Planning, 'Violations', and Urban Inclusion: A Study of Bhubaneswar

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List of Abbreviations

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
SLIP	Service Level Improvement Plan
SRDP	Slum Rehabilitation and Development Policy
ULB	Urban Local Body

1. Background

In November 2015, the Indian Institute for Human Settlements (IIHS) in collaboration with Youth for Unity and Voluntary Action (YUVA) conducted a two-day training workshop on 'Urban Planning' for organisations and activists working on housing rights. While the workshop provided an overview of urban planning in India, more in-depth work was needed to engage with the linkages between planning, housing, violations and evictions. There was a felt need to understand ongoing planning mechanisms and ways in which communities could engage in making planning a people-centric process. This led to the commissioning of a research project by YUVA to IIHS, with the objective to understand the nature, kind and quantum of violations in Indian cities with respect to their master plans. This was done through a literature review and in-depth study of two cities—Ranchi and Bhubaneswar. The output is a set of three reports, published in English and Hindi:

1. Planning, 'Violations', and Urban Inclusion: A Review of Literature
2. Planning, 'Violations', and Urban Inclusion: A Study of Ranchi
3. Planning, 'Violations', and Urban Inclusion: A Study of Bhubaneswar

The Ranchi field study was carried out with support from Adarsh Seva Sansthan, an NGO working on the issue of housing rights (among others) in Jharkhand. The team, comprising Lakhi Das, Ravi, Avinash and Rosa, facilitated IIHS' field work in the city. A two-day workshop was organised in Ranchi on 25–26 August 2016 to orient the community members towards master planning in Ranchi, and to share the preliminary findings of the study. In Bhubaneswar, YUVA staff helped the IIHS team in carrying out field work, with oversight by Sachikanta Pradhan and Pratap Sahu.

Over the course of a workshop in Delhi on 3 March 2017, the findings of the Ranchi and Bhubaneswar studies were shared with the project partners, along with academics, researchers, other NGOs, think tanks, etc. Key discussions and suggestions from all these workshops have been incorporated in the respective city reports.

2. 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 laws of planning. From the favelas in Rio to the bastis and unauthorised colonies 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. There is also a significant amount of 'change in land use' that comes across through influence, which could be referred to as development by exception. Teresa Caldeira has described this shared process of city-building as 'auto-construction' (Caldeira, 2014). Too often, auto-construction is misrecognised simply as a 'failure' and 'violation' of planning—what in the Indian landscape is called an 'implementation gap.' So how should we understand 'violation' when such acts are committed, often by the city's poorest residents, as a claim to the city and for shelter, and at the same time by the rich through influence? How can we perceive 'encroachment' or an 'illegal' act when it is carried out by such a large proportion of a city's residents? Indeed, what does the fact that our cities are auto-constructed tell us about planning? How should planning respond to such 'violations' that combine the difficulty of orderly urban development with concerns for urban equity and inclusion?

This set of reports seeks to help find answers to such questions by undertaking a literature review and studying the nature, kind and quantum of violations in two Indian cities, Ranchi and Bhubaneswar. They do so in order to gain more in-depth understanding of the kinds of violations that occur in cities. We hope to demystify and unpack this broad category that, within it, encompasses a range of ways of settling and surviving in the 'auto-constructed' city. These reports are intended 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 discern the relationship between planning and urban inclusion in Indian cities.

This report presents observations and findings from the study conducted in Bhubaneswar. A mid-size city, Bhubaneswar secured the topmost rank under the Smart Cities Mission. For a 'planned city', it has a high proportion of 'slum' population. Bhubaneswar was planned as a primarily administrative capital and this is reflected in its built form. However, its population increase over the years has led to a situation where it must manage its growth while simultaneously dealing with the challenges of planning and governance. 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 urbanisation of the Indian mid-size city towards a more inclusive growth pattern?
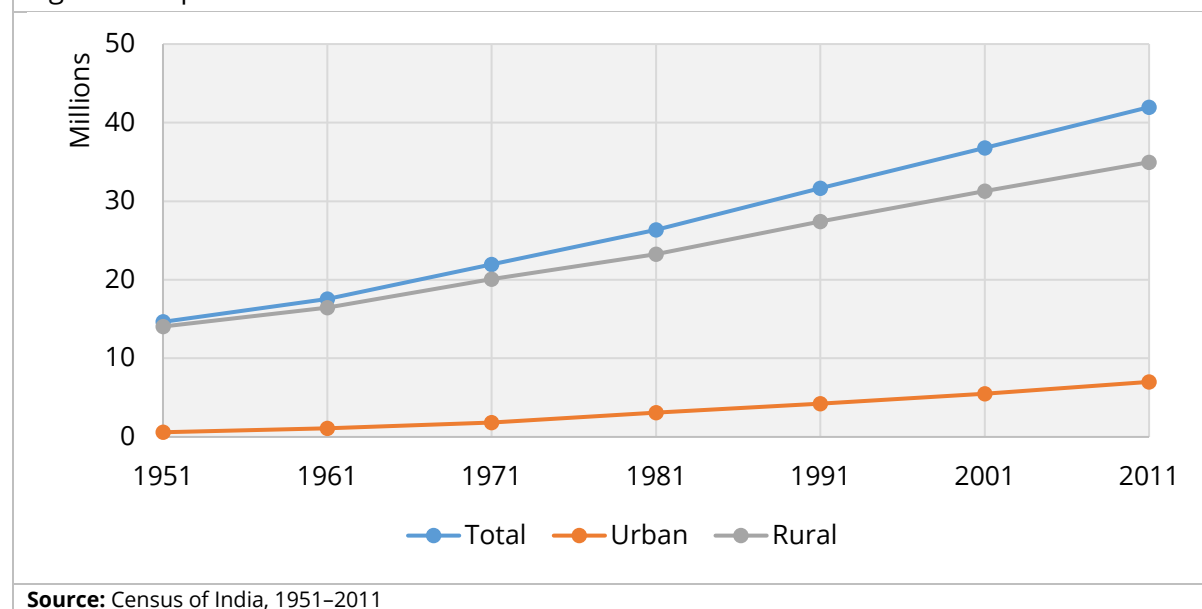
The report proceeds as follows. First, we briefly locate the context of Odisha's urbanisation and then present an overview of Bhubaneswar. Then, we look closely at one kind of violation in the city—the 'slum'. In doing so, we do not imply that violations are solely committed by slums—as in all Indian cities, violations are as 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 disaggregate 'slum' into the varied historical, spatial and legal forms of settlement that fall within this category. We do so by first mapping slums against Bhubaneswar's master plans to assess the precise nature of the violation and then drawing a typology of differential vulnerability and deviation from formal planning. In conclusion, we suggest how these 'violations' can be better understood, and ways to frame the engagement between 'slums', 'violations' and master plans.

3. Urbanisation in Odisha

Odisha occupies an area of 155,707 square kilometers 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 India's 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, after Himachal Pradesh, Bihar and Assam. According to Census 2011, there are 223 urban centres in Odisha; however, statutory towns are limited to 103 (five Corporations, 35 Municipalities and 63 Notified Area Councils).
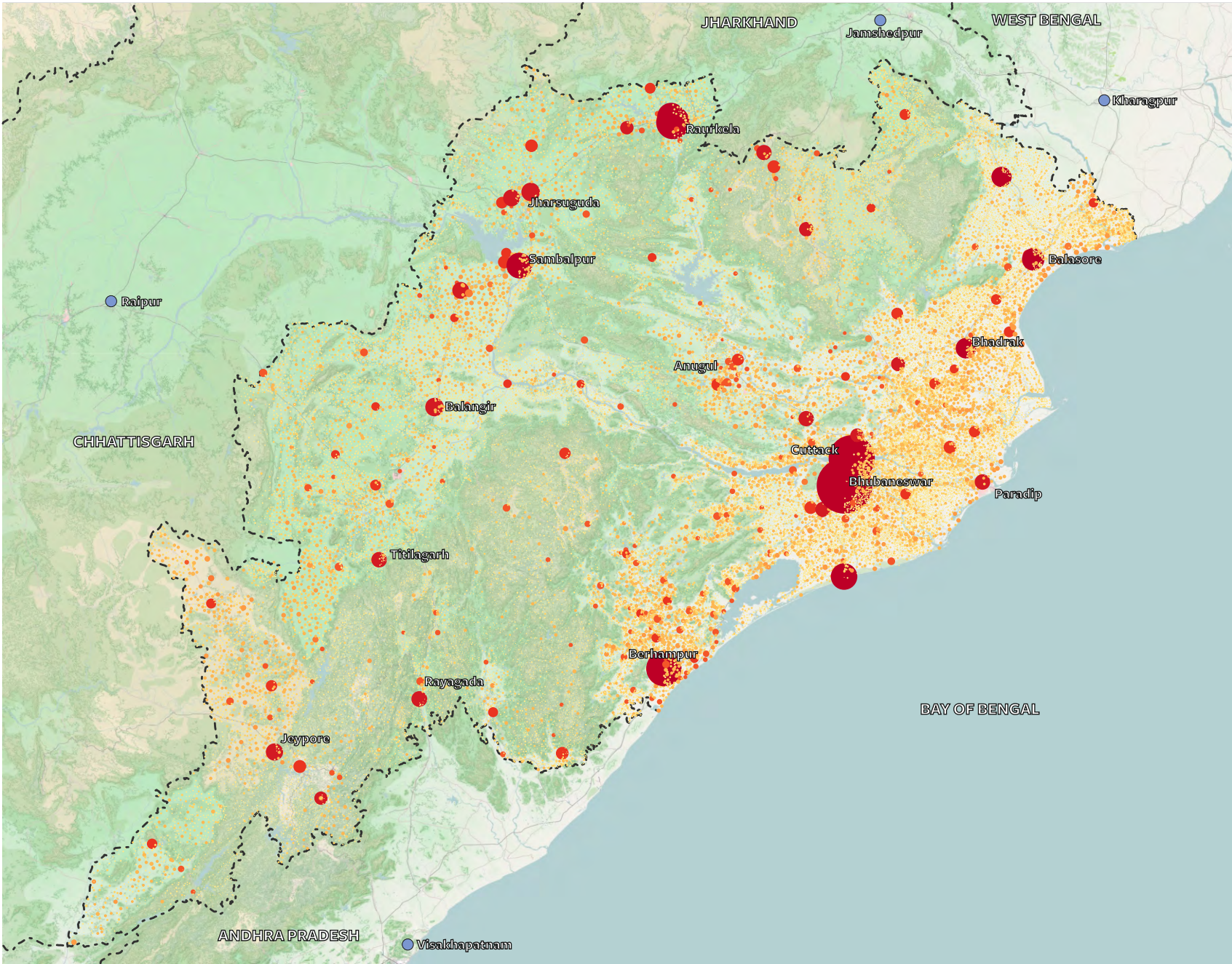
Figure 1: Population Growth in Odisha

Source: Census of India, 1951–2011
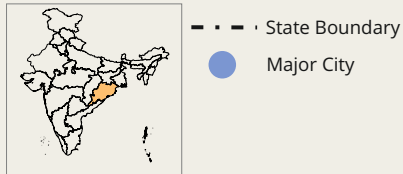
Even with few large urban centres, the urbanisation pattern of Odisha is not clustered; urban areas are distributed across the state. However, similar to the overall settlement pattern, urban areas are also more concentrated in the eastern belt of the state, in proximity of the coastline (Map 1).

Bhubaneswar and Cuttack, located in the Mahanadi Delta region, are the most populous cities in the state. Towns in the western belt (Jharsuguda, Angul-Talcher, Rourkela) essentially grew around mining related activities, starting from the 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

N

0 50 100 150KM

Datum: WGS 84
Projection: UTM 44 N

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

JHARKHAND
Jamshedpur
WEST BENGAL
Kharagpur
Raurkela
Jharsuguda
Sambalpur
Balasore
Raipur
Bhadrak
Anugul
Balangir
CHHATTISGARH
Cuttack
Bhubaneswar
Paradip
Titilagarh
Rayagada
Berhampur
BAY OF BENGAL
Jeypore
ANDHRA PRADESH
Visakhapatnam
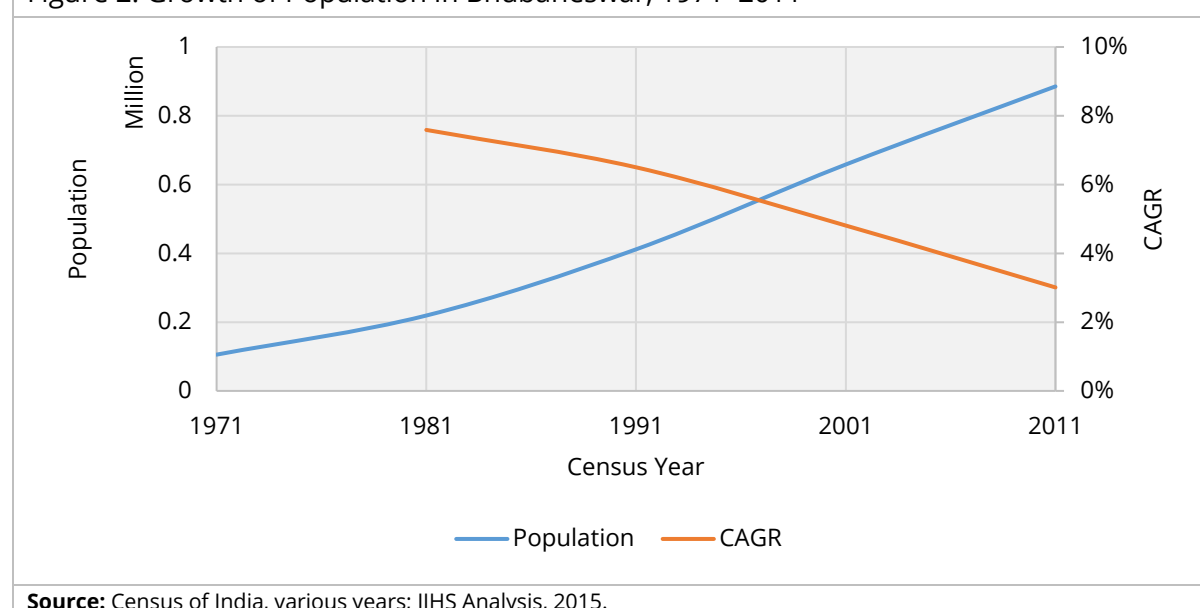
4. Bhubaneswar

4.1. 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 reserve forests in the north-western part and flood plains in the eastern part, the city has grown more towards the south-west.

Currently, the Bhubaneswar Municipal Corporation (BMC) is spread over an area of 135 square kilometres, covering 67 administrative wards. According to Census 2011, the city has a population of 885,363 people, with a 'slum' population of 163,983 people (18.5 per cent).

Figure 2: Growth of Population in Bhubaneswar, 1971–2011

Source: Census of India, various years; IIHS Analysis, 2015.

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

4.2. 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 with administration being the city's primary function. At the time, the city comprised 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 1983 and currently covers an area of 233 square kilometres, including Khorda and Jatani Municipalities. An Interim Development Plan for Bhubaneswar was formulated in 1993. The current Perspective Plan-2030 for the Bhubaneswar Cuttack Urban Complex (BCUC) was prepared by the Department of Architecture and Regional Planning, IIT-Kharagpur, in 2006. The Comprehensive Development Plan for the Bhubaneswar Development Planning Area (BDPA) was formulated within the framework of the Perspective Plan in 2010, again with the support of IIT-Kharagpur. BDPA constitutes around 58 per cent of the BCUC area and extends over 419.10 square kilometres out of the 721.9 square kilometres of the BCUC area. BDPA has been formed by amalgamating BMC, BDPA Rural, Khorda and Jatani.

4.3.   Other Plans for Bhubaneswar

There are a number of other plans that exist with respect to Bhubaneswar which are not statutory in nature but have been mostly prepared under a central or state scheme with funding for implementation. The City Development Plan for Bhubaneswar was prepared under the Jawaharlal Nehru National Urban Renewal Mission (JnNURM). More recently, Service Level Improvement Plans (SLIPs) for nine cities in Odisha including Bhubaneswar are being prepared under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT). Bhubaneswar secured the first rank in the first phase of the Smart Cities Mission. Under this mission, a Smart Bhubaneswar Town District Centre covering an area of around 4 square kilometres has been proposed. In order to achieve 'Housing for All', the AWAAS – Odisha Urban Housing Mission was launched in 2015.

5. Research Objectives and Methodology

5.1.   Objective

The underlying aim of this research project was to study informal settlements—authorised and unauthorised—in Bhubaneswar, in the context of the existing master plan. The specific objectives of the study included:

1. Mapping the informal settlements in Bhubaneswar, 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'.

5.2.   Methodology

1. Secondary data collection and review: Prior to fieldwork, a thorough secondary review was conducted to gather any information available on slums and planning in Bhubaneswar. This included the results of a slum listing carried out by the BMC. Though disaggregated by authorised and unauthorised, the list does 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 and profiling: Since the slum list gave no further information on the slum 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 a total of 436) was visited to create a comprehensive profile of each, with an effort to ensure geographical spread and a balance between authorised and unauthorised slums. In addition, transit housing and resettlement sites were 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 the 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 subdivision of authorised slums in the city. Two clear

categories emerged as a result of this: unauthorised slums, which have no tenurial rights (primarily on government land), and authorised slums, which have some form of record over their houses and land.

5. Overlay analysis with land use maps: Overlay analysis of the slum map was carried out with the existing and proposed land use plans, in order to identify instances and the nature of violations.

5.3. 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, the 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 conditions on ground.

6. Key Findings & Analysis
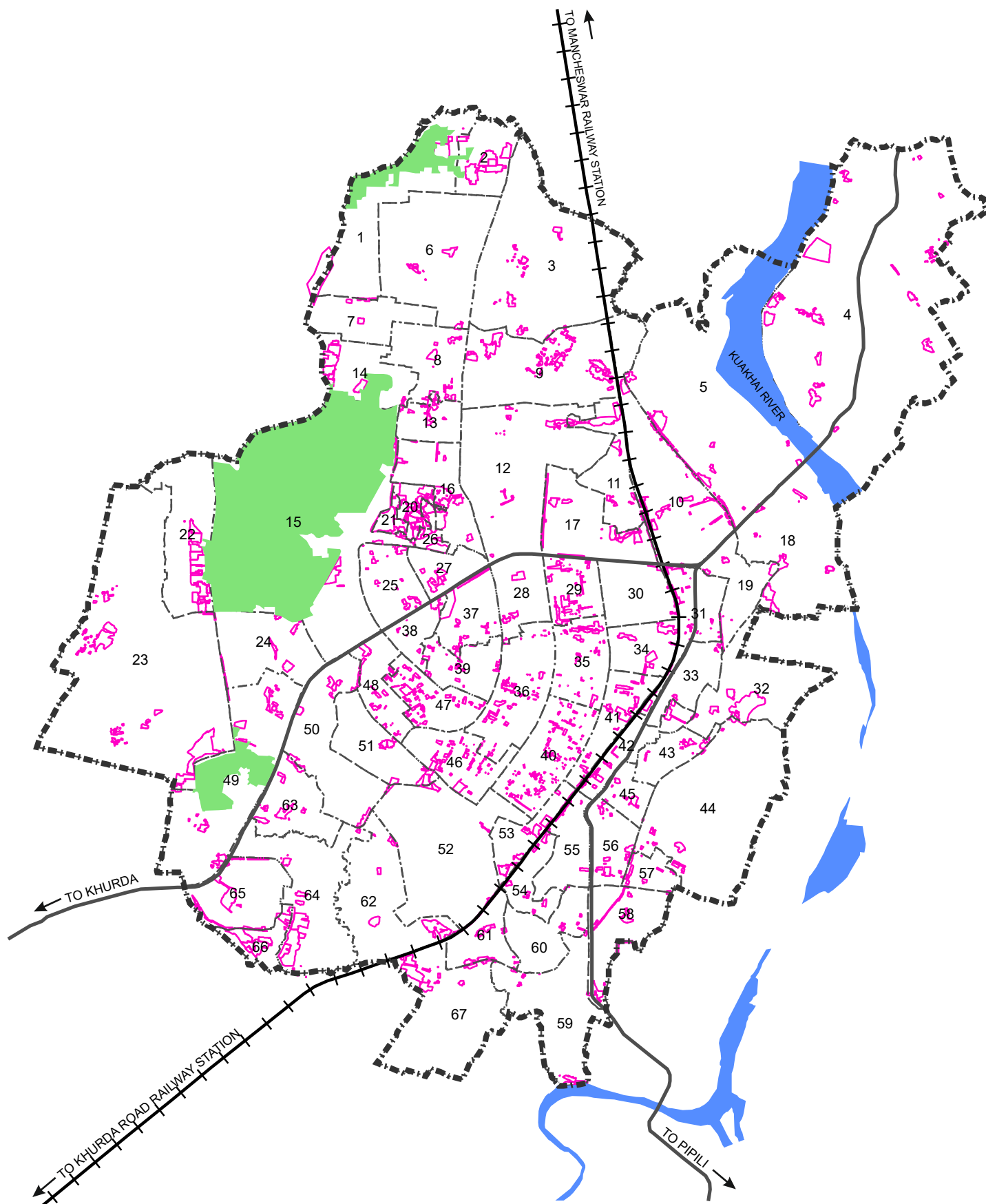
6.1.   Slums in Bhubaneswar

There are 436 recognised slum settlements in Bhubaneswar (identified by the BMC) of which 320 (73 per cent) are unauthorised and 116 (27 per cent) are authorised[1] (Map 2). The total slum population is of the order of 301,611 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 square kilometres, which is 3.9 per cent of the total municipal area (186 square kilometres), housing almost 36 per cent of the city's population. A lot of 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.

Table 1: Slums in Bhubaneswar					
Source	Number of Slums	Slum HH	Proportion of Total HH	Slum Population	Proportion of Total Population
BMC (n.d.)	436	80,665	41%	3,01,611	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	-			-

[1]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).
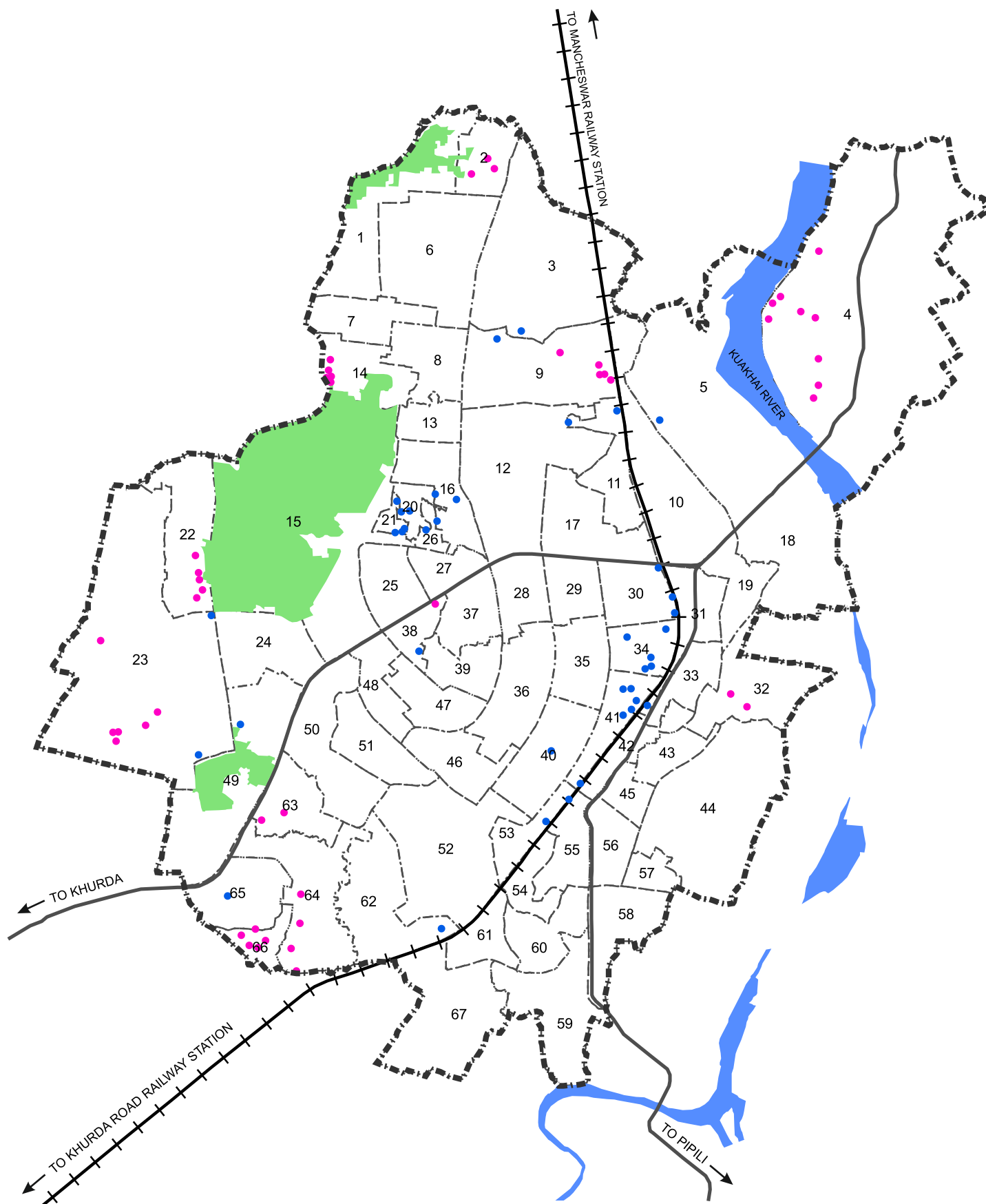
Map 2: Location of Recognised Slums in Bhubaneswar

TO MANCHESWAR RAILWAY STATION

TO BHUBANESWAR

KUAKHAI RIVER

TO KHURDA

TO KHURDA ROAD RAILWAY STATION

TO PIPILI

Legend

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

0   2KM   N

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.

TO MANCHESWAR RAILWAY STATION

KUAKHAI RIVER

TO KHURDA

TO KHURDA ROAD RAILWAY STATION

TO PIPILI

0   2KM   N

Table 2: Tenurial Details of Sample Slums			
Type of Slum	Total	Sample	Percentage
Unauthorised slums (no tenurial rights)	320	40	12.5%
Authorised slums (some form of tenurial rights)	116	48	41.4%
Total	436	88	20.2%
Source: Discussions with Municipal officials, 2016; IIHS Primary Survey, 2016.			

The following section provides an overview of characteristics of sample authorised and unauthorised slums based on self-reporting. Oversampling of authorised slums was done to understand the exact form and nature of tenurial rights.

6.2. Characteristics of Unauthorised Slums

A sample of 40 unauthorised slums was visited to understand their characteristics in terms of tenure, housing and services.

TENURE

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

HOUSING

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

SERVICES

Majority of the unauthorised slum settlements did not have individual water connections and instead relied on community standpost/pipe connections extended by the BMC or the Public Health and Engineering Department (PHED). Households would often use pipes to extend these water connections to their homes. As most of the unauthorised slums were within the city and faced space constraints, very few households had been able to construct private toilets.

6.3. Characteristics of Authorised Slums

A sample of 48 authorised slums was visited to understand their characteristics in terms of tenure, housing and services.

TENURE

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

a. Government rehabilitation sites: There are three clusters of government rehabilitation sites that came into being in the 1980s. Residents were resettled from the city to these sites which, at that time, were extremely far from the city. Households living in these sites were given plot sizes of approximately 600 square feet 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. Basic Services for Urban Poor housing sites: Basic Services for Urban Poor (BSUP) housing projects, constructed in the early 2000s, are also counted as authorised slums. These individual houses on single plots also have a 90-year lease agreement.

c. Urban villages: These include villages that fall within the BMC boundary. Residents own the land as well as the houses.

Table 3: Tenurial Details of Sample Authorised Slums		
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

In every slum, not more than a handful of houses were *kutcha*. While tenure has a role to play in housing quality, the permanency of the structures could be seen also in the fact that most of the settlements were old and consolidated. The BSUP project sites and old government resettlement sites had mostly single-storeyed houses on individual plots, with the exception of a few *kutcha* houses that were constructed recently, very close to the main road passing through the settlement. 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 or PHED boring connections, public standposts 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.

7. Master Plan, Slums and Violations

Land use zoning and Development Control Regulations (DCRs) are the two instruments in a master plan that guide urban growth and development. While land use zoning at the city level indicates broad land use zones, DCRs give details of uses and activities permitted under each 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, those like slaughter houses, heavy industries, stadiums, etc., are prohibited in residential use zones. Similarly, associated residential uses are permissible in other use zones like Commercial (C1&C2) and Public Semi-Public (PS), based on the application. The uses and activities permitted and prohibited, on application, under each of the land use zones are listed in Annex 2.

Please note that the following analysis has been carried out on a layer of broad land use zones as earmarked in the Master Plan.

7.1. 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 located on land marked entirely as residential. Majority of the slums (65 per cent) are located on land marked as partly 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).

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

Table 4: Overlay Analysis of Existing Land Use and Recognised Slums			
S. No	Land Use Category	No. of Slums	Percentage
11.	Commercial	1	0.2
12.	Recreational	1	0.2
13.	Mix of two or more non-residential uses	36	8.3
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 land marked as fully or partially residential 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.				

b. Proposed Land Use, 2030

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

Table 6: Overlay Analysis of Proposed Land Use and Recognised Slums			
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 land use and the tenurial status of 'slums' becomes even 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 themselves in the residential use (fully or partially) category in the Master Plan – 2030.

Table 7: Proposed Land Use vs. Tenurial Rights				
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

| Table 7: Proposed Land Use vs. Tenurial Rights				
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: IIHS Analysis, 2016–17.				
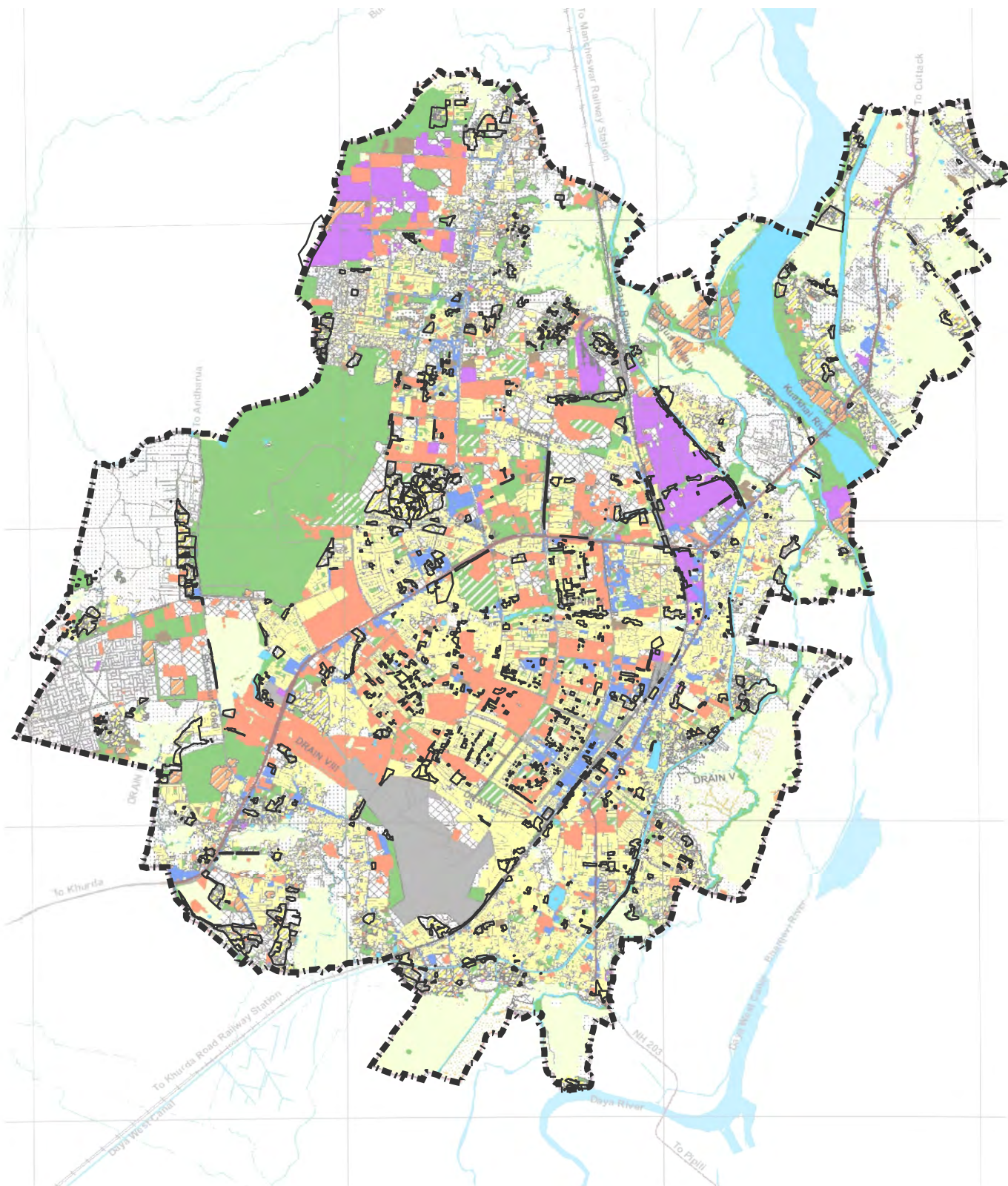
7.2. Master Plan and Housing for the Urban Poor

With the aim of eliminating the housing shortage by 2030, the future demand for housing in the BDPA has been calculated at 4.3 lakh dwelling units, keeping in mind 10 per cent of authorised slum households and 80 per cent of 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 Lower Income Group (LIG) and Economically Weaker Sections (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 and strategies to address the issue of slums including, among others, an inclusive approach to defining 'slum'/informal settlement and comprehensive listing; registration of slum dwellers and identity cards; de-listing of settlements after they reach acceptable levels of infrastructure and basic services; granting of tenure; environmental improvement; resettlement; economic development.

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 by 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 and affordable rental housing options. In order to prevent the future formation of slums, SRDP 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 the reservation of land at the city and zonal levels to house the urban poor. Since the Master Plan was prepared before these policies, these are yet to be integrated with the plan.
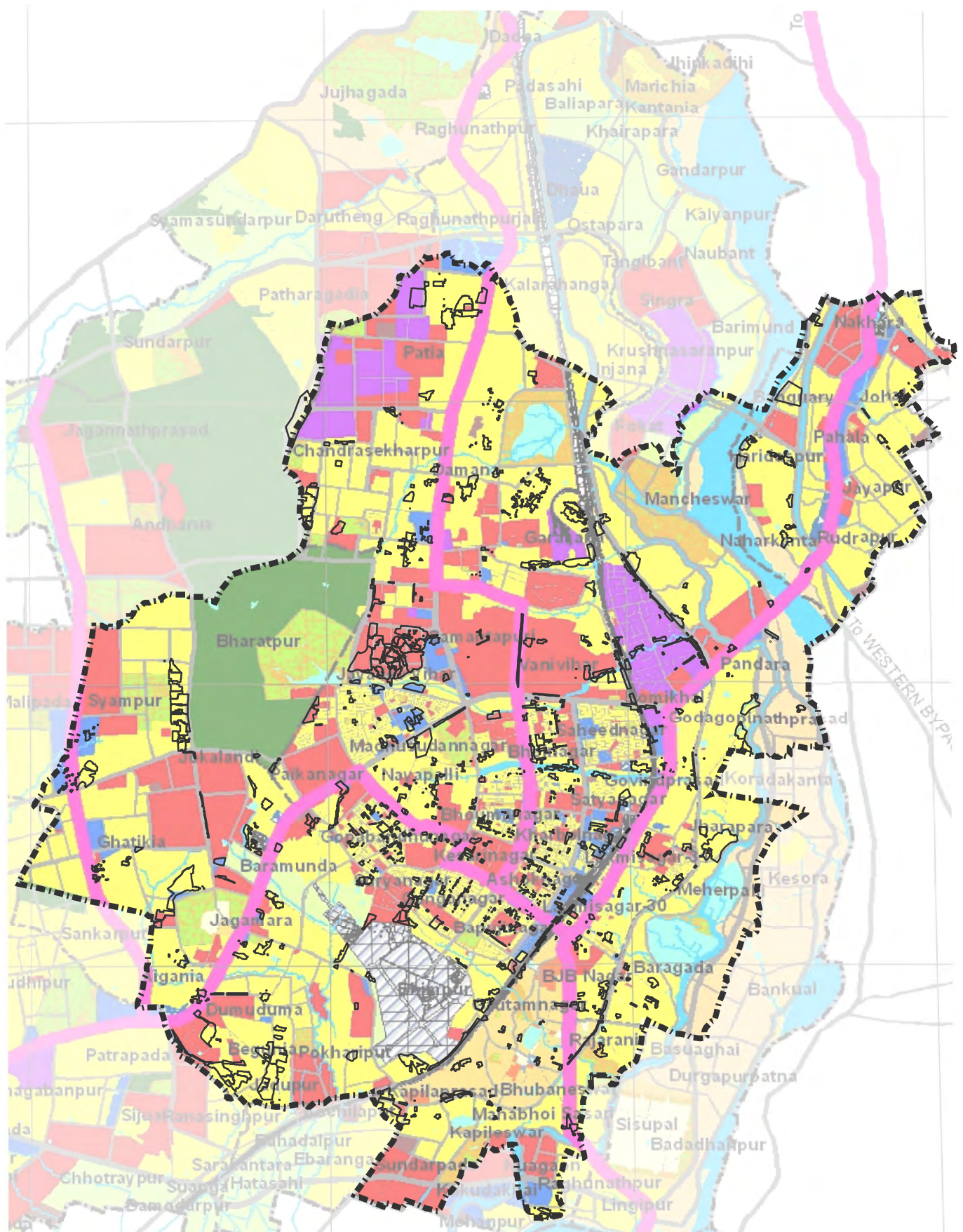
Map 4: Existing Land Use of Bhubaneswar - 2010 with Recognised Slums

Legend

- ┼┼┼ Railway Line
- ── National Highway
- ┣■┣■ BMC Boundary
- ▨ Residential - Urban
- ▨ Residential - Other

- ■ Commercial
- ■ Industrial
- ■ Public/Semi Public/Institution
- ■ Public Utilities
- ▨ Recreational

- ■ Transportation
- ■ Agricultural Land
- ■ Vegetation/Forest Land
- ▨ Vacant Land within Developed Area
- ░ Vacant Land under Development

- ▨ Waste Land
- ■ Water Bodies/Wetland
- ▨ Others

0   2KM   N

Source: Comprehensive Development Plan for Bhubaneswar Development Plan Area 2030; IIHS Analysis, 2016-17.
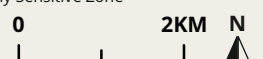
Map 5: Proposed Land Use of Bhubaneswar - 2030 with Recognised Slums

Legend

┼┼┼ Railway Line	C-2 Wholesale Commercial Use Zone	T-2 Railways	W-2 Ponds, Lakes & Lagoons
National Highway	I Industrial Use Zone	T-3 Airport	SH Protected Monuments & Precincts
BMC Boundary	PS Public & Semi-Public Use Zone	T-4 Bus Depots/Truck Terminals	SH-R Residential within Special Heritage Zone
MRTS	US Utility & Services Use Zone	A-1 Agricultural	SH-C Commercial within Special Heritage Zone
R Residential Use Zone	OS Open Space Use Zone	A-2 Forest	SH-PS Public & Semi-Public within Special Heritage Zone
C-1 Retail Commercial & Business Use Zone	T-1 Road	W-1 Rivers, Canals & Streams	ES Environmentally Sensitive Zone

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

0   2KM   N

8. 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 characterisation and use of the term 'slum' flattens diverse land and property regimes, and neighbourhoods. This is particularly true in the context of transitioning, mid-size urban centres like Bhubaneswar where the expansion of municipal boundaries would lead to the inclusion of erstwhile villages in urban limits. Characterising these villages as 'slums' in the same way as the term is applied in bigger cities (to ensure recognition and therefore protection) could possibly have the opposite effect. It would imply that 'slums' with tenure and those without tenure could potentially be approached in a similar fashion under a 'slum' improvement programme. It is important to keep these layers of tenurial rights and physical environment distinct. Even from the point of view of physical environment alone, it may not be ideal to call erstwhile villages 'slums' as soon as they enter 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 as 'authorised' slums range from villages that were incorporated into urban limits over the years to government-built resettlement sites under recent schemes. The inhabitants of these settlements have rightful claim over the land and dwelling units and, for the most part, the settlements are not in violation of land use. 'Unauthorised' slums, on the other hand, comprise settlements that do not have any tenurial rights. The term 'slum' signals not just inadequacy of services but also suggests uniform violation of planning and law. Conflating 'authorised' slums with unauthorised slums amounts to a simplistic reduction of settlements with varied histories. Moreover, categorising government-built resettlement sites as 'slums' not only reflects a superficial understanding of on-ground tenure complexities, but also compromises the success of any resettlement or slum improvement programme undertaken by the government. As a result, the number of slums in Bhubaneswar has remained the same.

Unlike Ranchi, a significant proportion 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, as opposed to settlements that do not possess any claim to land/property.

In this regard, overlay analysis is important. Even if residents of 'authorised' slums have tenurial rights and are in violation of land use zoning, it would still constitute a different mode of violation of the Plan from that of 'unauthorised' slums. Our analysis, however, shows that most authorised slums fall within the residential use category, whether one goes by Existing Land Use or the Proposed Land Use for 2037. Bhubaneswar clearly has what Bhan (2013) has termed as 'upgrading dividend'. At this juncture, settlements that require infrastructure and services are in good locations within the city (where employment and transportation are viable) and have strong tenurial rights, which makes upgradation politically feasible. This is precisely the kind of opportunity that a mid-size city poised for a big urban transition could seize. How should the Master Plan for 2037 use its zoning categories and land allocations to protect and upgrade these settlements rather than inadvertently deem them as violations? As new zones change around settlements, the risk is that a planning process that is 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 possible pragmatic and feasible political moves that are otherwise not evident.

There is a need to demand a second tier of plans, be it zonal plans or town planning schemes or in some cases, even layout plans. Second-tier plans not only make the master plan provisions clearer and more detailed, but are also easier to comprehend by the local community. This could also be an opportunity for people to participate in 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 recognised slums. Such data would be a powerful tool in engaging with the municipality and urban planning authorities, while arguing in favour of nuanced, contextual and particular solutions to address the tenurial and infrastructural needs of 'slums.' While breaking

away from the notion that 'slums' are simply 'violations' that can be dispensed with, such analysis instead reveals that different grades and types of violations can represent opportunities for possible incremental solutions that are both effective and politically feasible.

9. Recommendations and Next Steps

Some of the learning and recommendations that emerged from the study and subsequent workshops are summarised below:

1) **Separating resettlement sites from 'slum' list**
   Counting of BSUP housing constructed under JnNURM and other resettlement sites built through various state government schemes under the category of 'slums' paints an inaccurate picture of the housing in Bhubaneswar. These settlements are very different from unauthorised 'slums' in term of their housing, infrastructural and tenurial characteristics. It is recommended that these are taken out of the 'slum' list as their inclusion presents an inflated picture of the situation.

2) **Demarcating erstwhile villages as a separate residential category in the urban**
   Calling erstwhile villages 'slums' as soon as they become part of the urban is a very simplistic response to their built-form and infrastructural availability; like resettlement sites, these should also be taken out of the 'slum' list. Furthermore, keeping the city's diverse settlement typology in mind, it would be useful to have a separate category for urban villages and have special planning norms for them. The present categorisation of all settlements as 'residential-use' suggest a uniformity that is not reflective of the on-ground built form and public life.
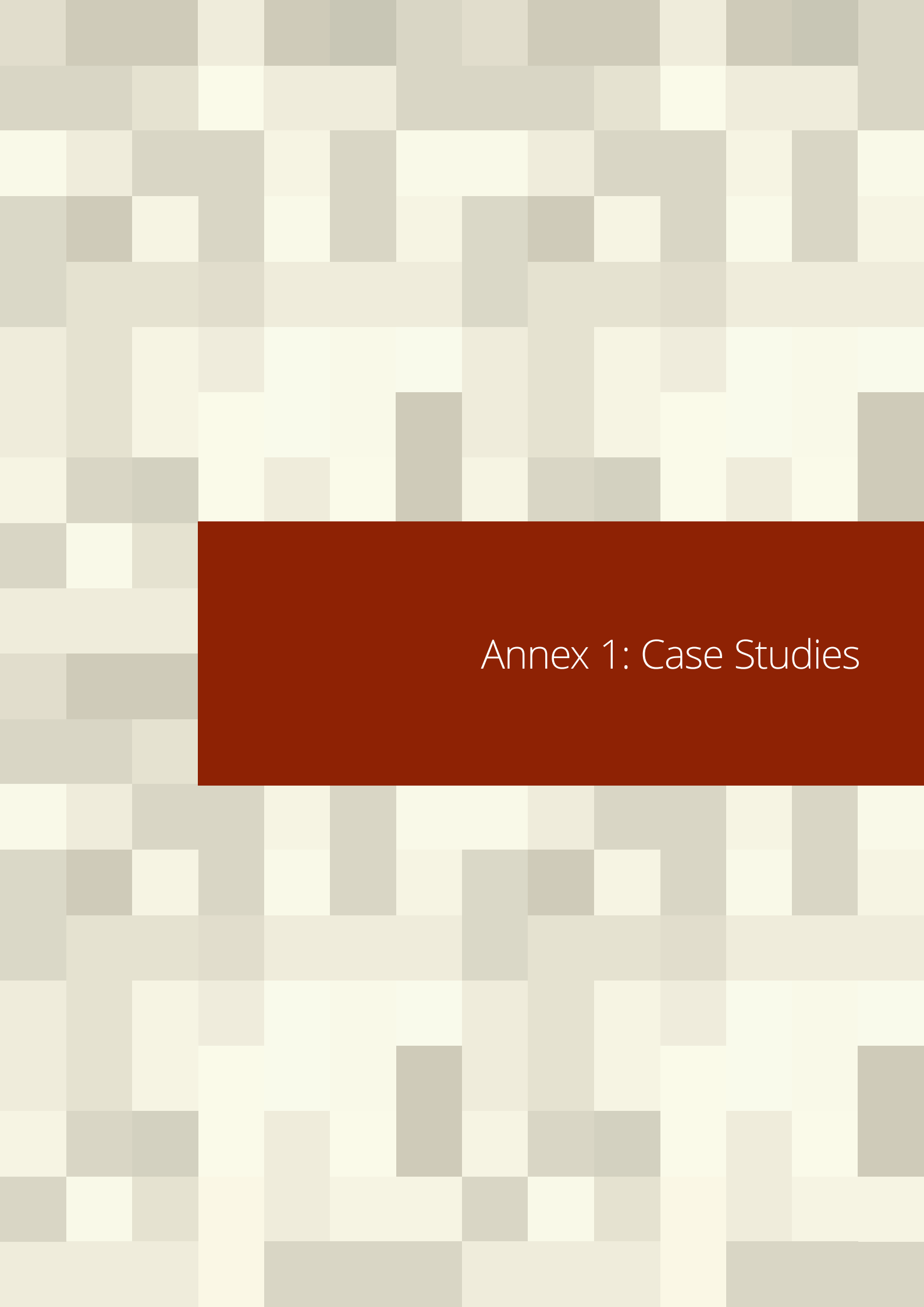
3) **Following developments on ground and plan for 'slums'**
   Bhubaneswar has a very high proportion of people living in unauthorised 'slums', many of these 'slums' are also in violation of the Master Plan. Therefore, it is crucial to follow the developments on ground (like smart city development) and take pre-emptive actions to plan for these 'slums'.
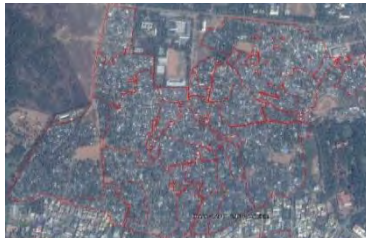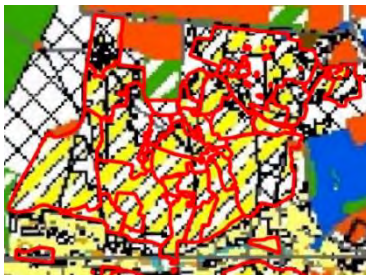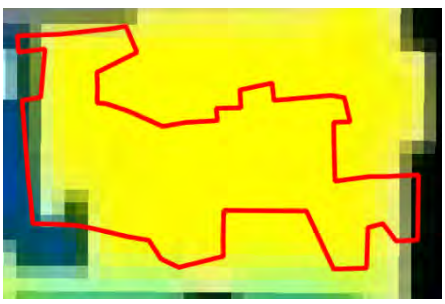
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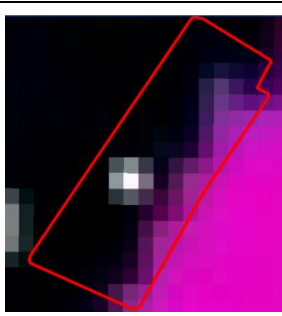
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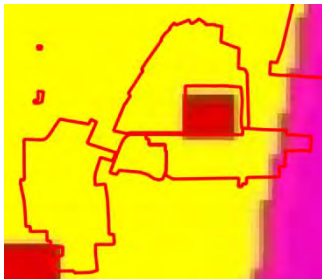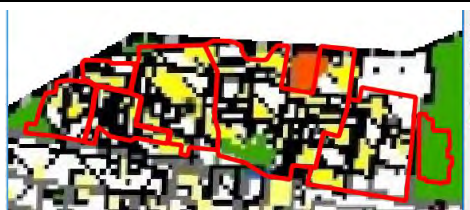
Annex 1: Case Studies

Salia Sahi

Ward No.: 16 & 20	No. of Households: Approx. 8,000

Known as 'Mini Odisha' in Bhubaneswar, Salia Sahi constitutes the biggest slum in the city. Made up of several sub-settlements and colonies, it is spread across Wards 16 and 20 and occupies prime location. Salia Sahi is listed as an unauthorised settlement as it is located 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 *kutcha* houses in between. All houses have electricity. Not all houses towards the outer fringe of the basti have individual toilets, but almost all houses within the basti have toilets. Households get water from BMC boring connections constructed at certain spots. There is no form of drainage present in the basti as a result of which 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.

Google Earth Imagery 2010	Google Earth Imagery 2016
Existing Land Use,2010: Residential Other	Proposed Land Use, 2030: Public & Semi-Public Use

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
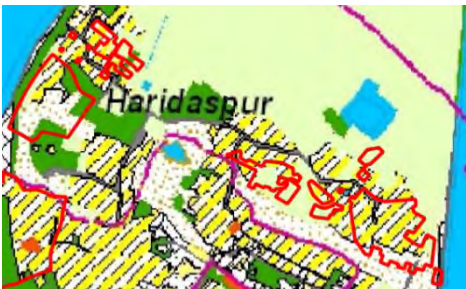
Shanti Palli, Shahid Nagar	
Ward No.: 34	**No. of Households:** 944

Shanti Palli, Shahid nagar is one of the largest bastis being considered for eviction due to the 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.

It is listed as an unauthorised settlement as it is situated 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 three PHED boring connections and a community standpost 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
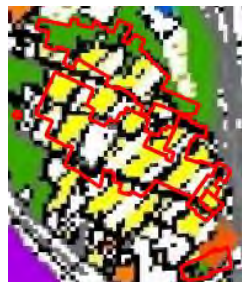
Laxmi Sagar Refugee Colony

Ward No.: 31	No. of Households: 253

Residents of Laxmi Sagar Refugee Colony claim that the land on which they and their grandparents have lived belongs to them and not the government. The settlement, however, remains listed as an unauthorised settlement as it is on government land. After leaving Bangladesh, a large number of Bangladeshi refugees were rehabilitated by the state government across Bhubaneswar. One of these settlements was Laxmi Sagar Refugee Colony, which has been in existence since 1988. 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
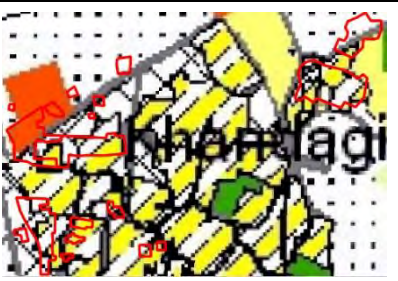
Shikharachandi Cluster	
Ward No.: 2	No. of Households: 837

Spread across three clusters, namely, Shikharachandi Cluster I, Cluster II & 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*, and some of them are even G+2 constructions. At the time of resettlement, households were given a 600-square-feet plot (20 feet x 30 feet) but did not receive any financial assistance or compensation to construct housing. They have, at certain points over a few years, received ₹ 5,000 during monsoons 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 in getting water as they do not have individual water connections, nor are there any public standposts, as a result of which they often have to buy water. Most of the houses have individual toilets. There are some open storm water drains along the *pakka* entrance road of the basti. Most of the male residents work in nearby shops or have their own small shops within the basti.

Google Earth Imagery 2011	Google Earth Imagery 2016

Existing Land Use, 2010: Partly Residential-Urban & 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
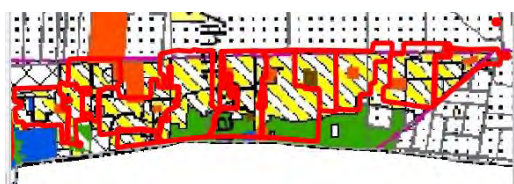
Niladri Vihar

Ward No.: 14	No. of Households: Approx. 952

Niladri Vihar is the name of a 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 households were given a 25 feet x 15 feet piece of land and ₹ 10,000 to build a house. An additional amount of ₹ 40,000 was available for loan against their patta. Some households were unable to repay the BMC loan and 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 *kutcha* houses present. Earlier, residents used to get water from a nearby BMC boring connection and public standposts. Recently, PHED has provided individual connections to most of the *pakka* houses, but not all. Most of the houses have individual toilets. Majority of the male members of the basti work as autorickshaw drivers or as daily wage labourers.

Adjacent to Niladri Vihar is another transit housing site of 1,000 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.

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

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
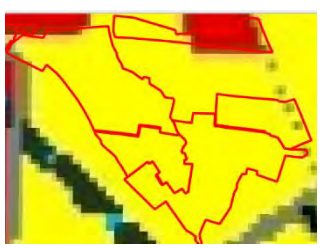
Dumdum Bharatpur	
Dumdum Bharatpur	
Ward No.: 63 & 64	No. of Households: 159

Spread across tthree 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 resettlement, 164 households that were resettled here were given a 600 square feet plot (20 feet x 30 feet) along with financial assistance of ₹ 150,000 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, with very few exceptions. There are some open storm water drains along the *pakka* entrance road of the basti. Most of the male residents work as autorickshaw drivers, daily wage labourers and rickshaw pullers.

Google Earth Imagery 2010	Google Earth Imagery 2016
Existing Land Use 2010: Partly 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

Haridaspur Cluster		
Ward No.: 4	No. of Households: 245	
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. 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. Only a handful of households with houses adjacent to the road do not own their land nor do they have papers for them. Residents get water from a nearby PHED boring connection. Not all houses have electricity or individual toilets.		
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	
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		

Rangmatia Cluster	
Ward No.: 9	No. of Households: 425

| Located in the northern part of the city, Rangmatia is an urban village included within the BMC boundary. A set of clusters, namely, Rangamatia Behera Sahi, Rangamatia Bhoi Sahi Rangamatia Tala Sahi and Rangamatia Uppar Sahi are subsets of the larger village.

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 house. All houses are *pakka*; some of them are G+1. Only a handful of households with houses adjacent to the road do not own the land, nor do they have papers for their house.
Residents get water from a nearby PHED boring connection. Not all houses have electricity or individual toilets. | |

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

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

Ghatikia Cluster	
Ward No.: 23	No. of Households: 257

Ghatikia is an urban village included within the BMC boundary. A set of clusters, namely, Ghatikia Baramana Sahi, Ghatikia Bhoi Sahi, Ghatikia Gada Sahi, Ghatikia Tala Gada Sahi and Ghatikia Uppar Sahi are 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.

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 house. All houses are *pakka* with only a handful of households with houses adjacent to the road that do not own their land, nor do they have papers for their house.

Residents get water from a nearby PHED boring connection and some have their own private wells. All houses have electricity and individual toilets.

Google Earth Imagery 2011	Google Earth Imagery 2016
Existing Land Use, 2010: Partly Residential-Other & Other Uses	Proposed Land Use, 2030: Residential, Transportation

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

Jokalandi Cluster

Ward No.: 22	No. of Households: 3,039

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.

There are some stretches within Jokalandi, especially towards the road in Cluster 10, where there is no BSUP housing but squatter settlements on government land, with no form of patta or rights for these houses. All these settlements are around 25 years old. Households that do not have a patta get water from a nearby government boring connection. They also received ₹ 5,000 as a subsidy to build their own toilets. The BSUP houses have a 90-year leasehold with restrictions on sale. Illegal sale through a power of attorney is, however, rampant. Houses have PHED water connections and individual toilets.

Google Earth Imagery 2011	Google Earth Imagery 2016
Existing Land Use, 2010: Partly 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

Raghunath Nagar, Shastri Nagar, Satya Nagar & Suka Vihar		
Ward No.: 66	No. of Households: 1,449	

Located towards the southern edge of the city is a fairly large BSUP project cluster within which there are several sub-settlements. The bastis in this area—Raghunath Nagar, Barabari Raghunath Nagar, Shastri Nagar, Satya Nagar and Suka Vihar—are listed as authorised slums by BMC.

All the settlements are approximately 35 years old. Residents were given a 600 square feet plot (20 feet x 30 feet), along with financial assistance of up to ₹ 1.7 lakh as loan. All houses have individual water connections and individual toilets. There are very few instances of reconstruction and illegal sale as compared to some of the other BSUP project sites. The bastis, though similar in most other aspects, have leaseholds for varying time periods.

Raghunath Nagar and Barabari Raghunath Nagar have a 10-year leasehold with restrictions on sale. Suka Vihar has a 30-year leasehold with restrictions on sale. Satya Nagar and Shastri Nagar have 90-year leaseholds with restrictions on sale.

Google Earth Imagery 2010	Google Earth Imagery 2016
Existing Land Use, 2010: Partly 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

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

Residential Use Zone (R)		
Uses/Activities Permitted	Uses/Activities Permissible on application to the Competent Authority	Uses/Activities Prohibited
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 centres	2. Warehousing, storage godowns of perishables, hazardous, inflammable goods, wholesale mandis, junkyards
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. Neighbourhood 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 centres, 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 centres
11. Health clinics, yoga centres, dispensaries, nursing homes and health centres (20 beds)	11. Burial grounds	11. District battalion offices, forensic science laboratory
12. Public utilities and buildings except service and storage yards, electrical distribution depots and water pumping stations	12. Printing presses employing not more than 10 persons	12. All uses not specifically permitted in column (a) and (b)

Residential Use Zone (R)		
Uses/Activities Permitted	Uses/Activities Permissible on application to the Competent Authority	Uses/Activities Prohibited
13. Nursery and greenhouses	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, three-wheeler/auto stands, rickshaw stands	16. Consulates	
17. Police posts and post offices		
18. Parks and tot–lots		

Retail Commercial and Business Use Zone (C1)		
Uses/Activities Permitted	Uses/Activities Permissible on application to the Competent Authority	Uses/Activities Prohibited
1. Retail business, mercantile	1. Associated residential uses	1. Polluting industries
2. Commercial centres	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 centres
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 centres, local shopping centres, weekly and formal markets, bakeries and confectionaries	11. Convention centres	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)

Retail Commercial and Business Use Zone (C1)		
Uses/Activities Permitted	Uses/Activities Permissible on application to the Competent Authority	Uses/Activities Prohibited
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, three-wheeler/auto stands, rickshaw stands		

Wholesale Commercial Use Zone (C2)		
Uses/Activities Permitted	Uses/Activities Permissible on application to the Competent Authority	Uses/Activities Prohibited
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 metres or more ROW	4. Service centres, garages, workshops	
5. Godowns, covered storage and warehousing	5. Non-polluting, non-obnoxious light industries	
6. Weigh bridges	6. Junkyards	
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	

Industrial Use Zone (I)		
Uses/Activities Permitted	Uses/Activities Permissible on application to the Competent Authority	Uses/Activities Prohibited
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 centres
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 centres	

Public & Semi-public Use Zone (PS)

Uses/Activities Permitted	Uses/Activities Permissible on application to the Competent Authority	Uses/Activities Prohibited
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 centres	2. IT services	2. Slaughterhouses
3. Social and welfare centres	3. Defense quarters	3. Junkyard
4. Libraries	4. Hostels, transit accommodation	4. Wholesale mandis
5. Hospitals, health centres, dispensaries and clinics	5. Entertainment and recreational complexes	5. Dairy and poultry farms, farmhouses
6. Social and cultural institutes	6. Nursery and kindergarten, welfare centre	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		

Utility and Services Use Zone (US)		
Uses/Activities Permitted	Uses/Activities Permissible on application to the Competent	Uses/Activities Prohibited
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 centres, telephone exchange	3. Health centre 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 centre	
8. Power plants/ electrical substation		
9. Radio and television station		
10. Fire stations		

Open Space Use Zone (OS)		
Uses/Activities Permitted	Uses/Activities Permissible on application to the Competent Authority	Uses/Activities Prohibited
1. Specialised parks/ multipurpose maidans	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 units, 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 centre	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 centres	
	13. Fire post, police station, post and telegraph office	
	14. Commercial uses centre	
	15. Special education areas	
	16. Incidental/ancillary residential use	

Transportation Use Zone (T)		
Uses/Activities Permitted	Uses/Activities Permissible on application to the Competent Authority	Uses/Activities Prohibited
1. All types of roads	1. Wayside 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 shelters, 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, telecommunications)		

Agricultural and Forest Use Zone (A)		
Uses/Activities Permitted	**Uses/Activities Permissible on application to the Competent Authority**	**Uses/Activities Prohibited**
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 centre	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 warehouses	
	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,	

Agricultural and Forest Use Zone (A)		
Uses/Activities Permitted	**Uses/Activities Permissible on application to the Competent Authority**	**Uses/Activities Prohibited**
	clay or stone	
	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	

Water Bodies Use Zone (W)		
Uses/Activities Permitted	Uses/Activities Permissible on application to the Competent Authority	Uses/Activities Prohibited
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 bye 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		

Special Heritage Zone (SH)		
Uses/Activities Permitted	Uses/Activities Permissible on application to the Competent Authority	Uses/Activities Prohibited
Any development should be in conformity with special byelaws and regulations prescribed in the respective zonal plan and to be approved by the Heritage Committee. *No construction/development in ASI/state government archaeological department restricted areas.*		
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/semi-public 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, archaeological 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 government archaeological departments)	8. Auditorium	
	9. Boating, picnic huts, camping sites, special training camps	
	10. Hospitals & health centres	
	11. Multistoried parking	

Environmentally Sensitive Zone (ES)		
Uses/Activities Permitted	Uses/Activities Permissible on Application to the Competent Authority	Uses/Activities Prohibited
Special bye laws need to be formulated in consultation with the Water Resources Department and other concerned departments for special Environmentally Sensitive Zones		
1. Riverfront 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 centres and community recreational areas, International convention centre	2. Small industries or small institutions
3. Riverside 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 bye 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 centres, 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	

Environmentally Sensitive Zone (ES)		
Uses/Activities Permitted	**Uses/Activities Permissible on Application to the Competent Authority**	**Uses/Activities Prohibited**
	13. Nonpolluting, agro-based and processing industries, 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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