depending on the detail required, learner capacity, and time constraints.

The following sections outline the pedagogical narratives that should help the instructor talk the learners through the various concepts covered in the case study. The instructor could initiate discussions based on questions learners might have around core concepts and scheme workings.

Part I: Background to Inclusionary Zoning and Regulations

This part introduces Inclusionary Housing and provides a context for the case study. The reviewed literature and the global and national experience make this part the theoretical framework referred to again in Parts II and III. Note: The instructor may have to explain affordable housing concepts like Price to Income Ratio (PIR) and typical housing demand and supply curve in an Indian city, to the learner in case they are not familiar with the same.

Part II: Ahmedabad Experience

This part details the case: IZ of Ahmedabad. It discusses its inception, its mandates, incentives given to developers, the output, and the outcome.

Part III: Adopting Inclusionary Zoning and Regulations in Indian Cities

The final part gives out directives or guides for the learners to create an IZR policy for a city in India.

The following page summarises for the instructor: learner prerequisites, pedagogical methods, and the broad learning outcomes from each part of the case study.



1.2 LEARNER LEARNER PREREQUISITES, TEACHING METHODOLOGY, AND LEARNING OUTCOMES FOR THE CASE STUDY

Table 1: Learner Prerequisites, Teaching Methodology, and Learning Outcomes for the Case Study

Part/ Chapter	Learner Prerequisites	Teaching Methodology	Learning Outcomes
Part I: Background to Inclusionary Zoning and Regulations			
1. Background	Basic familiarity with the urban housing sector in India.	Literature review, group discussions and further readings	Explain what Inclusionary Housing, Zoning and Regulation is the need for IH/IZR and what it aims to achieve why India needs to look at IH/IZR
2. Inclusionary Housing Practices	Understanding of Built Environment terms such as Built-Up Areas, FSI etc.	Infographics and Matrices Debates and discussion on the advantages of the various tools and incentives.	Explain how IH/IZR are implemented around the world: what are the tools used by the city, incentives given to developers and the result.
Part II: Ahmedabad Experience			
3. Inclusionary Zoning and Regulations in Ahmedabad	Basic understanding of the geography of Ahmedabad, its Development Plan (DP) and state Town Planning (TP) Act. Ability to use spread sheets	Through Maps, diagrams, graphs, and tables	The inception, mandates, tools, and incentives provided by the IZR of Ahmedabad Resultant housing stock, the ticket size, and price in its various submarkets. Improvement of people's life based on their ability to access a decent affordable house as per standard definitions and their own perception. Discussion: Identifying the strengths and weakness in the IZR of Ahmedabad and suggesting recommendations to the policy.
4. Discussion and Learnings		Questioning the findings/ results vis a vis the literature and global experience so the learner makes policy recommendations.	
Part III: Adopting Inclusionary Zoning and Regulations in Indian Cities			
5. Recommendations for Policy Formation	Basic understanding of the TP Act and DP	Audit of relevant sections of Town Planning Scheme and Analysing the city in the context of housing	Creating a methodology for creating IZR/ IH policy in other cities of India- the preconditions that need to be met for IZR to work, looking at statutory documents to pre-empt legal challenges, and Formulating an IH policy.



1.3 ASSIGNMENT QUESTIONS

Learners can discuss the key learning from the international and national cases presented.

Learners can come up with the leanings from the Ahmedabad case and compare them with the learnings mentioned in the case.

Learners can be asked to discuss the following so that they can ascertain the possible form the IH/IZR policy would take for their city:

1. Is there a need for a law at the national level to create IH or IZ at the local level?
2. What should be the purpose of the IZR, in their city :
 - Creating mixed income group neighbourhoods?
 - Creating quantum of units?
 - Creating a land bank with the government for housing?

Learners can design the IZR for their specific city or metropolitan area keeping in mind:

- The housing demand and supply of the city - using the same methods from the case
 - The nature of the real estate market in the city
3. If IZR should be applicable pan city or only targeted to specific zones of the city
 4. If the IZR should be mandatory or voluntary

1.4 CONCLUSION

This teaching note provides suggestions to the faculty on how this case can be used or taught to housing policymakers, key decision-makers for cities, urban planners, and the housing sector. There are many other ways in which this case can be used or taught based on the target audience and intended learning outcomes. Some of these are explored in the next section, Pedagogical Possibilities.

PEDAGOGICAL POSSIBILITIES

There are multiple ways in which this case can be taught based on the target audience and learning outcomes intended. The following are some suggested pedagogical possibilities for the research output of this case study, other than what has already been described in the teaching note:

1. An urban housing policy case study to understand and create **IH or IZ policies** for cities or states for **urban planning and urban housing students**.
2. An urban housing case study to comprehend how **IZ is implemented** for **urban planners and urban planning and urban housing students** and other **professionals with the development authority or Urban Local Body (ULB)**.
3. A case study on the **housing supply value chain** to help better understand the policy and the incentives given to **private developers** looking at developing inclusionary housing projects to add to the housing supply.
4. The **case data repository** can help develop a better understanding of the urban housing markets for **real estate experts and brokers**.

The case and the data repository can be used in the following ways:

1. An urban housing policy case study for urban planning and urban housing students

- **Designing and conducting surveys:** Provide the learner with the entire case repository except the survey related data and ask them to design a survey questionnaire for this case and compare it to the one used for the case. Then conducting the said survey in a city as an academic exercise.
- **Analysing the real-estate markets** for different cities using the same process of collecting data about real-estate projects from the RERA website followed for the case or getting this data from the local authorities. The housing flow in the market can be identified based on the number of new units sanctioned. These cases can be classified based on size, typology, and locational micro-markets.
- **Put forward the learnings** based on their understanding and comparing them to those mentioned in the case.
- Preparing policies for the city.

2. A case study to understand how IZ is implemented for urban planners and urban planning and urban housing students and other professionals with the development authority or ULB.

- Analysing the housing supply in the IZ of Ahmedabad: Provide the learner with the data repository (see appendix D) to analyse housing supply through the zone.
- Exposure to the IZ of Ahmedabad through organising site visits and stakeholder interviews in the various submarkets.
- Site visits to private (affordable) housing and public housing within the zone to comprehend the supply mechanism and compare the two housing types. A comparison can be made between the two based on the price, income groups served, services and facilities provided, and cost of construction.



3. A case study on the housing supply value chain for real estate developers.

- Developer contribution and the incentives are given to developers under IZR.
- Understanding the supply mechanism - supply of land, through Town Planning Scheme (TPS) and land transactions between landowner and real estate developer.
- Project cycle and project cost break up.
- Convergence with IH to get more incentives.

4. The case data repository can help understand the urban housing markets better by real estate experts and brokers.

- Analysing the housing supply in the IZ of Ahmedabad: Provide the learner with the data repository to analyse housing supply through the zone.
- Exposure to the IZ of Ahmedabad through organising site visits and stakeholder interviews in the various locational micro-markets. Some points to keep in mind during site visits:
 - Observations on the connectivity of the site with roads and public transport, neighbourhood facilities like public parks, shops for daily needs, schools, hospitals, and the basic services like water supply and sanitation provided at the site.
 - While interviewing the stakeholders – home-owners or renters can be asked about the housing price, their HH income. HH income may be under-reported and so an observation of the assets should be made to cross reference with the income.
- Understanding the supply mechanism – supply of land, through Town Planning Scheme (TPS) and land transactions between landowner and real estate developer.
- Project cycle and project cost break up.

Box 1: Designing the HH survey

Objective of the Survey

Understand if the markets have delivered DUs that are affordable, built as per standards with no congestion, provision of basic services and well connected through roads and public transport.

Based on these objectives a HH survey questionnaire can be designed.

The HH questionnaire used in the study is available at Appendix C2.

Sampling

This could be random, random-stratified, or snowball.

Random-Stratified sampling is ideal and would provide better results. The stratification could be done based on the locational micro-markets and the housing size or typology which acts as a proxy for income.

Snowball Sampling can be used in conditions where it is difficult to find willing respondents. The sample should be proportional to the universe or sampling frame it is drawn from.

AREAS OF FURTHER RESEARCH EMERGING FROM THIS CASE STUDY

There are a few gaps in our knowledge that would benefit from further research:

1. Outputs and outcomes of Inclusionary Zoning and Regulations and Inclusionary Housing in other Indian cities

As mentioned in the main case, there are many IR and IH programs and policies in the country at the state and national level, but the output and outcomes of these have not been studied. Further research in this field might shed light on these regulations and policies and add to the literature available on the IH in India.

2. Affordable Rental Housing through Inclusionary Zoning and Regulations in India

The IZR and IH policies in the US and UK look at the creation of rental housing stock and ownership housing. Indian IH policies focus on ownership housing. In 2020, COVID-19 pandemic related lockdown saw many urban poor migrants leaving their cities and going back to their native villages due to their inability to manage safe accommodations and pay rents. This exodus has led to the government's renewed interest in rental housing with the Affordable Rental Housing Complex (ARHC) for urban migrants launched in August 2020. As rental housing can be facilitated through IZR, further research can be undertaken to utilise this tool.

Another interesting topic that has emerged from our study for further research is:

3. NIMBY-ism in the reservation of plots for Socio-Economically Weaker Sections in Town Planning Schemes

While interviewing the developers, we found that most of them did not want the plot reserved for SEWS next to their project as it would reduce its value. For the same reason, landowners do not want their plots to be reconfigured next to SEWS plots. This NIMBY-ism can lead to a delay in the implementation of the TPS. Further research is required to know how this NIMBY-ism impacts the process of TPS formation and implementation.



CASE ARCHIVE

The Case Archive contains interviews, maps, matrices, infographics, databases, spreadsheets, and relevant sections of Town Planning Legislations of States and Development Plans of selected cities. The case study Instructor can use these to help the learner better understand the case.

(Case data repository is available at <https://sukalp.crdf.org.in/>)

APPENDIX A. DESCRIPTION OF INTERVIEWEES

The following interviews were conducted as a part of the research investigation. The minutes of the meeting are available in the Case Archives Folder C > Subfolder Interviews.

Sr. No.	Date	Position / Title
1	February 27, 2020	Deputy Town Planner, AUDA
2	March 11, 2020	Town Planner, AUDA; Involved in Preparation of the Development Plan 2021
3	May 28, 2020	Chief Town Planner (Retired), TPVD, Government of Gujarat
4	June 4, 2020	Founding Director and Chairperson, Sun Builders Group
5	July 7, 2020	Managing Director, A Shridhar Group and CREDAI-GIHED Vice-Chair, Gujarat
6	July 15, 2020	Real Estate Expert and CEO (Residential Properties) Space Management Limited
7	July 20, 2020	Real Estate Expert and Founder, Ytaminz Enterprise
8	October 1, 2020	Principal, TNSF, TNIFMC, Government of Tamil Nadu
9	December 17, 2020	Developer, Umiya Buildcon (RAH Zone)
10	December 17, 2020	Developer, Sai Sharanam (RAH Zone)
11	December 17, 2020	Developer, Shiv Developers (RAH Zone)
12	December 18, 2020	Developer, Om Shakti Developers (RAH Zone)
13	January 05, 2021	Personal Banking Officer HDFC Homes, Mithakhali branch
14	January 05, 2021	Deputy Manager (Home Loans) HDFC Homes, Mithakhali branch
15	February 12, 2021	Developer, Nila infrastructure
16	February 12, 2021	Developer, Soham Group
17	February 12, 2021	Developer, Vyapti Vande Matram Group
18	February 13, 2021	Developer, S. Sreedhar Group
19	February 13, 2021	Developer, Siddhi developers
20	February 13, 2021	Developer, Mahadev Developers
21	February 14, 2021	Developer, Akshar infra - Shypram
22	February 17, 2021	Developer, Akshar Afford
23	February 17, 2021	Developer, R K Sandipani
24	February 18, 2021	Possession Manager, Swati Chrysantha
25	February 18, 2021	Developer, Shree Sanidhya Flora
26	February 18, 2021	Developer, Aadi Siddhi Residency
27	February 18, 2021	Developer, Sun Shela One
28	February 21, 2021	Developer, Saumya Infracon

APPENDIX B: STATUTORY DOCUMENTS AND GOVERNMENT ORDERS

B1: List of Town Planning Legislations with Section

1. Gujarat Town Planning & Urban Development Act 1976
 - » Section 7(1)
 - » Section 12 (2)
 - » Section 40 (3)
2. Maharashtra Regional and Town planning Act 1966
 - » Section 14(l)
 - » Section 21(a)
 - » Section 22(1)
3. Odisha Development Authorities Act 1982, Section 9 & 10
4. Orissa Town Planning Improvement Trust Act 1956, Section 29
5. Karnataka Town and Country Planning Act 1961
 - » Section 13-E,
 - » Section 12(2)(iii)
 - » Section 76K.

B2: List of Development Plans and Development Control Regulations

1. Ahmedabad Development Plan (Second revised) 2021
 - » Section 14.1
2. Common General Development Control Regulations, Gujarat
 - » Schedule 19
3. Mumbai
 - » Development Plan 1991
 - » Development Plan 2036 Regulation 15
4. Master Plan 2021, Delhi
 - » Land pooling policy
5. Bhubaneshwar Development Authority (planning and building standards) Regulations 2018; Regulation 35(5)

B3: List of government orders referred

1. Madhya Pradesh Nagar Palika (meaning Municipality) Registration of coloniser, Terms and Conditions Rules, 1998
2. Policy for Housing for All in Urban Areas, Odisha, 2015
3. Tamil Nadu Town and Country Planning (Levy of Shelter Charges and State Shelter Fund) Rules, 2020
4. Revised DU size cap for affordable housing in RAH retrieved from:<https://www.uda.org.in/uploads/Assets/rdp/affordable%20housing.pdf>

These sections are available in the Case Archives Folder C > Subfolders Town Planning Legislations, Development Plans and Government Orders.



APPENDIX C: QUESTIONNAIRE

C1: Questionnaire for Developers

Name of developer/promoter -

Phone no -

Projects with RAH regulations - (names, locations)

- 1.
- 2.
- 3.

Project (name, location)	Project Inception Date	Project End date	Unit Types & Price	Units Sold	TPS AUDA/ AMC

Type of unit mix - 1RK / 1BHK /1.5 BHK/ 2BHK / Shops / Showrooms / Offices

The rationale behind the choice of the product mix -

Land

- Year of purchase of land - Cost of the land -
- Location/address -
- TPS -

Criteria for choice of the land parcel -

- Job centres in the vicinity -
- Area of the land parcel -
- Is the land parcel serviced?
- How is the connectivity to the land parcel?

Construction

- Cost of construction -
- FSI permissible -
- FSI utilised -
- The timeframe of the project -
- Overview of the project cycle -
- Finishes -
- Basic services and amenities -
- Appropriate building material -
- Sustainable building technology -

Incentives availed

- GST exemptions
- IT exemptions
- Infrastructure status exemptions
- PMAY - AHP
- RAH

Project Finance

- Mode of finance - Rate of interest -
- Selling price -
- Ticket size -
- Ticket price -
- Profit percentage -
- Sales velocity -
- Total no. of units -
- The time frame for construction of units -
- Units sold till date -
- Units unsold till date -

Miscellaneous

How is the market of affordable housing in Ahmedabad, per se?

Do you think you can achieve the highest and best use of the land parcel by doing an affordable housing project?

- What is your motivation for doing a project in the RAH zone? Is it simpler and easier to do affordable housing projects in the RAH overlay zone of Ahmedabad rather than in the city centre?
- Are the units delivered adequate for the end-user?
- Are you satisfied with the RAH policy? What are your suggestions for changes in RAH policy?



C2: Questionnaire for End Users

1. Project name -
2. Address -
3. Submarket – East, North, N-W, N-E, S-E, S-W, S-W-Ex, W
4. The overall mix of DUs -
 - » 1RK 1BHK 1.5BHK 2BHK 3BHK | Surveying –
5. Base zone -
 - » R1 R2 R3 Gamtal extension Logistics KZ A1 RAH1
6. AMC Jurisdiction - Within AMC Outside AMC
7. No. of floors -
8. Built use Residential Mixed
 - » If Mixed-use, then - Residential + Commercial / Industrial / Institutional / Others
9. Respondent’s name - Contact no. -

HH Details

Sr. No	9.1 Relation with Respondent	9.2 Age	9.3 Gender	9.4 Occupation
1				
2				
3				
4				
5				

Travel Details

Sr. No	9.5 Location of Work/ Study	9.6 Mode of Transport	9.7 No of trips in a Day	9.8 Travel time	9.9 Number of Working Days
1					
2					
3					
4					
5					

Issues, if any

- Work-from-home -
- Transport -

10. No. of married couples - Ticket size -

11. Relocation / Migration
- » Hailing from
 - » Name of town/city -
 - » Name of the neighbourhood (if from Ahmedabad) -

11a. Type of relocation/ migration

- » None
- » Intracity
- » Intercity
- » Interstate
- » Intercountry



11b. Purpose

- » Employment opportunity
- » Better Neighbourhood
- » Aspiration for a bigger house
- » Better Amenities/ services/ connectivity
- » Marriage
- » Establishing a separate HH

11c. Other purposes (specify) -

12. Financial Source

If self, then: Partial / Full

If a loan, then – bank/friends and family/others

If a bank, which bank:

Down Payment INR _____

Loan amount INR. _____

Rate of Interest _____ %

Repayment period _____ years

13. Housing

Ownership status

Owned (Year)

Current Price

Price when purchased

Year of Purchase

If owned

Year of occupation –

First owners – Yes/ No

Sale deed – Yes / No

If rented

Part of House Rented: Room / Whole floor / Part / Other

Purpose: PG/ residential/ partly commercial

No. of rooms 1RK / ___ BHK

CA - BA – SBA –

Rented (Year)

Current Rent

Rental Agreement (Y/N)

Agreement Duration

14. Site analysis

Plot area	
Ground Coverage	
No of buildings	
No of floors	
No of units	
FSI	
Adjacent Road Width	

15. Age of building:



16. End-user perception

Not satisfied

Need improvement

Satisfied

Decency of unit
 Adequacy
 Building material
 Construction quality
 Finishes
 Thermal comfort
 Road connectivity
 AMTS / BRTS stops
 Metro stops
 Public parks
 Shopping complexes
 Social infrastructure
 Safety
 Security

17. Other assets (Coping mechanism)

Real estate

Second property House / Shop / Land

Size of second property – _____sq.

Current status – Rented / Vacant

If rented, then how much is the rent? _____ INR/month

Vehicles

Cycle 2-wheeler 3-wheeler Car Van

Livestock – Yes / No

If yes then, what? – _____

Appliances

TV AC Computer/Laptop Fridge

Washing machine Mobile

18. Housing adjustments

After moving, did you make any repairs/renovation/increment? Give details:

19. Basic services and amenities

Source of water – Borewell / Municipality / Tank Water

Duration

Drainage Connection - Septic tank / STP

Garbage Collection: (D2D/ Person appointed) Daily/weekly

RWH (Y/N)

Electricity Connection (Torrent/VCL) Hours of Supply

Miscellaneous – Gym / Swimming Pool / Multipurpose Hall /

Others specify

Co-operative Housing Society (Y/N)

20. Income / Expenditure / Savings

HH Monthly Income

HH Monthly Expenditure

Education

APPENDIX D: LIST OF DATABASES

The following database would be available as spreadsheets in Folder C Case Archive > Database

- Matrix 1: List of Inclusionary Housing Policies in the United States of America studied in detail by the authors
- Matrix 2: List of Inclusionary Regulation in India studied in detail by the authors
- List of Town Planning Schemes in the Residential Affordable Housing Zone, Ahmedabad
- List of Projects (RERA Registered) in the Residential Affordable Housing Zone, Ahmedabad

APPENDIX E: MEDIAN INCOME OF AHMEDABAD

Method used to calculate the Median Income of Ahmedabad for 2021

Median income of Ahmedabad is mentioned in the DP2021 as per their socio-economic survey. This income was adjusted for inflation using the Wholesale Price Index.

For the month of January 2021, the final Wholesale Price Index and inflation rate for 'All Commodities' (Base: 2011-12=100) stood at 126.5 and 2.51% respectively. Taking the base year as 2012 with an average income as INR 3,00,000/- (as per Ahmedabad DP 2021 part 1 page 100) and adding cumulatively inflation rates from 2012 to 2021, the average per annum household income as INR 3,51,679/- or INR 0.35 Mn.





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