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# Planning, “Violations,” & Urban Inclusion: A Study of Bhubaneswar

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May 2017

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## Abbreviations Used

AMRUT	Atal Mission for Rejuvenation and Urban Transformation
BCUC	Bhubaneswar Cuttack Urban Complex
BDA	Bhubaneswar Development Authority
BDPA	Bhubaneswar Development Plan Area
BMC	Bhubaneswar Municipal Corporation
BSUP	Basic Services for Urban Poor
CDP	Comprehensive Development Plan
ELU	Existing Land Use
EWS	Economically Weaker Sections
HH	Household
IIT	Indian Institute of Technology
JnNURM	Jawaharlal Nehru National Urban Renewal Mission
LIG	Lower Income Group
PHED	Public Health and Engineering Department
PLU	Proposed Land Use
SLIP	Service Level Improvement Plan
Sq. Km.	Square Kilometre
SRDP	Slum Rehabilitation and Development Policy
ULB	Urban Local Body



## 1. Introduction: Why study violations?

In many cities of the world, particularly those in the global south, patterns of inhabitation and settling do not follow the logics or the laws of planning. From the *favelas* in Rio to the *bastis* in Delhi, the *musseques* in Luanda or the *shacks* in Durban, a significant part of these cities are built by residents themselves, often in some tension with law and planning. Teresa Caldeira has described this shared process of city-building as “auto-construction” (Caldeira, 2014). Too often, auto-construction is misrecognised simply as the “failure” and “violation” of planning, what in the Indian landscape is called an “implementation gap.” Yet how should we understand “violation” and “failure” when it is done often by the city’s poorest residents as a claim to the city and shelter? How can we understand an “encroachment” or “illegal” act if it is done by such a large proportion of city residents? Indeed, what does the fact that are cities are auto-constructed tell us about planning? How should planning respond to such “violations” that combine both the difficulty of orderly urban development with concerns for urban equity and inclusion?

This set of reports seek to help find answers to such questions by undertaking literature review, and studying the nature, kind and quantum of violations in two Indian cities – Ranchi and Bhubaneswar. We do so in order to understand better and in-depth what kinds of violations occur in cities. We hope to de-mystify and unpack this broad category that, within it, encompasses a range of ways of settling and surviving in the auto-constructed. We intend to better assess both the reasons that these violations become necessary as well as to think about how planning can engage with them. Doing so, we argue, is essential to understand the relationship between planning and urban inclusion in Indian cities.

This report presents the observations and findings from Bhubaneswar. We chose Bhubaneswar because for a city developed as a ‘planned’ one, Bhubaneswar has a high proportion of ‘slum’ population. It represents a mid-size city that secured first position in the Smart Cities mission. The city is precariously poised. On the one hand, it has a new impetus for growth and change. On the other, the scalar shift it is about to make will bring new challenges for urban planning, governance, management and, specifically, inclusion. Mid-size cities across India face this transition but each still has the potential for transformation and early responses to inequality that mega-cities like Delhi and Mumbai can no longer access. Can understanding “violations” be one part of tilting the urbanization of the Indian mid-size city towards a more inclusive growth pattern?

The report proceeds as follows. First, we briefly locate the context of Odisha’s urbanisation and then present an overview of Bhubaneswar. Then, we look closely in

Bhubaneswar at one kind of violation– the “slum.” In doing so, we do not imply that violations are solely done by slums – like all Indian cities, violations are much the domain of the elite (Bhan 2013). We focus on the “slum” because it is the kind of violation most closely related with urban vulnerability and represents a governmental category recognisable within urban governance in India. We argue that it is essential to dis-aggregate the category of “slum” into the varied historical, spatial and legal forms of settlement that are within this category. We do so by first mapping slums against Bhubaneswar’s Master Plans to assess the precise nature of the violation at hand and then drawing a typology of differential vulnerability and distance from formal planning. In conclusion, we suggest how to understand these “violations,” and how to frame the engagement between slums, “violations” and Master Plans.

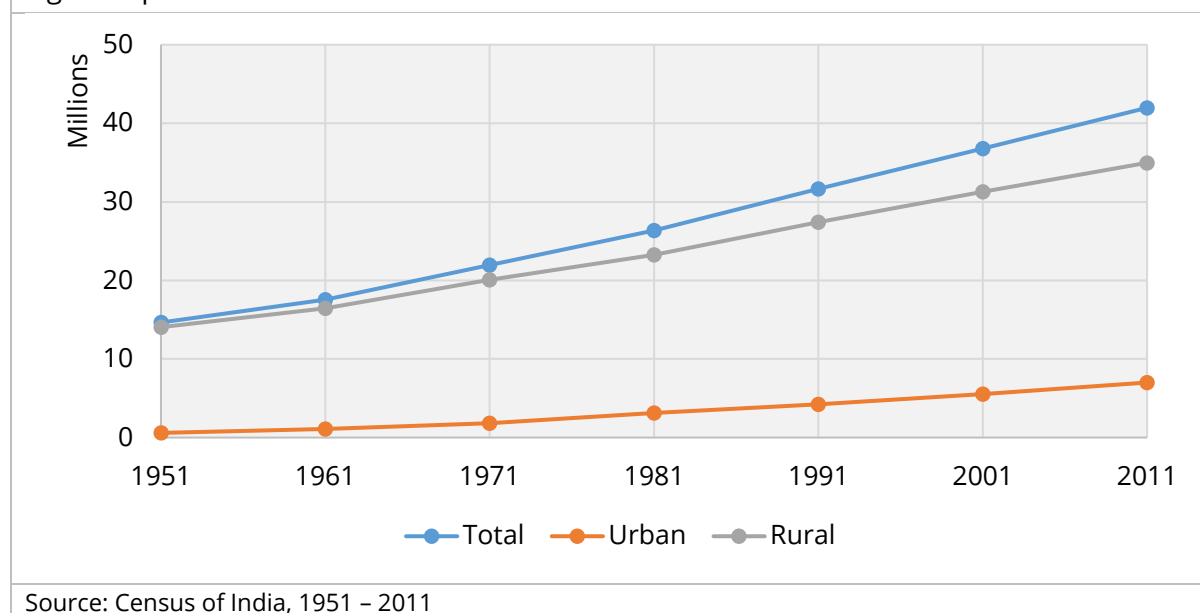


## 2. Urbanisation in Odisha

Odisha occupies a total area of 155,707 sq.km and has a population of 41.9 million persons as per Census 2011. It is the tenth largest state in terms of area and eleventh in terms of population size, accounting for 5 per cent of the geographical area and 4 per cent of the country's population.

With an urbanisation level of 17 per cent, Odisha is currently the fourth least urbanised state in the country, only Himachal Pradesh, Bihar and Assam. According to Census 2011, there are 223 urban centres in Odisha; however, statutory towns are limited to 103 (5 Corporations, 35 Municipalities and 63 Notified Area Councils).

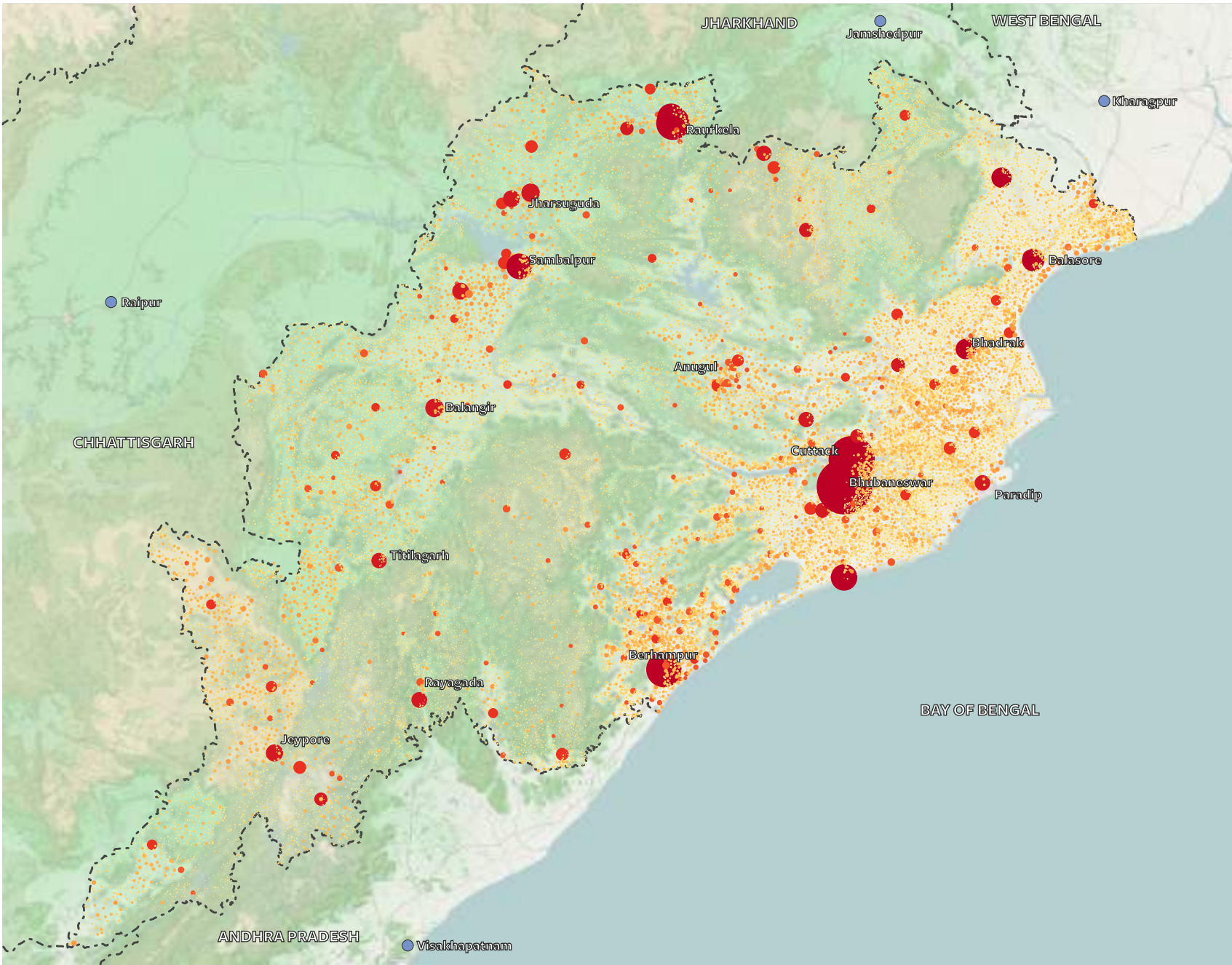
Fig. 1: Population Growth in Odisha



Even with few large urban centres, the urbanisation pattern of Odisha is not as clustered; the urban areas are distributed across the state. However, similar to the overall settlement pattern, urban areas are also more concentrated in the eastern belt of the state, in proximity of the coastline (Map 1).

Bhubaneswar and Cuttack are the most populous cities in the state located in the Mahanadi Delta region. Towns in the western belt (Jharsuguda, Angul-Talcher, Rourkela) have essentially come about for the mining related activities, starting from early 1900s.

Map 1: Settlement Structure of Odisha, 2011



**Key Map and Legend**

- - - State Boundary
- Major City

**Population Size Classes:**

- Class I city
- Class II town
- Class III town
- Class IV, V or VI town
- Very large village
- Large village
- Medium village
- Small village
- Hamlet or smaller

**Scale and Orientation:**

N

0 50 100 150KM

**Technical Details:**

Datum: WGS 84  
 Projection: UTM 44 N

**Source(s):**  
 Census of India, 2011; OpenStreet Maps; IIHS Analysis

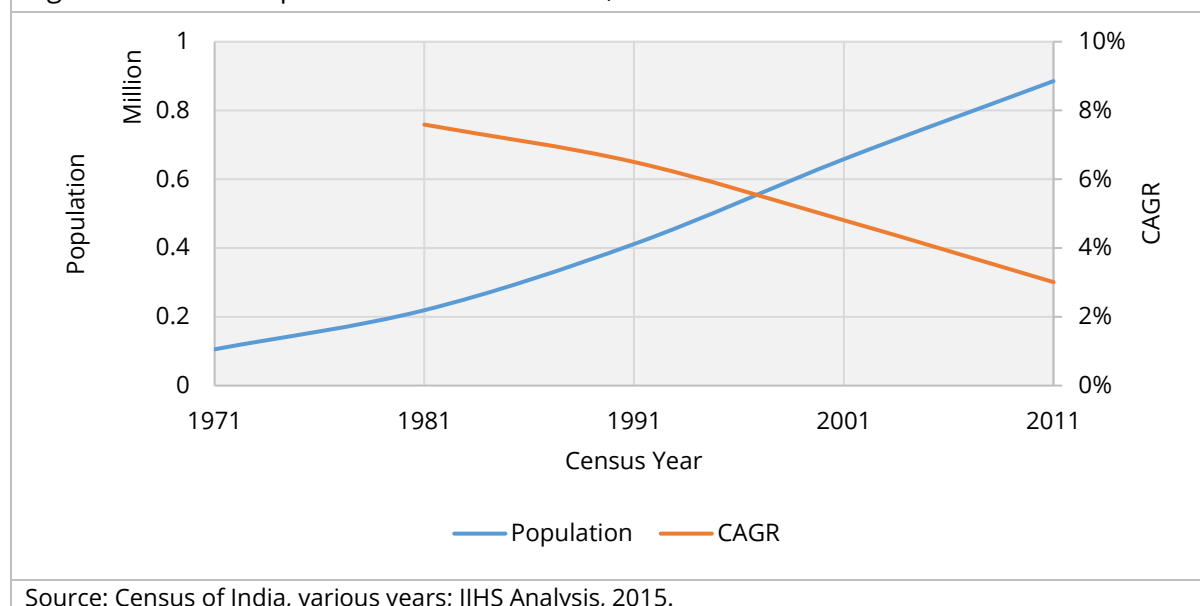
### 3. Bhubaneswar

#### 3.1. Brief Overview

Categorised as a tier-2 city, Bhubaneswar replaced Cuttack as the capital of Odisha in 1949. Designed by Otto Königsberger in 1946, Bhubaneswar along with Jamshedpur and Chandigarh is known as one of India's first planned cities. Due to the presence of the reserve forests in the north-western part and the flood plains in the eastern part, the city has grown more towards the southwestern side.

Currently, the Bhubaneswar Municipal Corporation spreads over an area of 135 sq. km. covering 67 administrative wards. According to Census 2011, the city has a population of 8,85,363 people with a 'slum' population of 1,63,983 people (18.5 per cent).

Fig. 2: Growth of Population in Bhubaneswar, 1971 – 2011



Bhubaneswar is, in a sense, a tale of three cities; there is old city around the temple which was in existence before the shifting of the capital, then there is planned capital city, and now increasingly there is 'unplanned' development all around.

#### 3.2. Master Plans of Bhubaneswar

Otto Königsberger drafted the first Master Plan for Bhubaneswar in 1954 with the intention of housing not more than 40,000 people and administration being city's primary function. At the time, it comprised of six administrative units, and the other units were planned as residential neighbourhoods with emphasis on horizontal rather than vertical growth. The Bhubaneswar Development Authority was established in the year 1983 and currently it covers an area of 233 sq. km. including Khorda and Jatani

Municipalities as well. An Interim Development Plan for Bhubaneswar was formulated in 1993. Currently, the Perspective Plan – 2030 for the Bhubaneswar Cuttack Urban Complex (BCUC) exists which was prepared by the Department of Architecture and Regional Planning, IIT-Kharagpur in 2006. The Comprehensive Development Plan for Bhubaneswar Development Planning Area (BDPA) has been formulated within the framework of Perspective Plan in 2010, again with the support of IIT-Kharagpur. The BDPA constitutes around 58 per cent of the BCUC area and extends over 419.10 sq.km. against 721.9 sq. km of the BCUC area. BDPA has been formed by amalgamating BMC, BDPA Rural, Khorda and Jatani.

### **3.3. Other Plans for Bhubaneswar**

There are a number of other plans that exist for Bhubaneswar which are not statutory in nature but mostly prepared under a central or state scheme with funding for implementation. Under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), the City Development Plan for Bhubaneswar was prepared. More recently, Service Level Improvement Plans (SLIPs) for 9 cities in Odisha including Bhubaneswar are being prepared under the Atal Mission of Rejuvenation and Urban Transformation (AMRUT). Bhubaneswar secured first rank in the first phase of Smart Cities Mission. Under this mission, a SMART Bhubaneswar Town District Centre covering an area of 985 Acres is proposed. In order to achieve Housing for All, AWAAS (Odisha Urban Housing Mission) was also launched in 2015.

## 4. Research Objectives and Methodology

### 4.1. Objective

The underlying aim of the research was to study informal settlements, authorised and unauthorised in the context of the existing Master Plan.

The specific objectives of the study included:

1. Mapping informal settlements with special emphasis on authorised and unauthorised 'slums';
2. Developing a typology of 'slums', especially authorised slums, with respect to their tenurial arrangements;
3. Analysing existing and proposed Master Plan provisions for the land occupied by authorised and unauthorised 'slums'.

### 4.2. Methodology

1. Secondary Data Collection & Review: Prior to fieldwork, a thorough secondary review was conducted to gather any information available. A slum listing done by the Bhubaneswar Municipal Corporation was found. Though disaggregated by authorised and un-authorised, the list did not provide any further information on the existing tenurial situation of slums.
2. Database Creation: The existing slum list was georeferenced to create a comprehensive spatial database.
3. Ground Truthing, Validation & Profiling: Since the slum list gave no further information on the slums settlements other than the ward number, number of households and total population of each slum, it was important to undertake primary fieldwork. A sample of 88 slums out of 436 were visited to create a comprehensive profile, with an effort to maintain geographical spread and a balance between authorised and un-authorised slums. In addition, transit housing and resettlement sites were also visited. The information recorded is on the basis of self-reporting by a group of residents in each *basti*. A minimum of three to four residents were questioned in each *basti* to triangulate information and eliminate individual bias. Due to time constraints, only parts of the slums were visited; in case of large slums, only some of the characteristics may differ.
4. Typology Development: A typology of slums was developed on the basis of the self-reported status of land and tenurial rights in the slum. This was crucial in understanding the further sub-divisions of authorized slums in the city. Two clear

categories emerged as a result of this: Unauthorised Slums that have no tenurial rights (primarily on government land) and Authorised Slums that have some form of record over their houses and land.

5. Overlay Analysis with Land Use Maps: Overlay analysis of the slum map was done with the existing and proposed land use plans to identify instances and nature of violations.

#### **4.3. Scope, Limitations and Challenges**

1. Due to resource and time constraints, only a sample of 'slums' could be visited for ground truthing and understanding tenurial arrangements.
2. Again, due to resource and time constraints, existing list of 'slums' was used; no new surveys to identify 'slum-like' settlements were done.
3. Since the raster images of existing and proposed land use maps were manually georeferenced and digitised, there may be some mismatch in the overlay analysis between the maps and the actual condition on ground.



## 5. Key Findings & Analysis

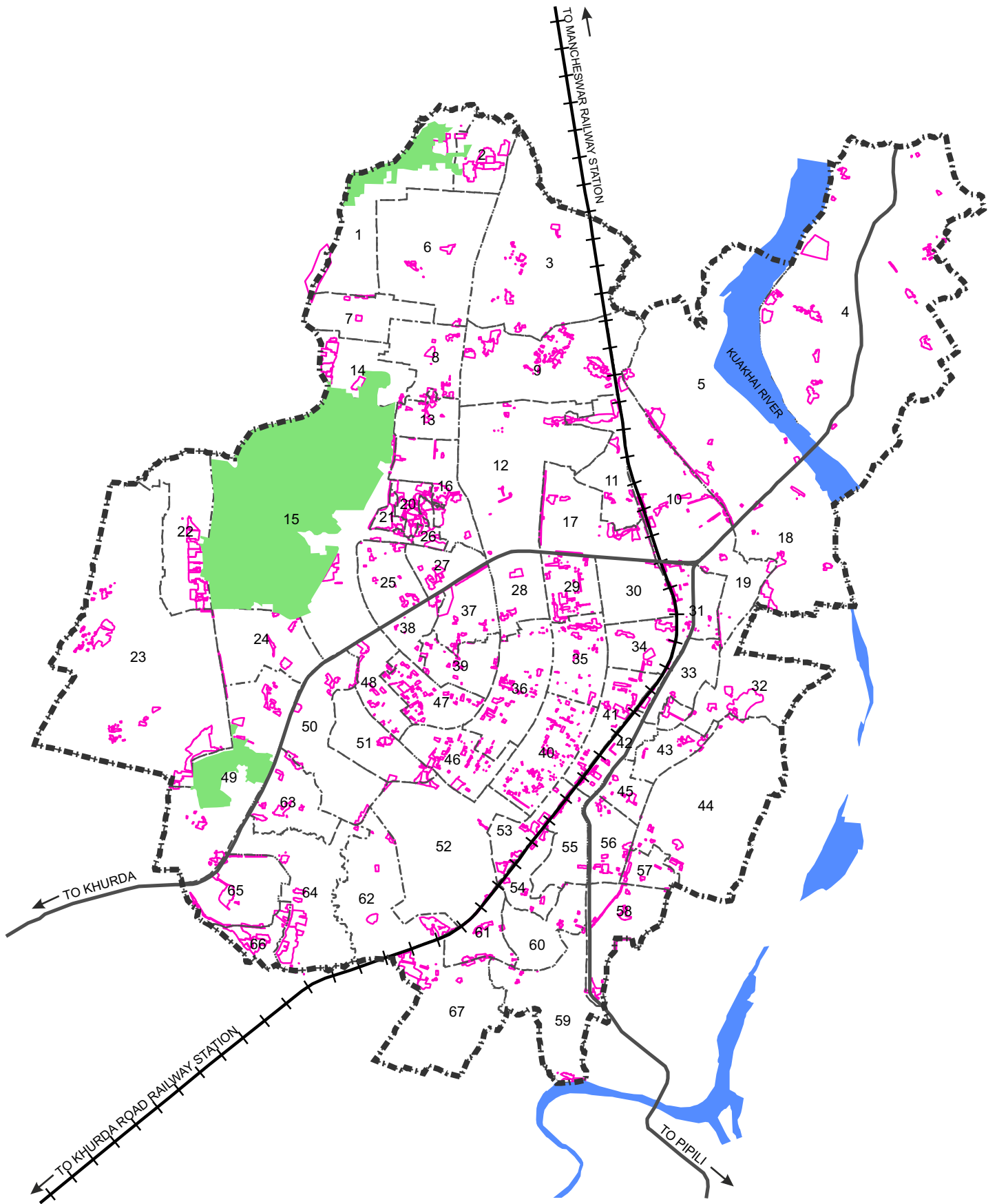
### 5.1. Slums in Bhubaneswar

There are 436 recognised slum settlements in Bhubaneswar (identified by the Municipal Corporation) of which 320 (73 per cent) are unauthorised and 116 (27 per cent) are authorised<sup>1</sup> (Map 2). The total slum population is of the order of 3,01,611 lakh persons or 80,665 households. The geographic area of the slums ranges from 0.045 hectares to 18.31 hectares, the smallest being Radha Krishna Basti in ward 45 and the largest being Khandagiri Bari in ward 23. The number of households in the slums also vary, from as low as 13 in Rangamatia Basti in ward 9 to as high as 1,414 in Tarini Nagar Salia Sahi in ward 16. The slums listed cover an area of 7.15 sq. km. which is 3.9 per cent of the total municipal area (186 sq. km) housing almost 36 per cent of city's population. A lot of the slums are found in clusters in the northern, southern and western parts of the city. The central part of Bhubaneswar consists of scattered and much smaller slums.

Source	Number of Slums	Slum HH	Proportion of Total HH	Slum Population	Proportion of Total Population
BMC (n.d.)	436	80,716	41%	3,01,797	36%
Census of India (2011)	-	42,277	21%	1,63,983	19%
Census of India, 2001	-	18,048	9%	71,403	8%
CDP Vision Plan, 2030 (2010)	193	-	-	-	-
CDP, 2006	250	-	-	-	-

A sample of 88 slums was visited to understand characteristics of slums in terms of tenure, land ownership, age of settlement, housing and services (Map 3; Table 2).

<sup>1</sup>Notified Slums: All notified areas in a town or city notified as 'Slum' by State, UT Administration or Local Government under any Act including a 'Slum Act'; Recognised Slums: All areas recognised as 'Slum' by State, UT Administration or Local Government, Housing and Slum Boards, which may have not been formally notified as slum under any act; Identified Slum: A compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities (Source: Census of India, 2013). In case of Bhubaneswar, Authorised Slums are erstwhile villages which are presently within BMC boundaries and retain their land rights. Unauthorised slums are slums on either central or state government land and do not possess any rights on the land on which they are currently living (Source: Interviews with municipal officials).



Map 2: Location of Recognised Slums in Bhubaneswar

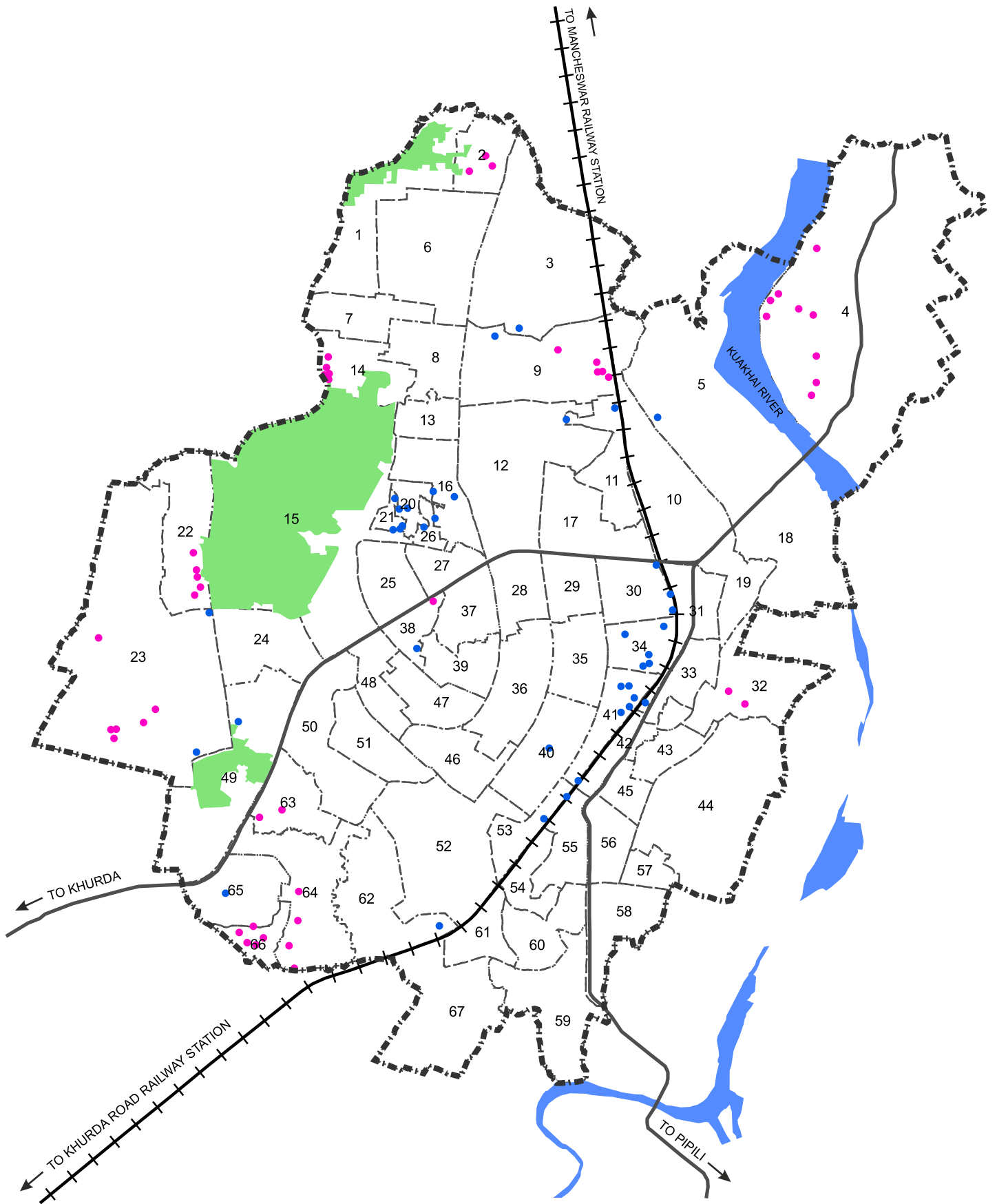
**Legend**

- Recognised Slum
- Vegetation/Forest Land
- Water Body
- Railway Line
- National Highway
- Ward Boundary
- BMC Boundary

Source: Slum information collected from BMC, 2016; IIHS Analysis, 2016-17.







Map 3: Location of Sample Slums in Bhubaneswar

**Legend**

- Slums with Tenure
- Slums with no Tenure
- Vegetation/Forest Land
- Water Body
- Railway Line
- National Highway
- Ward Boundary
- BMC Boundary

Source: Slum information collected from BMC, 2016; IIHS Analysis, 2016-17.



Type of Slum	Total	Sample	Percentage
Unauthorised Slums (No Tenorial rights)	320	40	12.5%
Authorised Slums (Some Form of Tenorial Rights)	116	48	41.4%
Total	436	88	20.2%

Source: Discussions with Municipal officials, 2016; IHS Primary Survey, 2016.

The following sections gives an overview of characteristics of sample authorised and unauthorised slums based on self-reporting. Over sampling of authorised slums was done to understand the exact form and nature of tenorial rights.

## 5.2. Characteristics of Unauthorised Slums

### TENURE

Majority of the unauthorised slums are located on state government land and some are on central government land (Railways, Defence). As a result, none of the settlements have any occupancy documents or tenorial rights over the land and house.

### HOUSING

In the case of older settlements, it was found that majority of the houses were *pucca* as they had time to consolidate and improve their living conditions over the years. Newer settlements had a higher degree of *kutchra* houses. Houses abutting the roads/highways were also mostly *kutchra* in nature, this could be because of their proneness to eviction owing to their visibility.

### SERVICES

Majority of the unauthorised slum settlements had either BMC or PHED boring for water supply from which residents would extend and make their individual connections to their homes. As majority of the unauthorised slums were within the city and faced space constraints, very few households had been able to construct private toilets.

## 5.3. Characteristics of Authorised Slums

### TENURE

There are diverse tenorial arrangements within the broad category of authorised slums. During fieldwork, it was discovered that namely three categories of settlements are counted within authorised slums:

- a. Government rehabilitation sites: There are three clusters of government rehabilitation sites made in the 1980s. Residents were resettled from the city to these sites which at that time were extremely far away from the city. Households

living in these sites were given plot sizes of approximately 600 sq.ft. along with some financial assistance in terms of a loan or grant. These sites were given to the households with a 90-year lease agreement.

- b. BSUP housing sites: BSUP housing projects constructed in early 2000s are also counted within authorised slums. These individual houses on single plots also have a 90-year lease agreement.
- c. Urban villages: Villages that are now within BMC boundary are also counted within authorised slums. Residents own the land as well as the houses.

Type of Authorised Slum	Sample	Percentage
BSUP Project Sites with 90- Year Lease Patta	11	23%
Government Resettlement Sites with 90- Year Lease Patta	11	23%
Urban Villages within BMC (own land)	26	54%
Total	48	100%

N= 88. Source: As reported by residents during IIHS Primary Survey, 2016

## HOUSING

Not more than a handful of houses were *kutcha* in any slum. While tenure has a role to play in housing quality, the permanency of the structures could be seen also because of the fact that most of the settlements were old and consolidated. BSUP project sites & the old government resettlement sites had mostly single storeyed houses on individual plots, with the exception of few *kutcha* houses right towards the edge of the road. Some of the urban villages towards the outer edge of the city even had G+1 and G+2 housing.

## SERVICES

Residents get water from either BMC/PHED boring connections, public stand-posts or have their own wells. Only the BSUP housing sites have piped water supply for each house. Some residents also purchase water from elsewhere to supplement their requirements.

## 6. Master Plan, Slums and Violations

Land Use Zoning and Development Control Regulations (DCRs) are the two instruments in Master Plan that guide the urban growth and development. While land use zoning at the city level indicate the broad land use zones, DCRs give details of uses/ activities permitted under each of the broad land use zone category. For example, Residential Use Zone (R) is a broad category under which permitted activities include plotted housing, group housing, night shelters, convenience shopping, high school, community hall, etc. While uses/ activities like cinema halls, colleges, etc. could be permitted on the basis of an application to the competent authority, uses/ activities like slaughter houses, heavy industries, stadiums, etc. are prohibited in the residential use zone. Similarly, associated residential uses are permissible in the other use zones like Commercial (C1&C2) and Public Semi-Public (PS), given permission based on the application. The uses and activities permitted/ permissible on application/ prohibited under each of the land use zones are listed in Annex 2.

Please note that the following analysis is done on the layer of broad land use zones, as earmarked in the Master Plan.

### 6.1. Understanding Land Use Violations: Overlay Analysis

#### a. Existing Land Use, 2010

Overlay analysis of the identified slums on Existing Land Use (2010) shows that almost 20 per cent of the slums are on the land marked entirely as residential. Majority of the slums (65 per cent) are on lands partly marked as residential and partly non-residential in the existing land use map. Almost 15 per cent of the slum settlements are marked as entirely non-residential in the existing land use map (Table 4).

S. No	Land Use Category	No. of Slums	Percentage
1.	Residential-Urban	44	10.1%
2.	Residential-Other	42	9.6%
3.	Partly Residential-Urban & Other Uses	137	31.4%
4.	Partly Residential-Other & Other Uses	112	25.7%
5.	Partly Residential-Urban, Residential-Other & Other Uses	37	8.5%
6.	Transportation	11	2.5%
7.	Industrial	8	1.8%
8.	Public Semi-Public	4	0.9%
9.	Vegetation/Forest	2	0.5%
10.	Agricultural	1	0.2%
11.	Commercial	1	0.2%
12.	Recreational	1	0.2%
13.	Mix of two or more non-residential uses	36	8.3%

Table 4: Overlay Analysis of Existing Land Use and Recognised Slums

S. No	Land Use Category	No. of Slums	Percentage
Total		436	100.00%

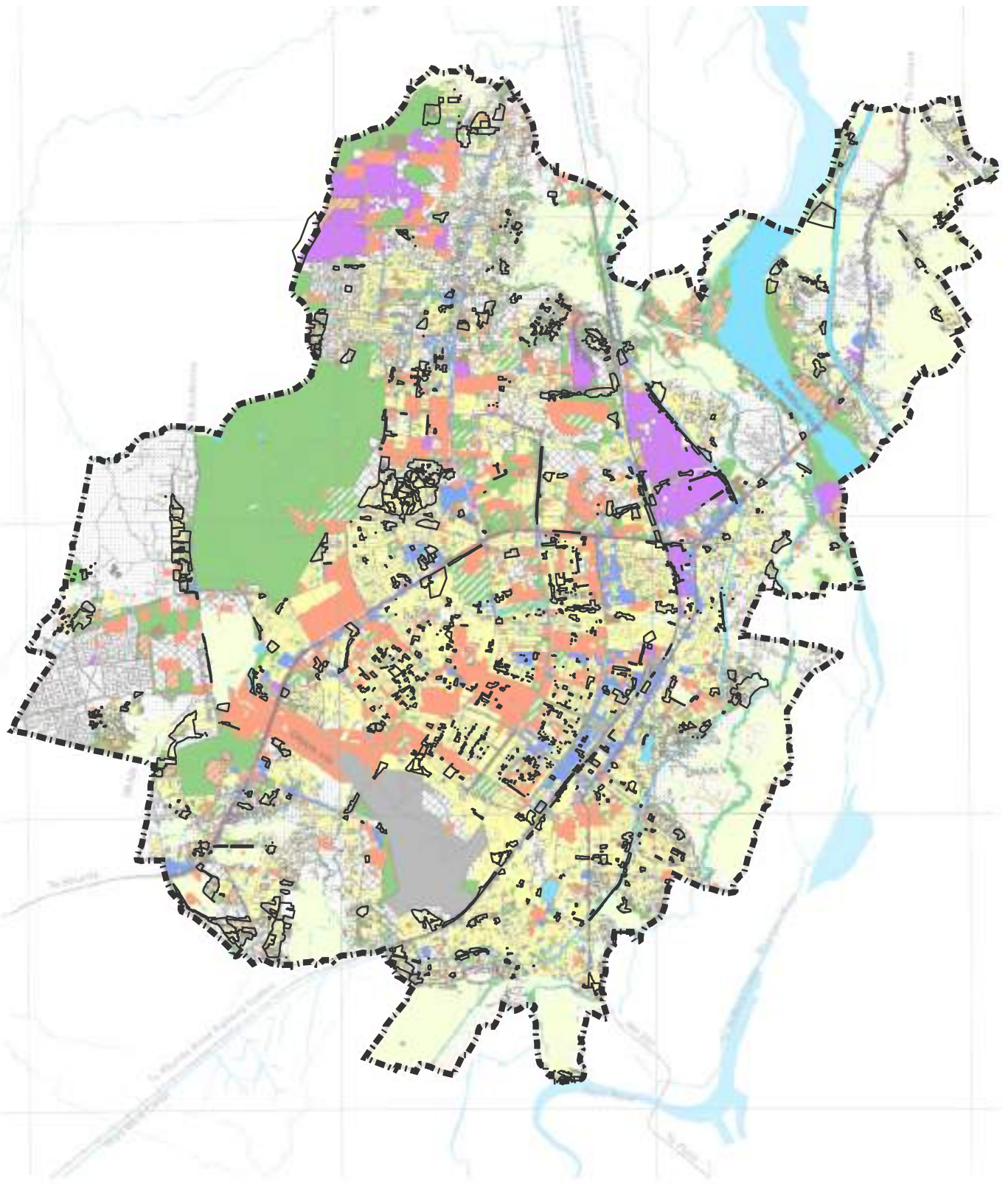
Source: IIHS Analysis, 2016-17.

The cross tabulation of existing land use with tenurial rights clearly shows the linkage between the two (Table 5). Almost 96 per cent of the authorised slums are on lands marked as residential fully or partially in the existing land use map. On the other hand, the proportion drops to 80 per cent in the case of unauthorised slums.

Table 5: Existing Land Use vs. Tenurial Rights

S. No	Existing Land Use	Authorised Slums	Unauthorised Slums	Total
1.	Residential-Urban	7	37	44
2.	Residential-Other	14	28	42
3.	Partly Residential-Urban & Other Uses	17	120	137
4.	Partly Residential-Other & Other Uses	66	46	112
5.	Partly Residential-Urban, Residential-Other & Other Uses	7	30	37
6.	Transportation		11	11
7.	Industrial		8	8
8.	Public Semi-Public		4	4
9.	Vegetation/Forest		2	2
10.	Agriculture		1	1
11.	Commercial		1	1
12.	Recreational		1	1
13.	Mix of two or more non-residential uses	5	31	36
Typology Total		116	320	436

Source: IIHS Analysis, 2016-17.

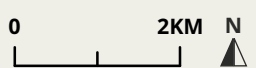


Map 4: Existing Land Use of Bhubaneswar - 2010 with Recognised Slums

**Legend**

- |                     |                                |                                   |                      |
|---------------------|--------------------------------|-----------------------------------|----------------------|
| ++ Railway Line     | Commercial                     | Transportation                    | Waste Land           |
| — National Highway  | Industrial                     | Agricultural Land                 | Water Bodies/Wetland |
| - - - BMC Boundary  | Public/Semi Public/Institution | Vegetation/Forest Land            | Others               |
| Residential - Urban | Public Utilities               | Vacant Land within Developed Area |                      |
| Residential - Other | Recreational                   | Vacant Land under Development     |                      |

Source: Comprehensive Development Plan for Bhubaneswar Development Plan Area 2030; IIHS Analysis, 2016-17.





b. Proposed Land Use, 2030

Overlay analysis of identified slums on Proposed Land Use (Vision 2030) shows almost 28 per cent of slums fall entirely on lands earmarked for residential use. Another 36 per cent slums are on lands partially proposed as residential and partially other uses. As high as 36 per cent of slums are on lands entirely earmarked for non-residential uses; predominant uses being transportation and public semi-public, or a mix of both.

S. No	Land Use Category	No. of Slums	Percentage
1	Residential	121	27.8%
2	Residence within Special Heritage Zone & other use	13	3.0%
3	Partly Residential & Other Uses	142	32.6%
4	Transportation	38	8.7%
5	Public Semi-Public	33	7.6%
6	Commercial	13	3.0%
7	Water Bodies	4	0.9%
8	Industrial	3	0.7%
9	Agricultural	1	0.2%
10	Environmentally Sensitive Zone	1	0.2%
11	Mix of Two or More Non-Residential Uses	67	15.4%
Total		436	100.0%

Source: IIHS Analysis, 2016-17.

The tension between the land use and tenurial status of 'slums' becomes even more clearer in the proposed land use. Similar to existing land use, almost 93 per cent of authorised slums make their way to residential use (fully or partially) in the Master Plan – 2030. On the other hand, only 52.5 per cent of the unauthorised slums find their way in the residential use (fully or partially) in the Master Plan – 2030.

S. No	Proposed Land Use	Authorised Slums	Unauthorised Slums	Total
1.	Residential	52	69	121
2.	Residence within Special Heritage Zone & other use	7	6	13
3.	Partly Residential & Other Uses	49	93	142
4.	Transportation	4	34	38
5.	Public & Semi-Public		33	33
6.	Commercial		13	13
7.	Water Bodies		4	4
8.	Industrial		3	3
9.	Agricultural		1	1

S. No	Proposed Land Use	Authorised Slums	Unauthorised Slums	Total
10.	Environmentally Sensitive Zone	1		1
11.	Mix of Two or More Non-Residential Uses	3	64	67
Typology Total		116	320	436
Source: IHS Analysis, 2016-17.				

## 6.2. Master Plan and Housing for the Urban Poor

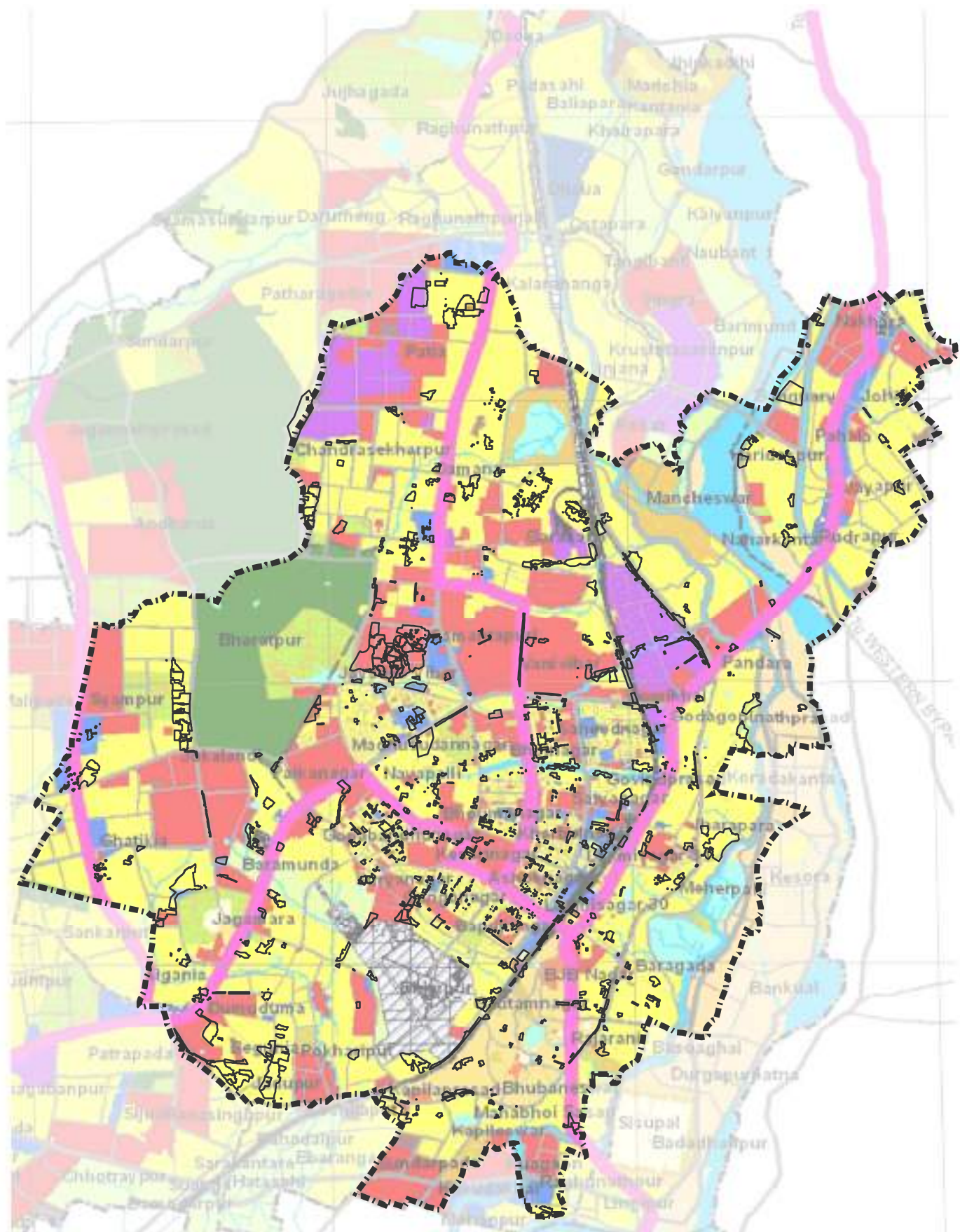
With the aim of eliminating housing shortage by 2030, the future demand for housing in the BDPA has been calculated as 4.3 Lakh dwelling units, keeping in mind 10 per cent of the authorised slum households and 80 per cent of the unauthorised slum households as households occupying non-standard dwelling units to compute the qualitative housing shortage. Almost 37 per cent of this housing stock is proposed for LIG and EWS households.

The Master Plan estimated a total of 193 slums in Bhubaneswar, 59 authorised and 131 unauthorised. The growth rate of slums in Bhubaneswar is estimated to be much higher than the national and state average. The Master Plan put forward a range of approaches/ strategies to address the issue of slums including: inclusive approach to definition of slum/ informal settlement and comprehensive listing; registration of slum dwellers and identity cards; de-listing of settlements after they reach the acceptable levels; granting of tenure; environmental improvement; resettlement; economic development; etc.

Odisha also has a slum rehabilitation and development policy (SRDP, 2011) and has recently formulated its affordable housing policy. The SRDP aims to have a slum free Odisha by 2020 and improve conditions of urban poverty by upgrading through in-situ development, all tenable settlements, as far as possible, through provision of tenure security, and minimising far-site relocation. The policy mentions the incremental provision of tenure and basic services through mainstreaming of slums and maintaining a supply of formal & affordable rental housing options. In order to prevent future slums, SRDP 2011 recommends all new housing projects developed by public or private agencies, to mandatorily construct 20-25 per cent housing for LIG/EWS groups as well as have reservations in plotted development. SRDP also prescribes financial inclusion, denotification of upgraded slum settlements, rental housing options and community participation in the decision-making process.

The Affordable Housing Policy for Odisha calls for reservation of land at the city and zonal level for housing the urban poor. Since Master Plan was prepared before these policies, the integration is yet to be made.





Map 5: Proposed Land Use of Bhubaneswar - 2030 with Recognised Slums

**Legend**

Railway Line	Wholesale Commercial Use Zone	Railways	Ponds, Lakes & Lagoons
National Highway	Industrial Use Zone	Airport	Protected Monuments & Precincts
BMC Boundary	Public & Semi-Public Use Zone	Bus Depots/Truck Terminals	Residential within Special Heritage Zone
MRTS	Utility & Services Use Zone	Agricultural	Commercial within Special Heritage Zone
Residential Use Zone	Open Space Use Zone	Forest	Public & Semi-Public within Special Heritage Zone
Retail Commercial & Business Use Zone	Road	Rivers, Canals & Streams	Environmentally Sensitive Zone

Source: Comprehensive Development Plan for Bhubaneswar Development Plan Area 2030; IIHS Analysis, 2016-17.



## 7. Conclusion

The detailed study of violations, disaggregated by tenurial rights and relationship to land use zones in the existing and notified Land Use Plans, suggests several important insights that must be investigated further as an extension of this study or through more studies.

The characterization and use of the word “slum” flattens diverse land and property regimes, and neighbourhoods. This is particularly true in transitioning, mid-size urban centres like Bhubaneswar where expansion of municipal boundary would bring erstwhile villages in urban limits, and applying “slum” definition to these villages in the same way as it is applied in bigger cities (to ensure recognition and therefore, protection) could possibly have opposite effect. It would mean that the “slums” with tenure and without tenure could potentially be approached in a similar fashion under a “slum” improvement programme. It is important to have the two layers of tenurial rights and physical environment as separate. Even from a physical environment point of view alone, it may not be ideal to call erstwhile villages as “slums” as soon as they enter the urban limits, especially when the entire city lacks basic infrastructure and services. In this study, we note that there is a mix of authorised and unauthorised slums in Bhubaneswar. The settlements that qualify for “authorised” slums range from villages that got included into urban limits over the years to government built resettlement sites; “unauthorised” slums, on the other hand, comprise settlements that do not have tenurial rights. These settlements have rightful claim over their land, dwelling units and for the most part are not in violation of Land Use. Their being counted as “slums” along with unauthorised slums counters a simplistic reduction of settlements with varied histories to the “slum” that signals not just inadequacy of services but also violation of planning and law. Categorising government built resettlement sites as “slums” would just mean that their own settlements can’t qualify to be non-slum, in which case how can they be expected to run any slum improvement programme in an effective manner. However, unlike Ranchi, a significant part of the ‘slums’ in Bhubaneswar are unauthorised with no tenurial rights. This is critical because it alters the kind of policy interventions that are possible in settlements that lack infrastructure and services but do possess strong claims of varying kinds to tenure, and in settlements that do not possess any claims to the land/ property.

Here, the overlay analysis is important. Even if residents in these ‘slums’ have tenurial rights, if they are against land use zoning, they would still be in a different mode of violation of the Plan. Our analysis, however, shows that most authorised slums are within residential use whether one goes by Existing Land Use or the Proposed Land Use for 2037. Bhubaneswar clearly has what one of the authors here has called an “upgrading dividend” (Bhan 2013). At this juncture, settlements that require infrastructure and services are both at good locations within the city (where employment and

transportation are viable) and they have strong tenurial rights that makes upgradation politically feasible. This is precisely the possibility that a mid-size city before its big urban transition could take. How should the Master Plan for 2037 use its zoning categories and land allocations to protect and upgrade these settlements rather than inadvertently turn them into violations? As new zones change around settlements, the risk is that a planning process not sensitive to existing “slums” will turn them into violations despite their long existence. Here, it will be planning that regulates and creates illegality rather than the other way around (Bhan 2013).

For settlements that lack tenurial rights but are on government land, the recognition that they do not violate zoning categories also provides the possibility of arguing for in-situ forms of development and expansion of tenure. After all, the nature of the “violation” is simplified – residential land is being used for its intended purpose and is publicly owned. Here, upgradation and tenure expansion would not require a change of land use, and municipal acts, in particular, give the state authority to grant more expansive tenure. Such a move would be much more complicated and, indeed, very difficult politically for almost half the unauthorised slums in Bhubaneswar, where ‘slums’ had violated land use zones in addition to not having legal claims to the property they are built on. Again, a closer look at the nature of violations suggests certain pragmatic, feasible and possible political moves that are otherwise not evident.

There is a need to demand for second tier of Plans, be it zonal plans or town planning schemes or in some cases, even layout plans. The second tier plans not only make the Master Plan provisions clearer and detailed out, but are also easier to comprehend by the local people. This would also give an opportunity to the people to participate in the plan making.

Assessing the nature of violations, and deepening the size of our sample as work continues, will allow us to create a complete typology of Bhubaneswar’s recognized slums. Such data is a powerful tool in engaging with the municipality and urban planning authorities to argue about nuanced, contextual and particular solutions to addressing the tenurial and infrastructural needs of ‘slums.’ Breaking the sense that ‘slums’ are simply “violations” that can be dispensed with, such analysis instead argues that different grades and nature of violations can represent opportunities for incremental solutions to be tried that are both effective and politically feasible.

## References

Bhan, G. (2013). Planned illegalities. *Economic and Political Weekly*, 48(24), 59-70.

Caldeira, T. 2014. 'Peripheral Urbanisation'. Paper presented at the LSE Cities Public Lectures, London, 23 October.

Census of India 2011a. Houselisting and Housing Census Data. In: Office of the Registrar General & Census Commissioner (ed.). New Delhi: Government of India.

Census of India. 2013. Primary Census Abstract for Slum. Office of the Registrar General & Census Commissioner, India. <http://www.censusindia.gov.in/2011-Documents/Slum-26-09-13.pdf>.

Housing & Urban Development Department. 2010. Comprehensive Development Plan for Bhubaneswar Development Plan Area 2030. Government of Odisha.

MoHUPA. 2011. Rajiv Awas Yojana - Guidelines. Government of India. <http://mhupa.gov.in/writereaddata/02-RAY-Guidelines.pdf>.

MoUD. 2016. Smart City Proposal. Government of India.

Housing & Urban Development Department. 2011. Slum Rehabilitation & Development Policy. Government of Odisha.

# Annex 1: Case Studies





<b>Salia Sahi</b>		
Ward No.: 16 & 20	No. of Households: Approx. 8,000	
<p>Known as 'Mini Odisha' in Bhubaneswar, Salia Sahi constitutes the biggest slum in the city. Made up of several sub-settlements and colonies, Salia Sahi spreads across wards 16 &amp; 20 and occupies prime location. The settlement is listed as an unauthorised settlement as it is on government land. Residents do not possess any documents for the land on which they reside nor have they been given any tenurial rights. As the settlement is quite old, majority of the houses are pakka with very few houses in between that are Kutcha. All houses have electricity. Not all houses towards the outer fringe of the basti have individual toilets for their homes, but almost all houses within the basti have toilets. Households get water from the BMC boring connections constructed at certain spots. There is no form of any drainage present in the basti, as a result the inner roads of the basti are littered with solid waste. Most of the male residents work as auto-drivers, daily wage labourers or run/own petty shops within the basti.</p>		
		
		
Google Earth Imagery 2010		Google Earth Imagery 2016
		
Existing Land Use, 2010: Residential Other		Proposed Land Use, 2030: Public & Semi-Public Use
<p>Source: Name of Slums and boundaries collected from Bhubaneswar Municipal Corporation, 2016 Existing &amp; Proposed Land Use Maps: Comprehensive Development Plan for Bhubaneswar Development Plan Area 2030 Photographs: IIHS primary survey 2016</p>		

## Shanti Palli, Shahid Nagar

Ward Number:  
34

No. of Households:  
944

Shanti palli – Shahid nagar is one of the largest bastis being considered for eviction due to implementation of the Smart City Project proposal. The basti is approximately 50 years old and has not faced a threat of eviction prior to this. The settlement is listed as an unauthorised settlement as it is on vacant PHED land. Residents do not possess any documents for the land on which they reside nor have they been given any tenurial rights. A lot of the households do not have individual toilets. BMC has made a community toilet which is used frequently by all residents. There are 3 PHED boring connections & a community stand post within the basti for people to get water. As the basti is located next to a major storm water drain, some of the houses located towards the drain face a particular problem of dirty water and mosquitoes.



Google Earth Imagery 2010

Google Earth Imagery 2016



Existing Land Use, 2010: Partly Residential-Urban, Residential-Other & Other Uses

Proposed Land Use, 2030: Residential

Source: Name of Slums and boundaries collected from Bhubaneswar Municipal Corporation, 2016  
Existing & Proposed Land Use Maps: Comprehensive Development Plan for Bhubaneswar Development Plan Area 2030

Photographs: IIHS primary survey 2016



## Laxmi Sagar Refugee Colony

Ward: Number:  
31

No. of Households:  
253

Residents of Laxmi Sagar Refugee Colony claim that the land on which they and their grand-parents have lived belongs to them and not the government. After leaving Bangladesh, a large number of Bangladeshi refugees were rehabilitated by the state government across Bhubaneswar, one of the settlements being Laxmi Sagar Refugee Colony which has been in existence since 1988.

The settlement however remains listed as an unauthorised settlement as it is on government land. Residents do not possess any documents for the land on which they reside nor have they been given any tenurial rights.

All houses have individual toilets. There is even a community space and a designated open area for the annual Durga Puja celebrations.



Google Earth Imagery 2011

Google Earth Imagery 2016













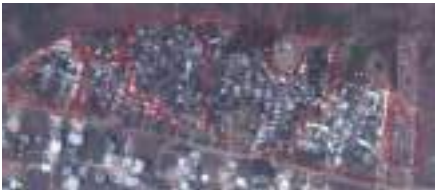


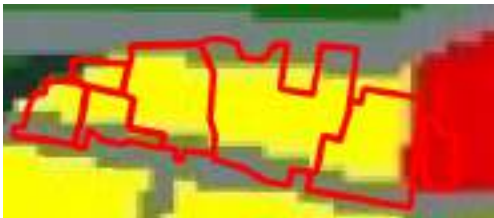
Existing Land Use, 2010: Partly Residential-Other & Other Uses

Proposed Land Use, 2030: Mix of Two or More Non-Residential Uses








Source: Name of Slums and boundaries collected from Bhubaneswar Municipal Corporation, 2016  
Existing & Proposed Land Use Maps: Comprehensive Development Plan for Bhubaneswar Development Plan Area 2030








Photographs: IIHS primary survey 2016



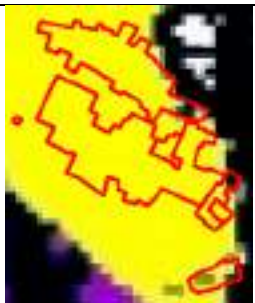
<b>Shikharachandi Cluster</b>	
Ward Number: 2	No. of Households: 837
<p>Spread across 3 clusters, namely Shikharachandi Cluster I, Cluster II &amp; Cluster III, Shikharachandi is an old resettlement site. The settlement is about 30 years old and as a result almost all houses here are pakka, some of them even being G+2 constructions. At the time of resettlements, households were given a 600 sq. ft. plot (20 x 30) but did not receive any financial assistance or compensation to construct housing. They have at times received arbitrary amounts of Rs. 5,000/- during monsoons for a few years but even that is not fixed. The entire Shikharachandi cluster is listed as an authorised slum. Residents have tenurial rights in the form of a 90-year leasehold with restriction on sale. Residents have difficulty getting water as they do not have individual water connections nor are there any public stand-posts, as a result they often have to buy their water. Most of the houses do have their individual toilets. There are some open storm water drains along the pukka entrance road of the basti. Most of the male residents work in nearby shops or have their own petty shops within the basti.</p>	
	
	
	
	
Google Earth Imagery 2011	Google Earth Imagery 2016
	
Existing Land Use, 2010: Partly Residential-Urban & Other Uses	Proposed Land Use, 2030: Residential
<p><b>Source:</b> Name of Slums and boundaries collected from Bhubaneswar Municipal Corporation, 2016  Existing &amp; Proposed Land Use Maps: Comprehensive Development Plan for Bhubaneswar Development Plan Area 2030  Photographs: IIHS primary survey 2016</p>	

<b>Niladri Vihar</b>		
Ward Number: 14	No. of Households: Approx. 952	
<p>Niladri Vihar is the name of the larger area within which there are several old resettlement colonies such as Rickshaw Colony, Panda Park, Hari-Krishna Basti, OMFED Basti etc. which were resettled in the year 1998. All bastis in Niladri Vihar are listed as authorised slums. Residents have tenurial rights in the form of a 90-year leasehold with restriction on sale. Most of households were given a 25x15 sq. ft. and Rs. 10,000/- to build housing. An additional amount of Rs. 40,000/- was available for loan against their patta. Therefore, some HH unable to pay back BMC the loan had to give up their patta. to the BMC. As a result, some of the houses have been sold illegally and there are also some kutchha houses present. Residents earlier got water from a nearby BMC boring connection and public stand-posts. PHED has recently given individual connections for most of the pakka houses but not all. Most of the houses have individual toilets but not all. Most of the male members of the basti work as auto-drivers or other daily wage labourers. Next to Niladri Vihar is also a transit housing site of 1000 units. These are being made to house families being evicted from the 24 bastis under the smart city project. Each household will be allotted a single room with no kitchen. There is a community toilet and a common open area for bathing and washing.</p>		 
		
Google Earth Imagery 2011	Google Earth Imagery 2016	
		
Existing Land Use, 2010: Partly Residential-Other & Other Uses	Proposed Land Use, 2030: Partly Residential & Other Uses	
<p>Source: Name of Slums and boundaries collected from Bhubaneswar Municipal Corporation, 2016  Existing &amp; Proposed Land Use Maps: Comprehensive Development Plan for Bhubaneswar Development Plan Area 2030  Photographs: IIHS primary survey 2016</p>		






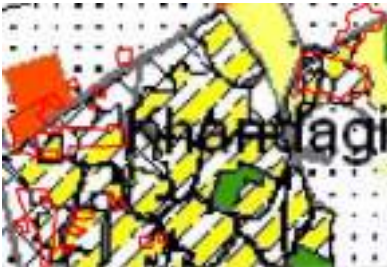










<b>Dumdum Bharatpur</b>		
Ward Number: 63 & 64	No. of Households: 159	
<p>Spread across 3 clusters, namely Dumuduma Bhoi Sahi-A, Dumuduma Pana Sahi and Dumduma Bhoi Sahi, Dumduma is an old resettlement site within Bharatpur. The settlement is about 30 years old and as a result almost all houses here are pakka. There are very few kutcha houses that have come up towards the entrance of the basti and right next to the road. At the time of resettlements, 164 households that were resettled here were given a 600 sq. ft. plot (20 x 30) along with financial assistance of Rs. 1,50,000/- to construct their houses. The entire Dumduma cluster is listed as an authorised slum. Residents have tenurial rights in the form of a 90-year leasehold with restriction on sale. All households have individual water connections from PHED and have individual toilets, barring the exception of very few that don't. There are some open storm water drains along the pukka entrance road of the basti. Most of the male residents work as auto drivers, daily wage labourers and rickshaw pullers.</p>		 
		
Google Earth Imagery 2010		Google Earth Imagery 2016
		
Existing Land Use 2010: Partly Residential-Other & Other Uses		Proposed Land Use, 2030: Residential
<p>Source: Name of Slums and boundaries collected from Bhubaneswar Municipal Corporation, 2016  Existing &amp; Proposed Land Use Maps: Comprehensive Development Plan for Bhubaneswar Development Plan Area 2030  Photographs: IIHS primary survey 2016</p>		

<b>Haridaspur Cluster</b>		
Ward Number: 4	No. of Households: 245	
<p>Located in the northern part of the city, Haridaspur is an urban village included within BMC boundaries. A set of clusters namely, Haridaspur Akka Biram Sahi, Haridaspur Bandha Sahi, Haridaspur Majhi Sahi, Haridaspur Mallick Sahi and Haridaspur Muslim Sahi are the subsets of the larger village.</p> <p>The village is listed as an authorised slum. As residents have inherited their land and houses from their respective families, each of them have the required ownership documents for their land and as well as their house.</p> <p>All houses are pakka, some of them are G+1 as well. Only a handful of houses adjacent to the road do not own their land and do not have papers for their house as well.</p> <p>Residents get water from a PHED boring connection nearby. Not all houses have electricity or individual toilets.</p>		 
		
Google Earth Imagery 2011		Google Earth Imagery 2016
		
Existing Land Use, 2010: Partly Residential-Other & Other Uses		Proposed Land Use, 2030: Partly Residential & Other Uses
<p>Source: Name of Slums and boundaries collected from Bhubaneswar Municipal Corporation, 2016</p> <p>Existing &amp; Proposed Land Use Maps: Comprehensive Development Plan for Bhubaneswar Development Plan Area 2030</p> <p>Photographs: IIHS primary survey 2016</p>		








<b>Rangmatia Cluster</b>		
Ward: 9	No. of Households: 425	
<p>Located in the northern part of the city, Rangmatia is an urban village included within BMC boundaries. A set of clusters namely, Rangamatia Behera Sahi, Rangamatia Bhoi Sahi Rangamatia Tala Sahi and Rangamatia Uppar Sahi are subsets of the larger village.</p> <p>The village is listed as an authorised slum. As residents have inherited their land and houses from their respective families, each of them have the required ownership documents for their land and as well as their house. All houses are pakka, some of them are G+1 as well. Only a handful of houses adjacent to the road do not own their land and do not have papers for their house as well.</p> <p>Residents get water from a PHED boring connection nearby. Not all houses have electricity or individual toilets.</p>		 
		
Google Earth Imagery 2011		Google Earth Imagery 2016
		
Existing Land Use, 2010: Partly Residential-Other & Other Uses		Proposed Land Use, 2030: Partly Residential & Other Uses
<p>Source: Name of Slums and boundaries collected from Bhubaneswar Municipal Corporation, 2016</p> <p>Existing &amp; Proposed Land Use Maps: Comprehensive Development Plan for Bhubaneswar Development Plan Area 2030</p> <p>Photographs: IIHS primary survey 2016</p>		



<b>Ghatikia Cluster</b>		
Ward Number: 23	No. of Households: 257	
<p>Ghatikia is an urban village included within BMC boundaries. A set of clusters namely, Ghatikia Baramana Sahi, Ghatikia Bhoi Sahi, Ghatikia Gada Sahi, Ghatikia Tala Gada Sahi and Ghatikia Uppar Sahiare subsets of the larger village. Some parts of the village were destroyed in the cyclone of 1999 and the villagers were given some land as compensation.</p> <p>The village is listed as an authorised slum. As residents have inherited their land and houses from their respective families, each of them have the required ownership documents for their land and as well as their house. All houses are pakka with only a handful of houses adjacent to the road do not own their land and do not have papers for their house.</p> <p>Residents get water from a PHED boring connection nearby and some have their private wells. All houses have electricity and individual toilets.</p>		 
		
Google Earth Imagery 2011		Google Earth Imagery 2016
		
Existing Land Use, 2010: Partly Residential-Other & Other Uses		Proposed Land Use, 2030: Residential, Transportation
<p>Source: Name of Slums and boundaries collected from Bhubaneswar Municipal Corporation, 2016 Existing &amp; Proposed Land Use Maps: Comprehensive Development Plan for Bhubaneswar Development Plan Area 2030 Photographs: IIHS primary survey 2016</p>		

<b>Jokalandi Cluster</b>		
Ward Number: 22	No. of Households: 3,039	
<p>Located towards the western edge of the city, Jokalandi is a BSUP project site, listed as an authorised slum by BMC. The entire settlement is divided into 12 clusters, with the latter additions being more recent.</p> <p>There are some stretches within Jokalandi, especially towards the road in cluster 10 that is not BSUP housing but squatter settlements on government land that do not have any form of patta or rights for their houses. All settlements are around 25 years old. Households that do not have a patta get their water from a government boring connection nearby. They also received Rs. 5,000/- as a subsidy to build their own toilets. The BSUP houses have a 90-year leasehold with restriction on sale. Illegal sale through power of attorney is however rampant. House have PHED water connections and individual toilets inside their houses.</p>		 
		
Google Earth Imagery 2011		Google Earth Imagery 2016
		
Existing Land Use, 2010: Partly Residential-Other & Other Uses		Proposed Land Use, 2030: Residential
<p>Source: Name of Slums and boundaries collected from Bhubaneswar Municipal Corporation, 2016  Existing &amp; Proposed Land Use Maps: Comprehensive Development Plan for Bhubaneswar Development Plan Area 2030  Photographs: IIHS primary survey 2016</p>		



<h2>Raghunath Nagar, Shastri Nagar, Satya Nagar &amp; Suka Vihar</h2>		
Ward Number: 66	No. of Households: 1,449	
<p>Located towards the southern edge of the city is a fairly large BSUP project cluster within which there are several sub-settlements. Raghunath Nagar, Barabari Raghunath Nagar, Shastri Nagar, Satya Nagar and Suka Vihar are the bastis in this area that are listed as authorised slums by BMC.</p> <p>All the settlements are approximately 35 years old. Residents were given a 600 sq. ft. plot (20 x 30) with financial assistance of up to Rs. 1.7 lakh as loan. All houses have individual water connections and individual toilets. There is much less reconstruction and illegal sale as compared to some of the other BSUP project sites. The bastis though similar in most other aspects, have different time periods for their leasehold.</p> <p>Raghunath Nagar &amp; Barabari Raghunath Nagar has a 10-year leasehold with restriction on sale. Suka Vihar has a 30-year leasehold with restriction on sale. Satya Nagar &amp; Shastri Nagar have 90-year leasehold with restriction on sale.</p>		 
		
Google Earth Imagery 2010	Google Earth Imagery 2016	
		
Existing Land Use, 2010: Partly Residential-Other & Other Uses	Proposed Land Use, 2030: Residential	
<p>Source: Name of Slums and boundaries collected from Bhubaneswar Municipal Corporation, 2016          Existing &amp; Proposed Land Use Maps: Comprehensive Development Plan for Bhubaneswar Development Plan Area 2030          Photographs: IHS primary survey 2016</p>		

## Annex 2: Land Uses Permitted, Permitted under Special Consideration & Prohibited in Different Use Zones

<b>Residential Use Zone (R)</b>		
<b>Uses/Activities Permitted</b>	<b>Uses/Activities Permissible on application to the Competent Authority</b>	<b>Uses/Activities Prohibited</b>
1. Residence plotted (detached, semi-detached and row housing), group housing, work-cum-residential	1. Places of worship	1. Heavy, large and extensive industries, noxious, obnoxious and hazardous industries
2. Hostels, boarding and lodging houses	2. Shopping centers	2. Warehousing, storage godowns of perishables, hazardous, inflammable goods, wholesale mandis, junk yards
3. Night shelters, dharmshalas, guest houses	3. Municipal, state and central government offices	3. Workshops for buses
4. Educational buildings (nursery, primary, high school)	4. Colleges and research institutions	4. Slaughter houses
5. Neighborhood level social, cultural and recreational facilities with adequate parking provisions	5. Petrol filling stations	5. Hospitals treating contagious diseases
6. Marriage and community halls	6. Places of entertainment, cinema halls, restaurants and hotels	6. Sewage treatment plants and disposal sites
7. Convenience shopping, local (retail) shopping	7. Markets for retail goods	7. Water treatment plants, solid waste dumping grounds
8. Community centers, clubs, auditoriums	8. IT and IT enabled services	8. Outdoor and indoor games stadiums, shooting range
9. Exhibition and art galleries	9. Tourism related services	9. Zoological garden, botanical garden, bird sanctuary
10. Libraries and gymnasiums	10. Motor vehicle repairing workshop, garages, storage of LPG cylinders	10. International conference centers
11. Health clinics, yoga centers, dispensaries, nursing homes and health centers (20 beds)	11. Burial grounds	11. District battalion offices, forensic science laboratory
12. Public utilities and buildings except service and	12. Printing presses	12. All uses not specifically

<b>Residential Use Zone (R)</b>		
<b>Uses/Activities Permitted</b>	<b>Uses/Activities Permissible on application to the Competent Authority</b>	<b>Uses/Activities Prohibited</b>
storage yards, electrical distribution depots and water pumping stations	employing not more than 10 persons	permitted in column (a) and (b)
13. Nursery and green houses	13. Godowns /warehousing of non-perishables	
14. Services for households (salon, parlours, bakeries, sweet shops, dry cleaning, internet kiosks etc.)	14. Bus depots without workshop	
15. Banks and professional offices not exceeding one floor	15. Household industries if the area for such use does not exceed one floor and there shall be no public display of the goods	
16. Bus stops, taxi stands, 3-wheeler/auto stands, rickshaw stands	16. Consulates	
17. Police posts and post offices		
18. Parks and tot-lots		

<b>Retail Commercial and Business Use Zone (C1)</b>		
<b>Uses/Activities Permitted</b>	<b>Uses/Activities Permissible on application to the</b>	<b>Uses/Activities Prohibited</b>
1. Retail business, mercantile	1. Associated residential uses	1. Polluting industries
2. Commercial centers	2. Wholesale storage yards	2. Heavy, extensive, noxious, obnoxious, hazardous and extractive industrial units
3. Banks, financial services and stock exchanges	3. Service garages provided they do not directly abut the main road	3. Hospitals, research laboratories treating contagious diseases
4. Perishable goods markets	4. Printing presses employing not more than 10 persons	4. Poultry farms, dairy farms, slaughter houses
5. Business and professional offices	5. 20 bedded hospitals not treating contagious diseases and mental patients	5. Sewage treatment plants and disposal sites, solid waste treatment plants and dumping grounds
6. Private institutional offices and semi government offices	6. Weigh bridges	6. Agricultural uses, storage of perishable and inflammable commodities
7. Shops and shopping malls	7. Colleges, polytechnics and higher technical institutes	7. Quarrying of gravel, sand, clay and stone
8. Commercial services	8. Sports complex and stadiums	8. Zoological gardens, botanical gardens and bird sanctuary
9. Restaurants and hotels	9. Transient visitor's homes	9. Sports training centers
10. Hostels, boarding houses, social and welfare institutions, guest houses	10. Places of entertainment, recreational uses and museums	10. District battalion offices
11. Convenience and neighborhood shopping centers, local shopping centers, weekly and formal markets, bakeries and confectionaries	11. Convention centers	11. Forensic science laboratory and all other related activities which may cause nuisance
12. Cinema halls, theaters, banquet halls, auditoriums	12. Religious places	12. Court
13. Marriage and community halls, night shelters	13. Public utilities, telephone exchanges	13. All uses not specifically permitted in the column (a) and (b)

<b>Retail Commercial and Business Use Zone (C1)</b>		
<b>Uses/Activities Permitted</b>	<b>Uses/Activities Permissible on application to the</b>	<b>Uses/Activities Prohibited</b>
14. Clinics and nursing homes	14. Police posts and post offices	
15. Petrol Pumps	15. Residential	
16. IT and IT enabled services	16. Picnic Hut	
17. Commercial institutes, research and training institutes		
18. Parking lots		
19. Taxi stands, 3-wheeler/auto stands, rickshaw stands		

<b>Wholesale Commercial Use Zone (C2)</b>		
<b>Uses/Activities Permitted</b>	<b>Uses/Activities Permissible on application to the Competent Authority</b>	<b>Uses/Activities Prohibited</b>
1. Wholesale and retail business	1. Truck terminal, bus depots and parking	1. Polluting Industries
2. Wholesale and storage buildings	2. Freight terminal	2. Large scale storage of hazardous and other inflammable materials except in areas, specifically earmarked for the purpose
3. Commercial and business offices and work places	3. Warehousing, storage godowns of perishable, inflammable goods, coal, wood, timber yards	3. All uses not specifically permitted in columns (a) and (b)
4. Petrol pumps and service stations on roads of 12 meter or more ROW	4. Service centers, garages, workshops	
5. Godowns, covered storage and warehousing	5. Non- polluting, non-obnoxious light industries	
6. Weigh bridges	6. Junk-yards	
7. Bus stops, taxi stands, 3-wheeler/auto stands, rickshaw stands	7. Gas installation and gas works	
8. Parking spaces	8. Railway yards and stations, road freight stations	
9. Restaurants	9. Banks and financial services	
10. Public utilities	10. Associated residential uses	
11. Police station/ posts, post offices	11. Government and Semi- government offices	
	12. Water treatment plants	



<b>Industrial Use Zone (I)</b>		
<b>Uses/Activities Permitted</b>	<b>Uses/Activities Permissible on application to the Competent Authority</b>	<b>Uses/Activities Prohibited</b>
1. All kind of nonpolluting industries	1. Heavy, extensive and other obnoxious, hazardous industries subject to the approval of the Orissa Pollution Control Board	1. General business unless incidental to and on the same site with industry
2. IT & ITES	2. Industrial Research Institute	2. Schools and colleges
3. SEZs notified by government of India	3. Technical Educational Institutions	3. Hotels, motels and caravan parks
4. Loading, unloading spaces	4. Junkyards, sports/ stadiums/ playgrounds	4. Recreational sports or centers
5. Warehousing, storage and depots of non-perishable and non- inflammable commodities	5. Sewage disposal works, electric power plants, service stations	5. Other non-industrial related activities
6. Cold storage and ice factory	6. Govt. semi-govt., private business offices	6. Religious buildings
7. Gas godowns	7. Banks, financial institutions and other commercial offices	7. Irrigated and sewage farms
8. Wholesale business establishments	8. Agro-based industries, dairy and farming	8. Major oil depot and LPG refilling plants
9. Petrol filling station with garages and service stations	9. Gas installations and gas works	9. Social buildings
10. Bus terminals and bus depots and workshops	10. Workshops garages	10. All uses not specifically permitted in columns (a) and (b)
11. Parking, taxi stands, 3-wheeler/auto stands, rickshaw stands	11. Hotels and guest houses	
12. Residential buildings for essential staff and for watch and ward	12. Museum	
13. Public utilities	13. Helipads	
	14. Hospitals and medical centers	

<b>Public &amp; Semi-public Use Zone (PS)</b>		
<b>Uses/Activities Permitted</b>	<b>Uses/Activities Permissible on application to the</b>	<b>Uses/Activities Prohibited</b>
1. Government offices, central, state, local and semi-government, public undertaking offices	1. Residential flats, residential plots for group housing and staff housing	1. Heavy, extensive and other obnoxious, hazardous industries
2. Universities and specialized educational institutions, colleges, schools, research and development centers	2. IT services	2. Slaughterhouses
3. Social and welfare centers	3. Defense quarters	3. Junkyard
4. Libraries	4. Hostels, transit accommodation	4. Wholesale mandis
5. Hospitals, health centers, dispensaries and clinics	5. Entertainment and recreational complexes	5. Dairy and poultry farms, farmhouses
6. Social and cultural institutes	6. Nursery and kindergarten, welfare center	6. Workshops for servicing and repairs
7. Religious buildings	7. Open air theater, playground	7. Processing and sale of farm products
8. Conference halls	8. Residential club, guest house	8. All uses not specifically permitted in columns (a) and (b)
9. Community halls, Kalyan mandaps, Dharamshala	9. Bus and Truck terminals, helipads	
10. Museums, art galleries, exhibition halls, auditoriums	10. Parking areas, taxi stands, 3-wheeler/auto stands, rickshaw stands	
11. Police stations, police lines, jails		
12. Local state and central govt. offices uses for defense purpose		
13. Educational and research institutions		
14. Social and cultural and religious institutions		
15. Local municipal facilities		
16. Uses incidental to govt. offices and for their use		
17. Monuments		

<b>Utility and Services Use Zone (US)</b>		
<b>Uses/Activities Permitted</b>	<b>Uses/Activities Permissible on application to the Competent Authority</b>	<b>Uses/Activities Prohibited</b>
1. Post offices, Telegraph offices, public – utilities and buildings	1. Service industry	1. Any building or structure which is not required for uses related to public utilities and activities is not permitted therein.
2. Water Treatment Plant, Sewage Treatment Plant, Solid waste Treatment Plant solid waste dumping grounds	2. Warehouse/storage godowns	2. Heavy, extensive and other obnoxious, hazardous industries
3. Radio transmitter and wireless stations, telecommunication centers, telephone exchange	3. Health center for public and staff or any other use incidental to public utilities and services	3. All uses not specifically permitted in column (a) and (b)
4. Water supply installations	4. Information/Payment kiosk	
5. Sewage disposal works	5. Incidental/ancillary residential use	
6. Service stations	6. Truck terminals, helipads	
7. Cremation grounds and cemeteries/burial ground	7. Commercial use center	
8. Power plants/ electrical substation		
9. Radio and television station		
10. Fire stations		

<b>Open Space Use Zone (OS)</b>		
<b>Uses/Activities Permitted</b>	<b>Uses/Activities Permissible on application to the Competent Authority</b>	<b>Uses/Activities Prohibited</b>
1. Specialized parks/ maidans for multipurpose use	1. Building and structure ancillary to use permitted in open spaces and parks such as stands for vehicles on hire, taxis and scooters	1. Any building or structure, which is not required for open air recreation, dwelling unit except for watch and ward, and uses not specifically permitted therein.
2. Regional parks, district parks, playgrounds, children's parks	2. Commercial use of transit nature like cinemas, circus and other shows	2. All uses not specifically permitted in column (a) and (b)
3. Clubs	3. Public assembly halls	
4. Stadiums, picnic huts, holiday resorts	4. Restaurants	
5. Shooting range, sports training center	5. Parking areas, Caravan parks	
6. Swimming pools	6. Open air cinemas/ theatre	
7. Botanical/ zoological garden, bird sanctuary	7. Entertainment and recreational complexes	
8. Green belts	8. Community hall, library	
9. Bus and railway passenger terminals	9. Open air theater, theme parks, amphitheaters	
10. Public utilities and facilities such as police post, fire post, post and telegraph office	10. Residential club, guest house	
11. Animal racing or riding stables	11. Camping sites	
	12. Yoga and meditation centers	
	13. Fire post, police station, post and telegraph office	
	14. Commercial uses center	
	15. Special education areas	
	16. Incidental/ancillary residential use	

<b>Transportation Use Zone (T)</b>		
<b>Uses/Activities Permitted</b>	<b>Uses/Activities Permissible on application to the</b>	<b>Uses/Activities Prohibited</b>
1. All types of roads	1. Way side shops and restaurants	1. Use/activity not specifically related to transport and communication permitted herein.
2. Railway stations and yards	2. Authorised/Planned Vending areas	2. All uses not specifically permitted in column (a) and (b)
3. Airport	3. Incidental/ancillary residential use	
4. Bus stops and Bus and Truck terminals	4. Emergency health care centre	
5. Taxi stands, auto stands, rickshaw stands	5. Tourism related projects	
6. Ferry Ghats	6. All ancillary (complimentary) uses for above categories (subject to decision of the Authority)	
7. Parking areas		
8. Multi-level car parking		
9. Filling stations		
10. Transport offices, booking offices		
11. Night shelter, boarding houses		
12. Banks		
13. Restaurants		
14. Workshops and garages		
15. Automobile spares and services, Godowns		
16. Loading and unloading platforms (with/without cold storage facility), weigh bridges		
17. Ware houses, Storage depots		
18. Utility networks (drainage, sewage, power, tele- communications)		

<b>Agricultural and Forest Use Zone (A)</b>		
<b>Uses/Activities Permitted</b>	<b>Uses/Activities Permissible on application to the</b>	<b>Uses/Activities Prohibited</b>
1. Agriculture and Horticulture	1. Houses incidental to this use	1. Residential use except those ancillary uses permitted in agricultural use zone
2. Dairy and poultry farming, milk chilling center	2. Parks and other recreational uses	2. Heavy, extensive, obnoxious, noxious and hazardous industries
3. Storage, processing and sale of farm produce	3. Wayside shops and restaurants	3. Any activity which is creating nuisance and is obnoxious in nature
4. Dwelling for the people engaged in the farm (rural settlement)	4. Hospital for infectious and contagious diseases, mental hospital after clearance from the Authority	4. All uses not specifically permitted in column (a) and (b)
5. Farm houses and accessory buildings	5. Agro serving, agro processing, agro business	5. For notified forest lands only afforestation is permitted and Item no. 18 and 19 from column (b) are permissible by the competent authority
6. Afforestation	6. Cottage industries	
	7. Burial and cremation grounds	
	8. Service industries accessory to obnoxious and hazardous industries	
	9. Ice factory, cold storage	
	10. Godowns and ware houses	
	11. Soil testing lab	
	12. Normal expansion of land uses only in the existing homestead land	
	13. Solid waste management sites, Sewage disposal works	
	14. Electric sub station	
	15. Quarrying of gravel, sand, clay or stone	



<b>Agricultural and Forest Use Zone (A)</b>		
<b>Uses/Activities Permitted</b>	<b>Uses/Activities Permissible on application to the</b>	<b>Uses/Activities Prohibited</b>
	16. Building construction over plots covered under town planning scheme and conforming uses	
	17. Brick kilns and extractive areas	
	18. Eco-tourism, camping sites, eco-parks, eco lodges	
	19. Special outdoor recreations	

<b>Water Bodies Use Zone (W)</b>		
<b>Uses/Activities Permitted</b>	<b>Uses/Activities Permissible on application to the</b>	<b>Uses/Activities Prohibited</b>
1. Rivers, canals	1. Fisheries	1. Use/activity not specifically related to Water Bodies Use not permitted herein.
2. Streams, water spring	2. Boating, water theme parks, water sports, lagoons	2. All uses not specifically permitted in column (a) and (b)
3. Ponds, lakes	3. Water based resort with special by-laws	
4. Wetland, aqua culture pond	4. Any other use/activity incidental to Water Bodies Use Zone is permitted.	
5. Reservoir		
6. Water logged/marshy area		

<b>Special Heritage Zone (SH)</b>		
<b>Uses/Activities Permitted</b>	<b>Uses/Activities Permissible on application to the Competent Authority</b>	<b>Uses/Activities Prohibited</b>
<i>Any development should be in conformity with special byelaws and regulations prescribed in respective zonal plan and to be approved by the Heritage Committee. No construction /development in ASI /State Archeology restricted area.</i>		
1. Residential with special bye laws	1. Heritage interpretation centre, art galleries & sculpture complex	1. Use/activity not specifically related to Special Heritage Use Zone not permitted herein.
2. Public -semipublic with special bye laws	2. Educational and research Institutions	2. Multistoried building
3. Commercial with special bye laws	3 Social and cultural institutions	3. Multiplex, Shopping Mall
4 Recreational with special bye laws	4. Commercial activities	4. Dumping ground
5. Theme Parks, Archeological Parks / Gardens with special bye laws	5. Craft based cottage industries	5. Sewerage Treatment
6. Amphitheatres with special bye laws	6. Hotels, guest houses, lodges, resorts	6. All uses not specifically permitted in column (a) and (b)
7. Open Air Museums with special bye laws	7. Group Housing, apartments	
8. Restoration of protected and enlisted monuments and precincts by the concerned authority only (ASI / State Archeology)	8 Auditorium	
	9 boating, picnic huts, camping sites, special training camps	
	10. Hospitals & health centers	
	11. Multistoried Parking	

<b>Environment ally Sensitive Zone (ES)</b>		
<b>Uses/Activities Permitted</b>	<b>Uses/Activities Permissible on application</b>	<b>Uses/Activities Prohibited</b>
<i>Special bye laws need to be formulated in consultation with the Water resources dept. &amp; other concerned departments for special Environmentally Sensitive zone</i>		
1. River front developments	1. Group housing, corporate type housing adopting modern technology with special by-laws	1. Plotted housing
2. Scenic value areas	2. Theme parks, yoga parks, sports centers and community recreational areas, International convention centre	2. Small industries or small institutions
3. River side green areas	3. Incidental residences	3. Use/activity not specifically related to Environmentally Sensitive Use Zone not permitted herein
4. Existing village settlements	4. Seven or five-star lake resorts, Five star hotels. organized commerce with special by-laws	4. No development of any kind is permitted between the River/Canal/Stream and the embankment
	5. Hospitals and health institutions	5. All uses not specifically permitted in column (a) and (b)
	6. Art academy, media centers, food courts, music pavilions	
	7. Parking areas, visitor facilities	
	8. Educational, technical, research institutes of higher order	
	9. Boating, Picnic huts, Camping sites Special Training camps	
	10. Existing residential or other uses with special by-laws	
	11. Resorts, sculpture complex, lagoons& lagoon resort, water sports.	
	12. Tourist and pilgrim related commercial activities, hotels and lodges	
	13. Nonpolluting, agro-based and processing industries,	

<b>Environmentally Sensitive Zone (ES)</b>		
<b>Uses/Activities Permitted</b>	<b>Uses/Activities Permissible on application</b>	<b>Uses/Activities Prohibited</b>
	Storage or Godowns for food grains	
	14. Water Treatment Plant, Sewage Treatment Plant, Solid waste Treatment Plant solid waste dumping grounds	







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