

## Measuring Urbanisation in India

RUMI AIJAZ

**ABSTRACT** Living conditions in fast-growing rural areas across India are deteriorating due not only to the impact of urbanisation but the lack of capacity of the local governments to manage such transitions. This brief makes the case for changing the administration status of such areas from “rural” to “urban”, establishing urban governance mechanisms therein, and making them resilient. For identification of such areas, the state government’s opinion must be sought in determining quantifiable criteria that aptly capture regional variations in urbanisation.

### INTRODUCTION

*“What gets measured gets managed.”*

~ Peter F. Drucker,  
American management expert

This truism succinctly relates to a fundamental concern in the field of urbanisation.

It is, after all, another way of saying that “measurement gives a clear idea about reality and helps in making effective future strategies”.<sup>1</sup> In many places across the world,

increasing urban populations are creating pressure on land, infrastructure, and institutions. Yet in these same places, the changes occurring due to urbanisation are not being adequately measured; absent reliable measurements, the management of these urban areas suffers, as a result. Inadequate data and information leads to formulation of weak policies, laws and plans. This, in turn, contributes to the deteriorating conditions in these urban areas.

**Observer Research Foundation (ORF)** is a public policy think-tank that aims to influence formulation of policies for building a strong and prosperous India. ORF pursues these goals by providing informed and productive inputs, in-depth research, and stimulating discussions.



To know more about  
ORF scan this code

This brief examines current principles and methods on measuring urbanisation in India. The second section describes the methods used by state governments and the census office of the national government to designate “urban areas”. Definitions adopted by international organisations and foreign governments are also reviewed. Section three analyses the various criticisms that have been levelled on state/census “urban area” definitions, and describes alternative measures being proposed by other stakeholders (such as the agglomeration index and population grid cells) for estimating the real extent of urbanisation in India. Data culled by India’s census organisation, the UN population division, the World Bank and European Commission are utilised. The significance of declaring an area as “urban” is discussed in section four, which also gives examples of fast-growing rural settlements where disorderly conditions have occurred because rural governments are unable to handle the challenges of urbanisation. The brief closes with specific recommendations on

addressing concerns of rapidly growing rural settlements in India.

## ‘URBAN AREA’: DEFINITIONS

Governments across the world designate settlements as “urban” and “rural” based on certain criteria. These criteria vary across countries. For example, in Canada, the criteria for determining an area as “urban” is that the area should have 1,000 or more inhabitants, and a population density of 400 persons or more per sq. km. In Ethiopia, Argentina, Israel and Austria, meanwhile, localities with 2,000 or more inhabitants are classified as “urban”. At the other end of the spectrum is the Republic of Korea (or South Korea), where an “urban area” is one that has 50,000 or more inhabitants. Elsewhere, other aspects (such as access to facilities, built up structures, non-farm employment) are also considered in declaring an area as “urban”. Table 1 provides the definitions adopted by nations having very high absolute urban populations of over 100 million.

**Table 1: Definition of ‘Urban’ in Countries having Urban Population over 100 Million**

Country	Definition
China	According to the regulation on the classification of urban/rural residence for statistical purposes.
India	<i>State government definition:</i> Governor of the state declares by public notification an area as “urban” based on certain parameters, such as population of the area, the density of the population therein, the revenue generated for local administration, the percentage of employment in non-agricultural activities, the economic importance or such other factors. <i>National government (census office) definition:</i> (a) All administrative units that have been defined by statute (i.e., settlements declared based on state government definition); and (b) Administrative units satisfying the following three criteria: (i) A minimum population of 5,000 persons; (ii) 75 percent and above of the male main working population being engaged in non-agricultural pursuits; and (iii) A density of population of at least 400 persons per sq. km. (1,000 per sq. mile).
USA	Agglomerations of 2,500 or more inhabitants, generally having population densities of 1,000 persons per square mile or more.

Country	Definition
Brazil	Area inside the urban perimeter of a city or town, defined by municipal law.
Indonesia	Area which satisfies certain criteria in terms of population density, percentage of agricultural households, access to urban facilities, existence of additional facilities, and percentage of built up area not for housing.
Japan	City (shi) having 50,000 or more inhabitants with 60 percent or more of the houses located in the main built-up areas and 60 percent or more of the population (including their dependants) engaged in manufacturing, trade or other urban type of business.
Russia	Cities and urban-type localities, officially designated as such, usually according to the criteria of number of inhabitants and predominance of agricultural, or number of non-agricultural workers and their families.

Source: United Nations, 2015.<sup>2</sup>

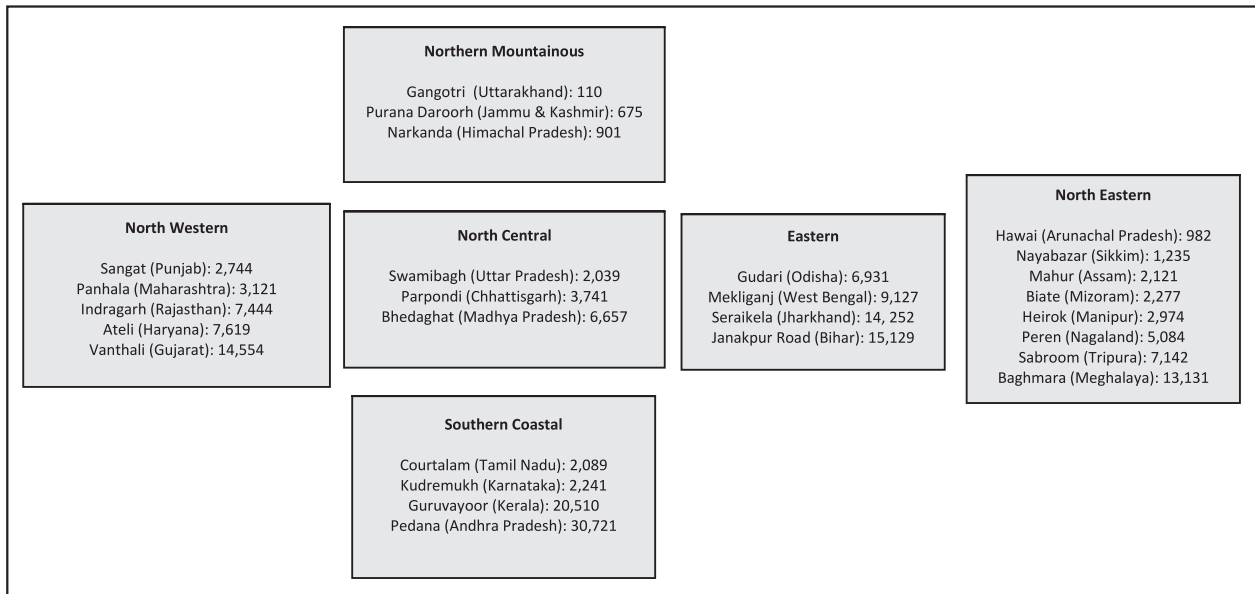
In India, settlements are classified as “urban” when these display certain demographic and economic qualities (Table 1). Settlements not displaying similar qualities are classified as “rural”. There are two definitions in use for declaring Indian settlements as “urban”. These are described below.

### State Government Definition

Since urban development is a subject under the purview of state governments, the governor of the state declares by public notification an area as “urban” based on certain parameters, such as “population of the area, the density of the population therein, the revenue generated for local administration, the percentage of employment in non-agricultural activities, the economic importance or such other factors”.<sup>3</sup> In such specified areas, an urban local government/municipality is constituted under the law for the purpose of governance. All settlements having an urban local government are known as ‘statutory towns’.

This definition of “urban” adopted by the state governments in India is widely criticised. In the opinion of not only academic

researchers but also certain government officials, the definition is vague and offers scope to state bureaucracies to make arbitrary decisions about which areas/settlements are to be classified as “urban” or “rural”, irrespective of whether or not they display urban or rural characteristics. In view of this anomaly, it is argued that many settlements displaying urban characteristics are classified as “rural”, and vice-versa, for reasons best known only to the state governments. Further, a lack of clarity in this definition of what constitutes an “urban area” has allowed state governments to fix their own norms of population size and other parameters. Thus, the norms and parameters differ across states. This difference is observed in the population data of statutory towns situated in various states of India (Figure 1). For example, in the less and sparsely populated northern hilly regions of India, settlements having populations as low as 110 are classified as statutory towns. In other regions of the country, the lowest population of a statutory town is higher. Interestingly, in the states of Gujarat, Kerala, Andhra Pradesh, Jharkhand, Bihar and Meghalaya, settlements having population of less than 13,000 are classified as “rural”.

**Figure 1: Lowest Population of a Statutory Town in Indian State**

Source: Census of India, 2011.<sup>4</sup>

Note: Numbers mentioned against the names of towns in Figure 1 are population size of the least populated statutory towns in the state. Any settlement below the mentioned population size is classified as “rural” by the state government. Statutory towns governed by cantonment boards, or classified as industrial notified areas/industrial townships in various Indian states are not included in Figure 1.

## National Government (Census Office) Definition

In view of the absence of an objective criteria from the state government for classifying a settlement as “urban”, the national government (represented by the Office of Registrar General and Census Commissioner of India), considers a settlement as “urban” based on the following criteria:

(a) if it has an urban local government (i.e., statutory towns notified by the state government); and (b) any place that satisfies the following three criteria: (i) minimum population of 5,000; (ii) at least 75 percent of male main<sup>5</sup> working population engaged in non-agricultural pursuits; and (iii) population density of at least 400 persons per sq. km (1,000 persons per sq. mile).<sup>6</sup>

Settlements fulfilling the above-mentioned three census criteria (of population size,

workers, and population density) are designated by the census office as ‘census towns’. In counting the country’s urban population, the census office includes the population living in both statutory and census towns. The state governments, however, do not consider census towns declared by the census office as “urban”. All such census towns are treated as “villages” by the state governments, and are governed by rural local governments/panchayats.

Thus, as per the approach followed by the state governments, India technically has 4,041 statutory towns (as per census 2011) where 323 million persons live, and the share of urban population in India’s total population is about 27 percent (Table 2). However, if the census definition of “urban” is considered, as is being done by the national government of India and various international organisations for the purpose of country comparisons

(Figure 2), India's share of urban population in total population increases to 31 percent (Table 2). Figure 2 shows that while the absolute

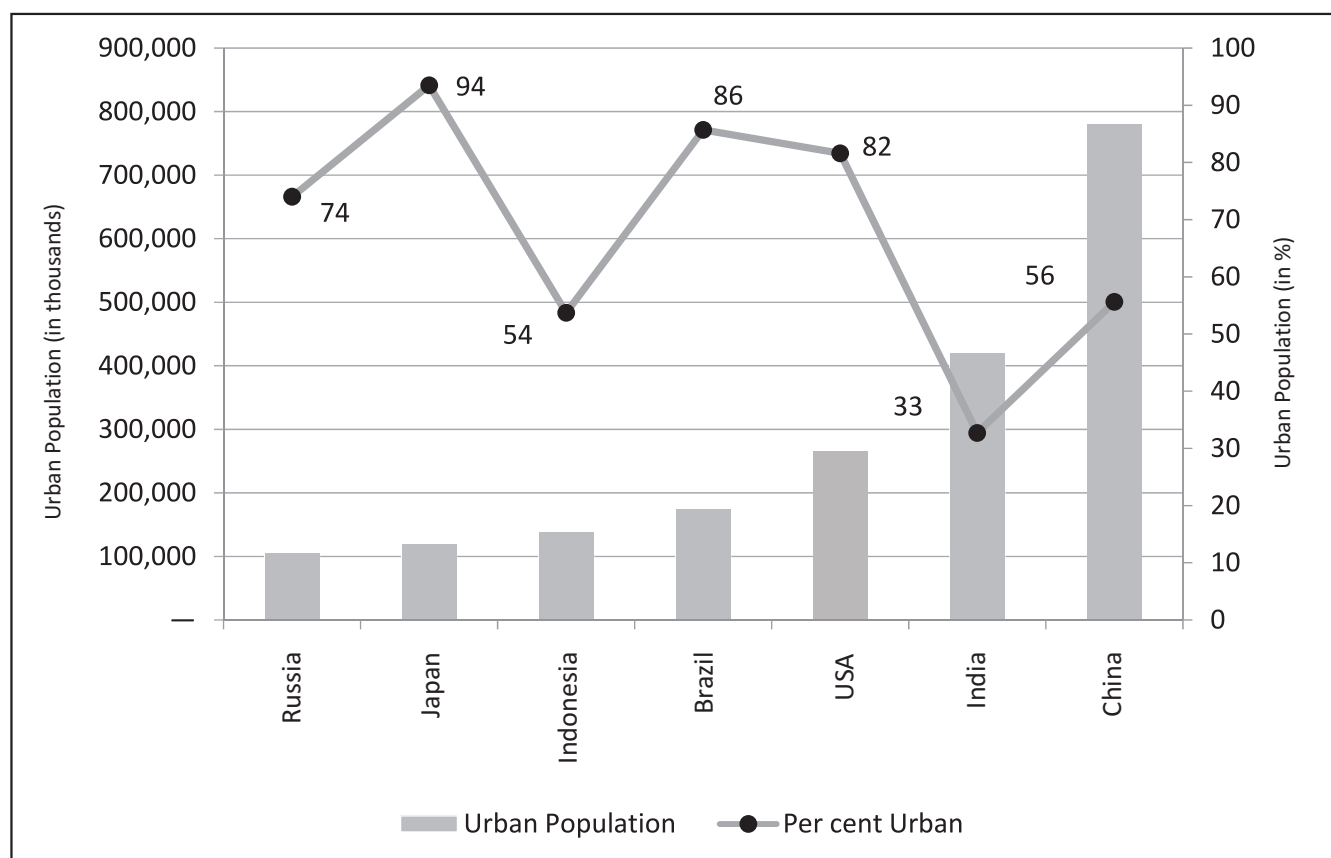
urban population of India is second highest after China, in terms of percentage share, India is relatively less urbanised.

**Table 2: Number of Towns and Urban Population in India, 2011**

Parameter	Statutory Towns (based on state government definition)	Census Towns (based on census office definition)	Total Towns (based on state government and census office definition)
Number of towns	4,041	3,892	7,933
Population (in million)	323	54	377
Share of urban population in total population (%)	26.69	4.46	31.15

Source: Census of India, 2011.<sup>7</sup>

**Figure 2: Countries having Urban Population over 100 Million and Urban Proportions, 2015 Estimates**



Source: United Nations, 2014.<sup>8</sup>

Due to changes in social and economic characteristics of settlements over time, the census office also revised the definition of “urban area”. The idea for revision was to ensure that settlements displaying “urban” characteristics are assigned the “urban” tag. Two census periods are significant in this respect – until 1951, and after 1951. The definition until 1951 was broad and arbitrary (Table 3). Based on this definition, many settlements were classified as “urban” by the census office in 1951, and the percent decadal change in urban population during 1941-51

was high. Due to the ambiguous nature, the definition was revised after 1951 with more rigid and uniform criteria adopted in 1961.

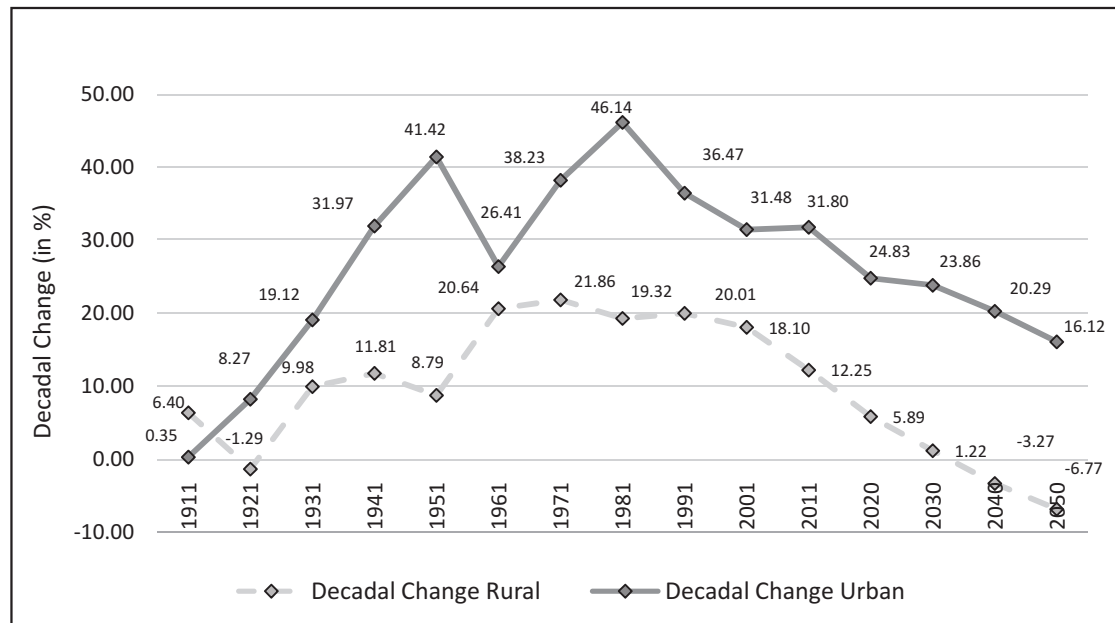
A change in definition led to declassification of many towns into villages. What followed then was a decline in the: (i) number of towns from 3,060 in 1951 to 2,700 in 1961; and (ii) decadal change in urban population from 41.42 percent during 1941-51 to 26.41 percent during 1951-61 (Figure 3). Thereafter, percent decadal change in urban population increased and reached a peak of

**Table 3: Chronological Changes in Census Definition of Urban Area**

Census Year	Definition
Before 1951*	(i) Every municipality; (ii) All civil lines not included in municipal limits; and (iii) Every cantonment and every other continuous collection of houses, inhabited by not less than 5,000 persons. (In making this decision, the census superintendent was instructed to take into consideration the character of the population, the relative density of the dwellings, importance in trade and historic associations, and to avoid treating as towns, overgrown villages without urban characteristics).
1951**	(i) All places with a population of 5,000 and over; and (ii) Some places with a smaller population but possessing definite urban characteristics, such as drinking water, electricity, schools, post offices, hospitals (census superintendents to take the decision on identifying places based on urban characteristics).
1961	(i) All places with a city corporation, municipality, cantonment board or notified town area committee (ii) All other places which satisfied the following criteria: (a) Minimum population of 5,000; (b) Density of population of not less than 400 persons per sq. km (1,000 persons per sq. mile); and (c) At least three-fourth of male population engaged in non-agricultural pursuits.
1971	No major change, except for the following substitution in (c) above: ‘at least 75 percent of the male working population (excluding cultivators and agricultural labourers) engaged in non-agricultural pursuits’.
1981, 1991, 2001, 2011	No major change

Source: \*Census of India, 1933;<sup>9</sup> \*\* Rao, V.K.R.V., 1965;<sup>10</sup> Census of India, 2011.<sup>11</sup>



**Figure 3: Percentage Decadal Change in Urban Population**

Source: Census of India; United Nations, 2014.<sup>12</sup>

46.14 percent during 1971-81, following which there was a slowdown in the growth of the urban population. One study reveals that the decline in urban growth during 1981-91 is not associated with changes in the rate of natural increase; rather, it happened due to a substantial decline in the volume of net migration to urban areas.<sup>13</sup> A declining trend continues. The definition adopted in 1961 is used till date, with minor revisions.

### IS INDIA'S URBAN POPULATION UNDERESTIMATED?

On numerous occasions, concern has been expressed by urban policy analysts over the actual size of India's urban population. It is emphasised that the urban population of India is higher than the state government (official) figure of 26.69 percent, as well as the national government (census) figure of 31.15 percent. However, due to methodological deficiencies in measurement by the state/national government agencies, a significant proportion

of urbanisation occurring in the country remains unreported. Several population estimates and interpretations have come to light in this respect. These are mentioned below, along with the official figures of the state government and the census office (also see Figure 4):

- *State government:* As per the state government (statutory) definition, 26.69 percent of India's population lived in urban areas in 2011. This is the official figure and the present level of urbanisation in India.
- *National government (census office):* The census office has added 4.46 percent to the official figure of 26.69 percent. As mentioned previously, the 4.46 percent is the proportion of population living in census towns declared by the census office based on three criteria (of population size, workers and population density). Thus, according to the census office, 31.15 percent of India's

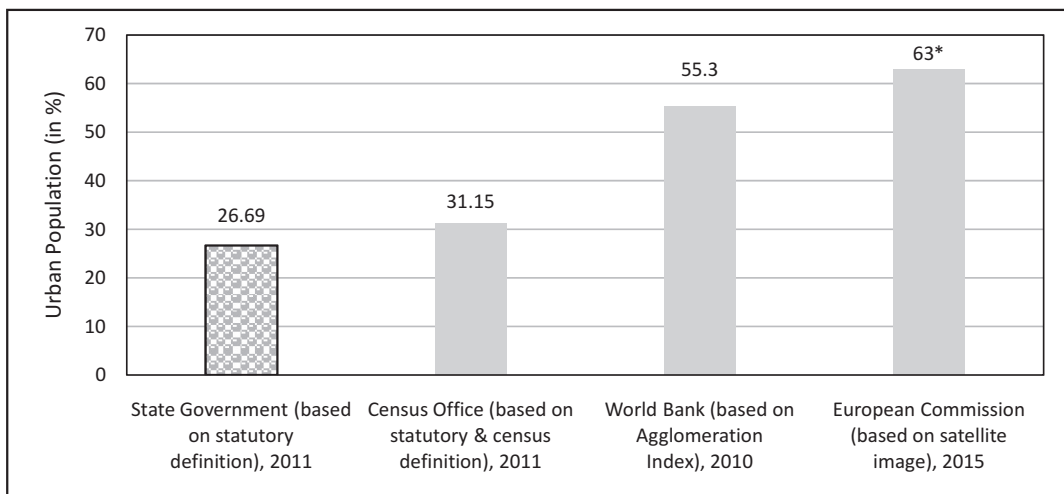
population lived in urban areas in 2011. The state governments do not consider census towns as urban units, and since urban development is a state subject, census towns declared by the census office are actually governed by rural governments.

- Uchida and Nelson:* The authors proposed an alternative measure of urban concentration called an agglomeration index in 2008.<sup>14</sup> The index is calculated using three criteria: (i) population density; (ii) population of a large urban centre, and (iii) travel time to that large urban centre. The aim of this measure is to provide a globally consistent definition of settlement concentration to enable cross-country comparative and aggregated analyses. The World Bank<sup>15,16</sup> observes that by using the measure of agglomeration index, the “share of India’s population living in areas with urban-like features was 55.3 percent in 2010... suggesting the existence of considerable hidden urbanisation... particularly on the peripheries of major

cities, which is not captured by official statistics”.

- Joint Research Centre (JRC) of the European Commission:* A global database, namely the Global Human Settlement Layer (GHSL), developed by the JRC with the support of the Directorate-General for Regional and Urban Policy, is available for assessing human presence on earth. These data are based on satellite images that “make it possible to analyse the development of built-up areas, population and settlements of the whole planet over the past 40 years”.<sup>17</sup> The database helps in understanding the degree of urbanisation by using population grid cells in four periods – 2015, 2000, 1990, and 1975. The data show that about 63 percent of India’s population lived in cities or large urban areas in 2015. To arrive at this figure, the following definition is used: “contiguous grid cells of 1 sq. km. with a density of at least 1,500 inhabitants per sq. km. or a density of built-up greater than 50 percent, and a minimum of 50,000 inhabitants”.<sup>18</sup>

**Figure 4: Urbanisation Rate in India according to various Definitions**



Source: Census of India, 2011;<sup>19</sup> World Bank, 2015;<sup>20</sup> European Commission, 2016.<sup>21</sup>

Note: \* 63 percent denotes population living in cities or large urban areas. The percentage will be more if the population of towns or small urban areas is added.



## SIGNIFICANCE OF DECLARING AN AREA AS 'URBAN'

Various urban studies scholars have often expressed reservations over classifying areas or settlements into “urban” and “rural”, saying it is inappropriate as it creates divisions among societies and leads to social and economic inequalities. These scholars suggest that such urban-rural classification be avoided, and instead a holistic approach (e.g., regional planning) should be used for planning and governance, as the two units are intrinsically linked. The fact is, however, that such classification is a universal practice, and is adopted by governments to ensure better administration based on the rural or urban characteristics exhibited by these areas. By default, the perception of governance is that urban areas need an “urban reform” approach, while rural areas require a “rural reform” one.

Thus, areas are designated as “urban” and “rural” based on the prevailing characteristics, and data on various demographic and socio-economic aspects are collected separately for urban and rural areas by the government agencies for the purpose of policymaking, planning and development. As discussed in the previous section of this brief, scholars and research institutions observe that the full extent of urbanisation is not being captured in India because the criteria used by state governments to declare an area as “urban” is vague. In this respect, it is noted that many rural/peri-urban areas/census towns experiencing an increase in population size and built-up structures, as well as changes in occupational patterns from primary to secondary/tertiary sector activities, continue to be governed by rural governments. Inadequate experience of rural agencies in managing the physical transformation, coupled with their weak financial condition, is

resulting in chaotic conditions in such areas. For example, the population of Boisar, a census town in Thane district of Maharashtra, has grown by 146.2 percent from 14,685 to 36,151 during 2001-11. It has also undergone physical and occupational changes, similar to those witnessed in rapidly growing urban centres. However, without yet being classified as “urban”, it continues to be governed by a rural government. Rapid transformation of the area and a governance deficit has caused multiple problems, including poor waste, sewage and drainage management; environmental pollution; and lack of facilities.<sup>22</sup> Similarly, Dabgram in Jalpaiguri district of West Bengal is also classified by the census office as a “census town”. It has a population of 119,040 and a density of 4,948 persons per sq. km., it recorded a 65.8 percent growth in population during 2001-11, and is situated at a distance of three km from Siliguri city.

Scholars suggest that state governments consider the benefits before declaring areas as “urban” or “rural”. In this respect, the following concerns are raised:

- Since all national government interventions and financing for development of settlements are based on their “urban” or “rural” status, settlements are converted into towns or villages by state governments irrespective of the local area characteristics these possess.
- If a settlement is declared “urban”, it is subjected to application of rules and regulations, building byelaws, development controls, and taxation, in order to ensure planned growth and development. For this reason, state governments generally avoid converting villages into towns as they feel that application of urban laws will make

villagers unhappy, and the political leadership at the state/local level would become unpopular among the rural electorate.

## CONCLUSION

This paper has reviewed the legal procedure followed in India to declare an area (place) as “urban”. The review shows that the state governments are legally empowered to take the decision based on certain broad parameters.<sup>23</sup> The areas that meet the conditions as per the parameters are declared “urban” by the state government, and an urban local government is established for the governance of the area. Census 2011 data show that about 323 million persons (or 26.69 percent of India’s total population) live in 4,041 urban areas (or statutory towns) declared by the state governments (Table 2).

The procedure adopted by the state governments, however, is under criticism because of its vagueness. Urban policy analysts feel that it is not a clearly defined procedure, and allows state governments to make arbitrary decisions about which area is to be declared “urban” or “rural”. This practice, in the opinion of some, is adopted by the state governments because of their vested interests, which is not only leading to an underestimation of urbanisation in the country, but is also resulting in the occurrence of chaotic conditions in rapidly growing rural areas, peri-urban areas, and census towns governed by rural governments.

Considering the importance of urbanisation for a nation, and the deteriorating living conditions in rapidly transforming rural areas, which is reportedly due to a governance deficit, there is an imperative for: (i) better

estimation of urbanisation in India; and (ii) changing the administration status of rapidly transforming rural areas to “urban” along with setting up of urban local governments in such areas. Accordingly, various measures for estimating the real extent of urbanisation are in use, or proposed (Figure 4): As per India’s census office, which relies on a normative definition as against the state government’s political definition, the country is 31.15 percent urban (2011); based on the concept of agglomeration index (developed by Uchida and Nelson and used by the World Bank), India is 55.3 percent urban (2010); and according to the Joint Research Centre of the European Commission, which relies on satellite imageries for assessing human presence on earth, 63 percent of India’s population lives in cities or large urban areas.<sup>24</sup> Further, considering the census data on number of towns, the Ministry of Housing and Urban Affairs has asked the state governments to take necessary steps for conversion of census towns into statutory towns, and set up urban local governments in such towns for ensuring planned development.<sup>25</sup> Census data show that about 54 million persons live in census towns (Table 2), which are governed by rural governments, and the population of some census towns goes over 100,000. According to the ministry, a change in administration status of settlements would also entitle these to receive assistance from the national government under various nationally sponsored urban development programmes.

To summarise the problem presented in this paper, the adverse impacts of urbanisation are seen across rural areas of India. The national government, various organisations, and urban policy analysts are concerned about the deteriorating conditions in these areas.

They argue for identifying and converting all areas where the impact of urbanisation is felt, or those exhibiting urban characteristics, into urban units to be governed by urban local governments, which are better empowered than their rural counterparts, so that the growth and transformation occurring in these areas can be managed in a planned manner, which in turn would lead to an improved quality of life of a sizeable proportion of the country's population. However, these suggestions are not being followed because the state governments use their own principles for declaring an area as "urban" or "rural".

Given these conditions, it is necessary to think further about the way in which the matter is being approached, and what needs to be done.

- **Altering Census Criteria:** International definitions of "urban" (presented in Table 1) are formulated by national governments based on country-specific population and development characteristics. Some definitions specify parameters—such as population, density, occupational patterns—that are commonly used by national governments to distinguish between urban and rural areas. The parameters and values, however, vary from country to country and have been probably set based on prevailing characteristics in a country. In India, for example, the census office uses a similar definition, and has set its own values. Though the definition specifies measurable parameters (related to population, density, non-agricultural male workers), it needs to be assessed whether it is correct to apply the same parameters and values used since 1961 (see Table 3) uniformly across Indian states, or there is need to alter these in the light of prevailing physical, socio-economic and development characteristics of Indian states. One concern is about the threshold urban population size of 5,000 persons: policy analysts believe that this threshold value could be brought down. This change will allow many fast growing rural settlements to be considered as "urban". In the US, for example, which has a sizeable urban population of 270.68 million (amounting to 83.4 percent of the country's total population) in 2017,<sup>26</sup> agglomerations having at least 2,500 inhabitants and density of 1,000 persons per square mile are declared "urban". Such matters relating to any alteration of the census criteria, however, must be discussed in the Indian parliament, and a representative stakeholder group, including state functionaries, should take decisions.
- **Quantifying State Criteria:** It is necessary to remove vagueness in the procedure followed by state governments in declaring an area as "urban". Today, the situation is such that even within the same geographical region of India, there are huge differences in the threshold population of a statutory town. For example, in the northeastern states, threshold population of a statutory town in Arunachal Pradesh is 982 persons, whereas it is 13,131 persons in Meghalaya (Figure 1). Similarly, in the southern coastal states, threshold population of statutory towns vary from a low of 2,089 in Tamil Nadu to a high of 30,721 in Andhra Pradesh. These differences in threshold population of statutory towns

within a region have various governance and financial implications, i.e., the administration status, governance structures, regulatory mechanisms and financial allocations for settlements (statutory towns) in Tamil Nadu change from a population of 2,089 onwards (because of a change in their administration status from “rural” to “urban”), while those in Andhra Pradesh change from 30,721 onwards. It will be useful to have uniformity in the threshold urban population size of settlements within a region so that these receive similar treatment in terms of governance. Ideally, the parameters used by state governments in declaring an area as “urban” should be reviewed, quantified and finalised in consultation with the state functionaries. This method will eliminate the scope of using ambiguous practices by the state governments in classifying settlements as “urban”. One popular suggestion is that the state criteria should be replaced with census criteria, because the census criteria are quantifiable. However, this might not be feasible: urban development being a state subject, the state governments might like to follow their own criteria and values based on state-level population and development characteristics.

- Assigning Special Area Status to Growth Centres: In view of the lackadaisical response of state governments towards converting census towns into statutory towns and setting up of urban

governments in census towns, the rural areas, peri-urban areas, and census towns experiencing rapid growth and transformation due to urbanisation could be treated as “special areas” by state governments. The agglomeration index and GHSL database that draw upon satellite images and GIS tools can help in early identification of such areas, and analysing spatial information. In such areas, the capabilities of existing rural governments may be built so that they are better equipped to deal with the growing pressures. The present emphasis on establishing urban governments in census towns might not guarantee improvement of such areas, as almost all statutory towns/cities of India are poorly governed by urban governments.

Ideally, the plan should be to establish strong and resilient urban governance mechanisms in rural areas experiencing noticeable changes in their physical, social and economic characteristics as well as a deterioration in living conditions due to the impact of urbanisation. This requires a change in the administration status of such areas from “rural” to “urban”. An unambiguous criteria should be used by state governments to declare an area as “urban”; such clarity will correct the extent of urbanisation. Instead of asking state governments to apply the current quantifiable census criteria, the state’s opinion should be sought in determining quantifiable criteria that aptly capture regional variations in urbanisation. [ORF](#)

## ABOUT THE AUTHOR

**Rumi Aijaz** is a Senior Fellow at the Observer Research Foundation, New Delhi.



## ENDNOTES

1. “What gets measured, gets managed,” ExtremeLearners, <http://extremelearners.com/what-gets-measured-gets-managed/>.
2. “Table 6 – Demographic Yearbook 2015,” United Nations Department of Economic and Social Affairs, 2015, <https://unstats.un.org/unsd/demographic/products/dyb/dyb2015/notes/notes06.pdf>.
3. Constitutional Provisions relating to Village Panchayats and Municipalities in India, Sixth Edition (Lucknow: Eastern Book Company, 1999).
4. Census of India, District Census Handbooks (Delhi: Office of the Registrar General and Census Commissioner, 2011).
5. Workers who worked for more than 6 months (180 days) in the reference period are termed as main workers.
6. Census of India, Meta Data (Delhi: Office of the Registrar General and Census Commissioner, 2011), 2.
7. Census of India, Primary Census Abstract Data Highlights – India, Executive Summary (Delhi: Office of the Registrar General and Census Commissioner, 2011).
8. United Nations, World Urbanization Prospects: The 2014 Revision, CD-ROM Edition (Department of Economic and Social Affairs, Population Division, 2014).
9. Census of India, India - Report, 1931, Vol. 1, Part 1 (Delhi: Manager of Publications, 1933).
10. Rao, V.K.R.V., “Economic Growth and Rural-Urban Income Distribution 1950-51 – 1960-61,” *The Economic Weekly* (20 February 1965): 373.
11. Census of India, Provisional Population Totals - Kerala, Paper 2, Vol. 2, Chapter 1 (Delhi: Office of the Registrar General and Census Commissioner, 2011), 7-8, [http://www.censusindia.gov.in/2011-prov-results/paper2-vol2/data\\_files/kerala/Chapter\\_I.pdf](http://www.censusindia.gov.in/2011-prov-results/paper2-vol2/data_files/kerala/Chapter_I.pdf).
12. United Nations, Op. cit., n. 8.
13. Krishan, Gopal, “The Slowing Down of Indian Urbanisation,” *Geography*, Vol. 78, No. 1 (January 1993): 80-84.
14. Uchida, Hirotugu and Andrew Nelson, “Agglomeration Index: Towards a New Measure of Urban Concentration,” Background Paper for the World Development Report (15 February 2008).
15. The World Bank, “Leveraging Urbanization in India,” 24 September 2015, <http://www.worldbank.org/en/country/india/brief/leveraging-urbanization-india>.
16. The World Bank, “Leveraging Urbanization in South Asia,” accessed October 26, 2017, <http://www.worldbank.org/en/region/sar/publication/urbanization-south-asia-cities>.

17. "New Satellite Image Database Maps the Dynamics of Human Presence on Earth," European Commission, October 18, 2016, <https://ec.europa.eu/jrc/en/news/new-satellite-image-database-maps-dynamics-human-presence-earth>.
18. "GHS Settlement Grid," European Commission, accessed October 27, 2017, [http://ghsl.jrc.ec.europa.eu/ghs\\_smod.php](http://ghsl.jrc.ec.europa.eu/ghs_smod.php).
19. Census of India, Op. cit., n. 7.
20. The World Bank, Op. cit., n. 15.
21. European Commission, Op. cit., n. 17.
22. Jenkins, Cordelia, Makarand Gadgil and Shamsheer Yousaf, "India's Census Towns face a Governance Deficit," Live Mint, October 7, 2012.
23. Broad parameters include population of the area, the density of the population therein, the revenue generated for local administration, the percentage of employment in non-agricultural activities, the economic importance or such other factors.
24. Ministry of Finance, Economic Survey 2016-17, Volume 2 (Delhi: Department of Economic Affairs, 2017), 221.
25. "States asked to Convert 3,784 Urban Areas into Statutory Urban Local Bodies," Press Information Bureau, May 17, 2016, <http://pib.nic.in/newsite/PrintRelease.aspx?relid=145405>.
26. "U.S. Population (Live)," Worldometers, <http://www.worldometers.info/world-population/us-population/>.



**Ideas • Forums • Leadership • Impact**

---

20, Rouse Avenue Institutional Area, New Delhi - 110 002, INDIA  
Ph. : +91-11-43520020, 30220020. Fax : +91-11-43520003, 23210773.  
E-mail: [contactus@orfonline.org](mailto:contactus@orfonline.org)  
Website: [www.orfonline.org](http://www.orfonline.org)