

शहरी क्षेत्र
प्रारम्भ
URBAN AREA
STARTS

How “urban” is India?

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- ❑ General public conception of India as a primarily rural country.
- ❑ Recognition of an important urban economy & population.
 - ❑ Growing urban population: more persons added to urban population in 2001-11 than to rural population
 - ❑ Percentage of urban population was 31% in 2011, up from 27% in 2001
 - ❑ Trends suggest percentage of urban population crossing 50% by 2041
- ❑ But what is “urban”?
 - ❑ Official Census definition of “urban”
 - ❑ Settlements with a recognised urban local governing body
 - ❑ Settlements satisfying the following three conditions:
 - ❑ Population greater than 5,000 persons
 - ❑ Population density greater than 400 persons per square kilometre
 - ❑ At least 75% of male main workers involved in non-agricultural pursuits
- ❑ Do these parameters capture the true extent of urbanisation in India?

WHAT DO OTHERS SAY ABOUT “URBAN”?

- ❑ Uchida and Nelson (2010)
 - ❑ Residents, workers, firms agglomerate in urban areas – creating agglomeration economies
 - ❑ Thus “urban” can be viewed as all those who have access to such economies
 - ❑ Going by this logic, India would be approximately 52% “urban”

- ❑ Chandrasekhar (2011)
 - ❑ Roughly 8 million workers live in officially rural areas but work in urban areas
 - ❑ Are they “urban”, then?

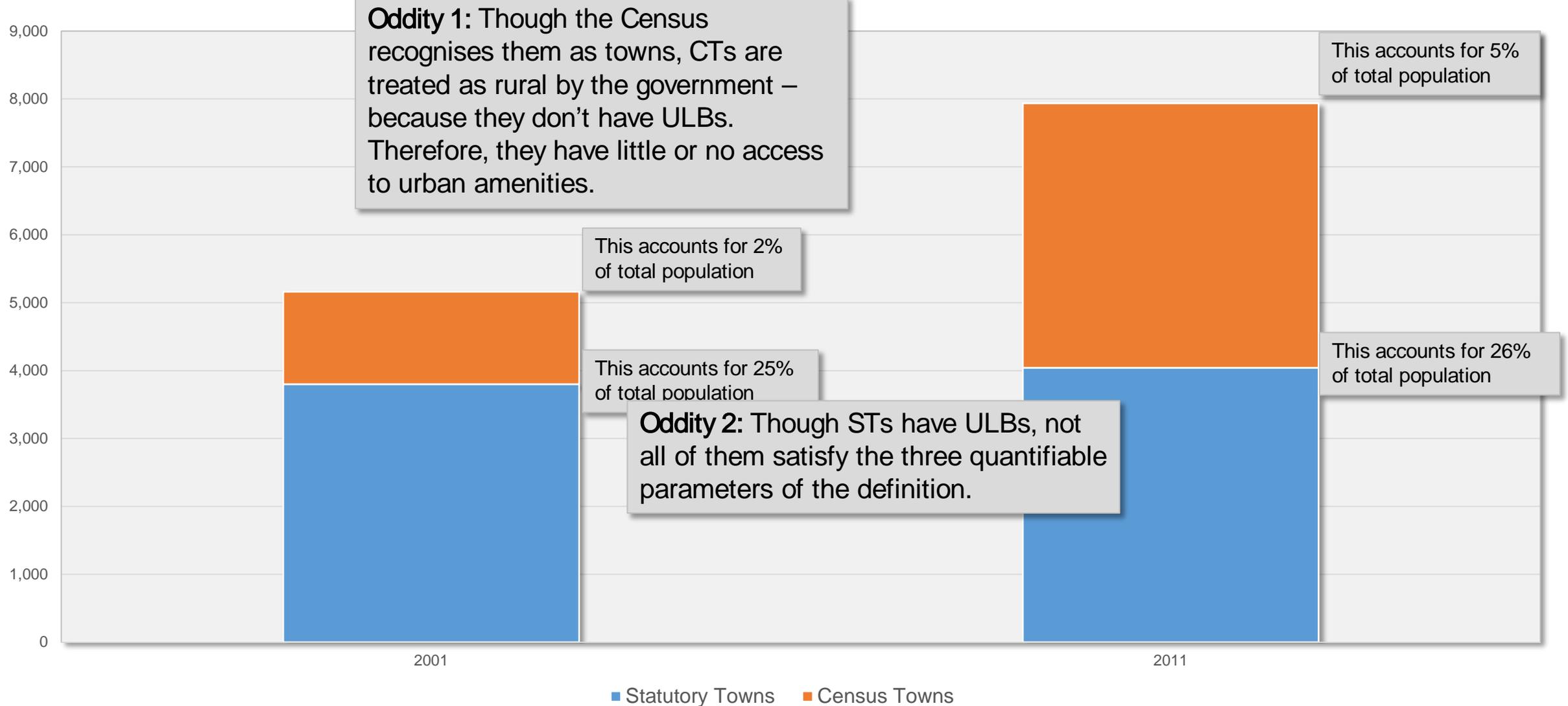
- ❑ Denis and Marius-Gnanou (2011)
 - ❑ Contiguous settlements with population greater than 10,000 should be counted as “urban”
 - ❑ By this measure, approximately 37% of India is “urban”

WHAT ARE WE SAYING?

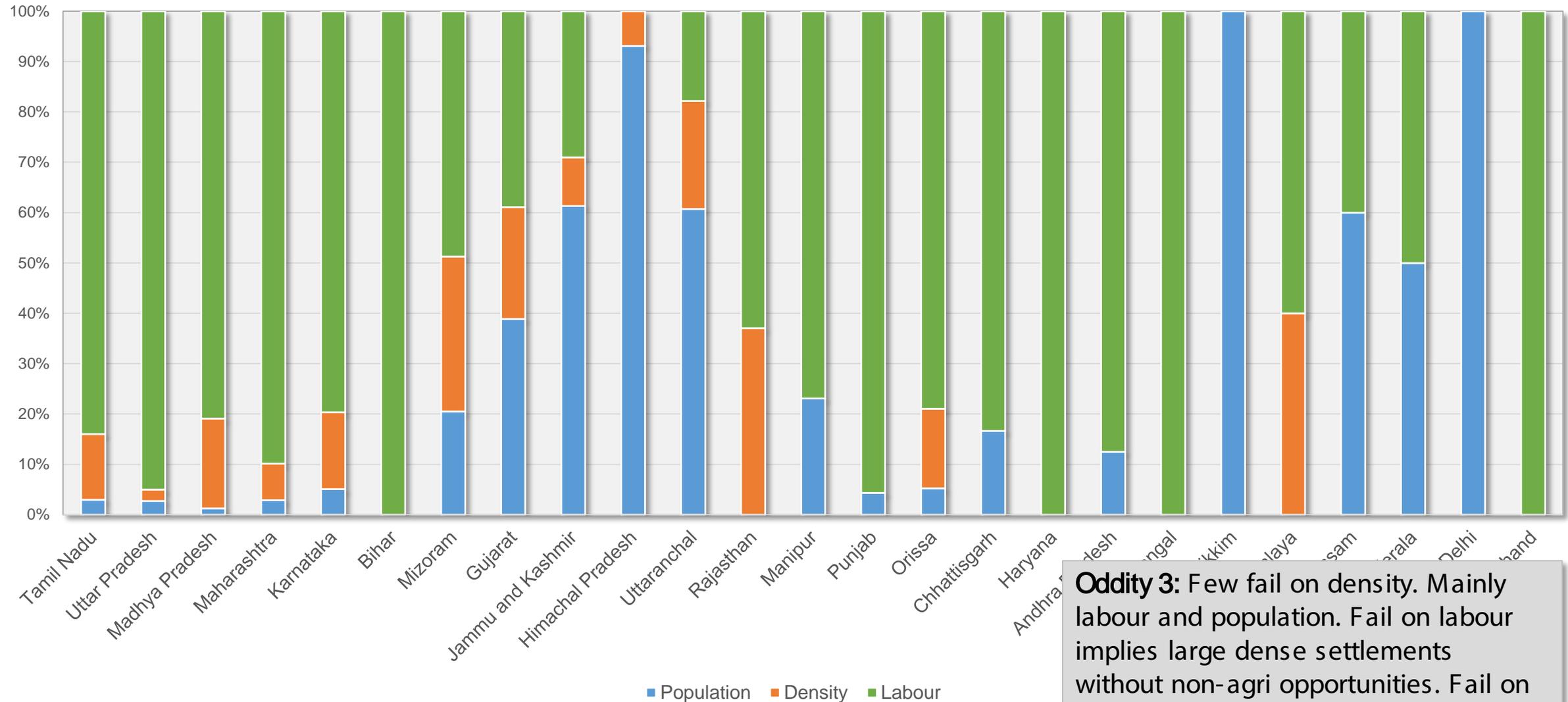
- ❑ Characterisation of extent and location of “urban” India important
 - ❑ Especially the part that is overlooked
 - ❑ Because these are important in urban policy and infrastructure finance discussions
- ❑ The extent of “urban” India is sensitive to definition.
- ❑ Definitions can be hard to defend.

- A quick recap
- What is officially “urban”?
- Settlements with a recognised urban local governing body – called “statutory towns”
- Settlements that satisfy the following three conditions – called “census towns”
 - Population greater than 5,000 persons
 - Population density greater than 400 persons per square kilometre
 - At least 75% of male main workers involved in non-agricultural pursuits

Numbers of Statutory Towns and Census Towns



Statutory Towns not satisfying the statistical conditions, 2001



Oddity 3: Few fail on density. Mainly labour and population. Fail on labour implies large dense settlements without non-agri opportunities. Fail on population implies small dense settlements.

❑ Evolution over time – application of these definitions on current census numbers would result in vastly different “urban”

1872	Only recognised government bodies	Towns with municipalities (based on “Town Improvement Act of 1865” enacted by the Madras government)
1881	Population cut-off clearly defined, density is qualitative	“Where the population is not less than 5,000 and resides in one assemblage of houses, the houses being in juxtaposition or only separated by streets or spaces surrounded on all sides by houses or gardens or spaces whether cultivated or not distinctly appertaining to the houses in question, such assemblage of houses, if bearing one common name shall be considered a town.” – 1881 Census Report of India
1901-1941	Population size, density, economic activity, government notification – but only population cut-off clearly defined.	“...all municipalities of whatever population and every other collection of houses, permanently inhabited by not less than 5,000 persons, which the Provincial Superintendent of Census having regard to the character and relative density of its population, its importance as a centre of trade and its historical associations, considered to treat as town” – Madras Presidency “Certain well accepted tests such as constitution in regard to sanitary and police arrangements, relative density of the dwellings, numerical strength and character of the population, the importance of the place with regard to trade, architecture and historical associations were laid down as the distinguishing features of urban tracts” – Cochin state “Towns consist of: (a) every municipality of whatever size; (b) all civil lines not included in municipal limits; (c) every cantonment; and (d) every other continuous collection of houses permanently inhabited by not less than 5,000 persons and possessing an urban character. In dealing with places falling under the last head, the character of population, the relative density of dwellings, the importance of the places as centres of trade and its historical associations were taken note of.” – Travancore State

- What about internationally? How does our definition compare?
- Majority of countries use a population based condition for “urban”
 - United Kingdom uses 10,000 cut-off, France uses a 2,500 cut-off
 - If India defined “urban” on its population cut-off alone – 40% urban in 2001, and 50% in 2011
- Many use density
 - If India defined “urban” on its density cut-off alone – 70% urban in 2001
- Some use concentration of non-agricultural labour
 - Japan has a cut-off of 60%
 - If India defined “urban” on its labour cut-off alone – 34% in 2001, and 36% in 2011
- Table below gives the various scenarios of urban population if combinations of the components were considered

Census	Official	Population	Density	Labour	Population and Density	Population and Labour	Density and Labour
2001	27%	43%	69%	34%	40%	29%	31%
2011	31%	47%		36%		31%	

SENSITIVITY TO THE DEFINITION

- ❑ Returning to Uchida and Nelson (2010)
 - ❑ Urbanisation = agglomeration economies
 - ❑ Agglomeration economies driven by:
 - ❑ Population density | market thickness
 - ❑ Population size | market size
 - ❑ Travel time | access time to market

- ❑ Returning to Denis and Marius-Gnanou (2011)
 - ❑ Identified large settlements which exhibited contiguity in dense built area
 - ❑ Entire contiguous area defined as “urban”

- ❑ Authors suggest that density is a major driver
 - ❑ Which is true – urban-like densities would require urban-like infrastructure
 - ❑ Sewerage, water-supply, etc.

SENSITIVITY TO THE DEFINITION | LABOUR

- ❑ So what is different?
 - ❑ Formulations of population and non-agricultural workforce

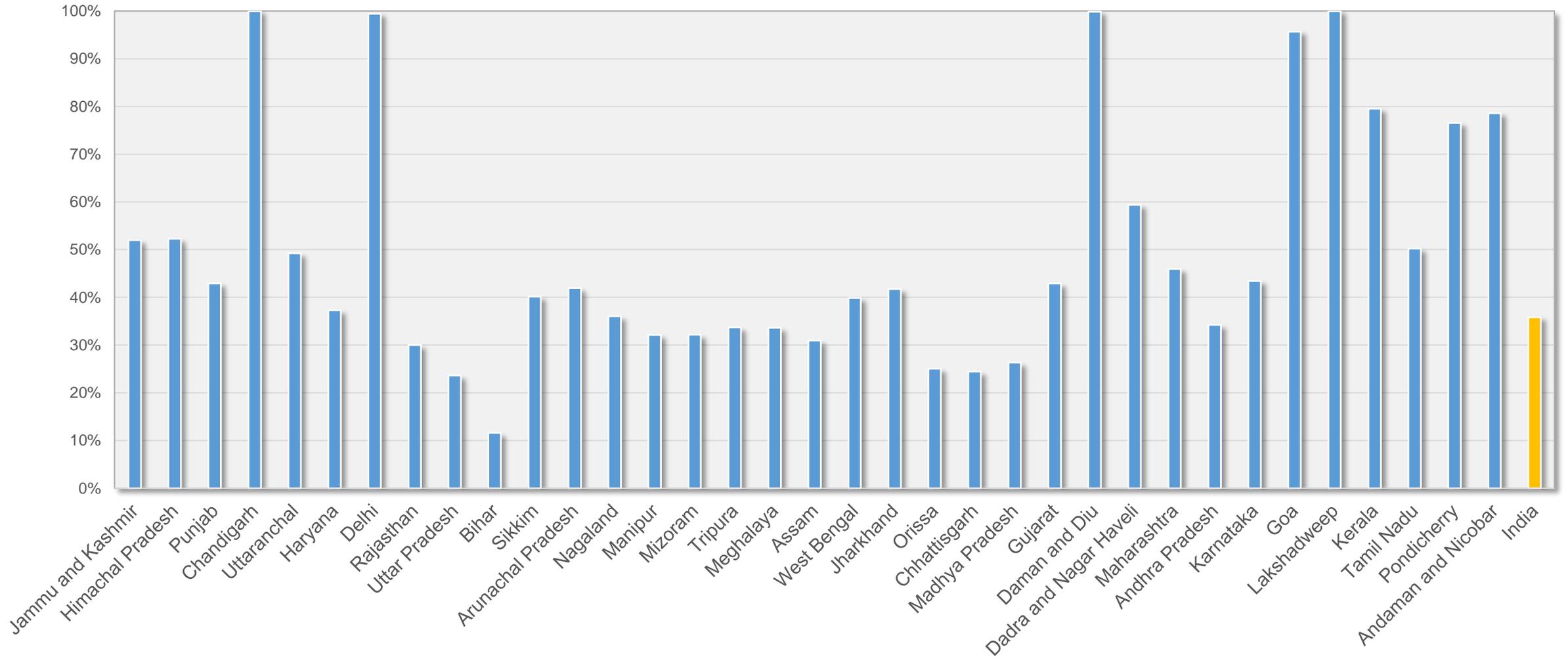
- ❑ Consider urban-like non-agricultural workforce
 - ❑ Important in terms of providing social security nets
 - ❑ Important in terms of providing employment opportunities
 - ❑ But not so much in terms of infrastructure
 - ❑ Chandrasekhar (2011): 8 million workers travel from erstwhile rural areas to work in urban areas

- ❑ Also, what is the basis for “75% of male main workers involved in non-agricultural pursuits”?
 - ❑ Why not 50%?
 - ❑ Why not 75% of all workers, and not just male main workers?
 - ❑ Why not 50% of all workers?

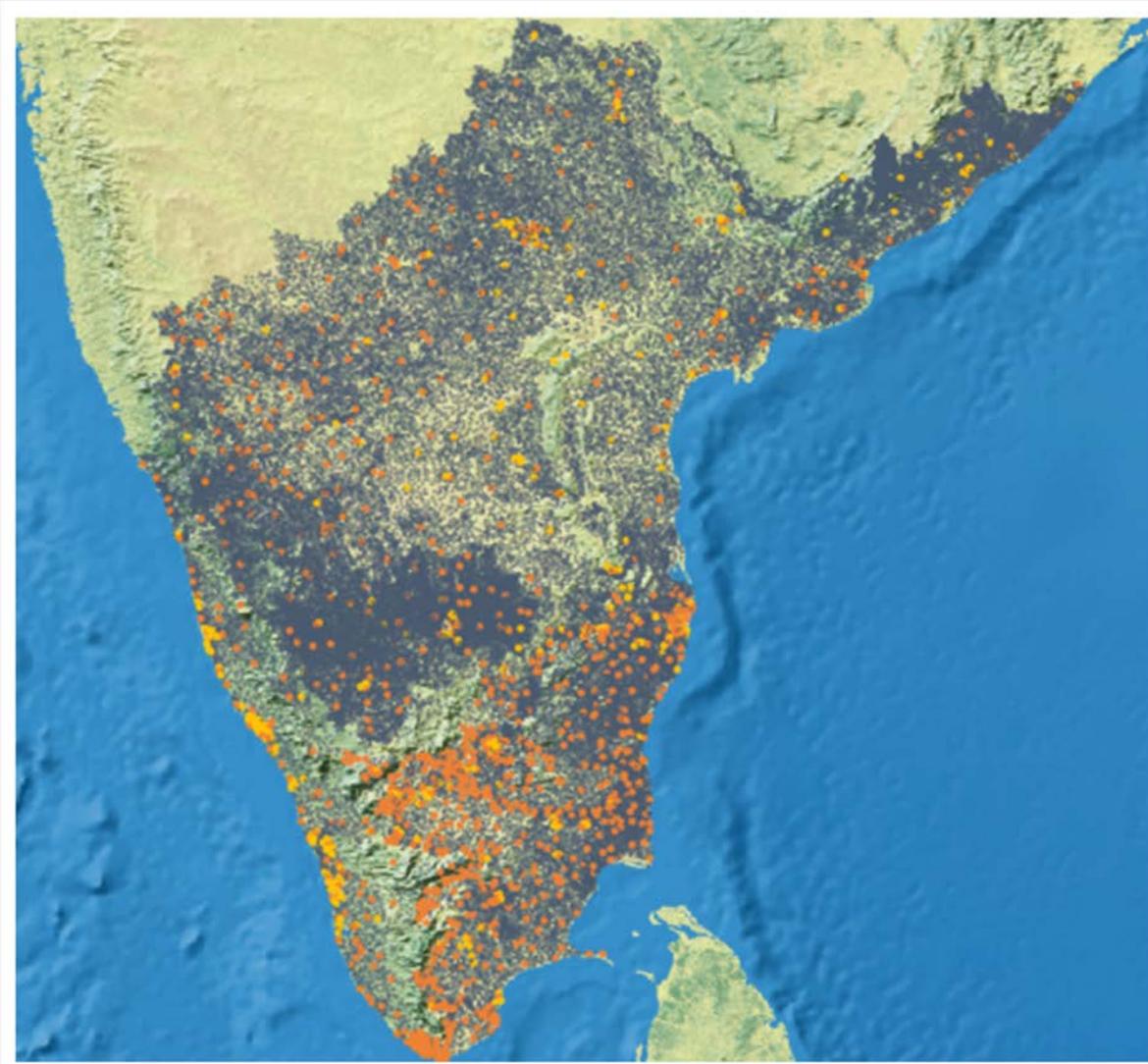
SENSITIVITY TO THE DEFINITION | LABOUR

Percentage of Urban Population if at least 75% of male main workers work in non-agricultural pursuits

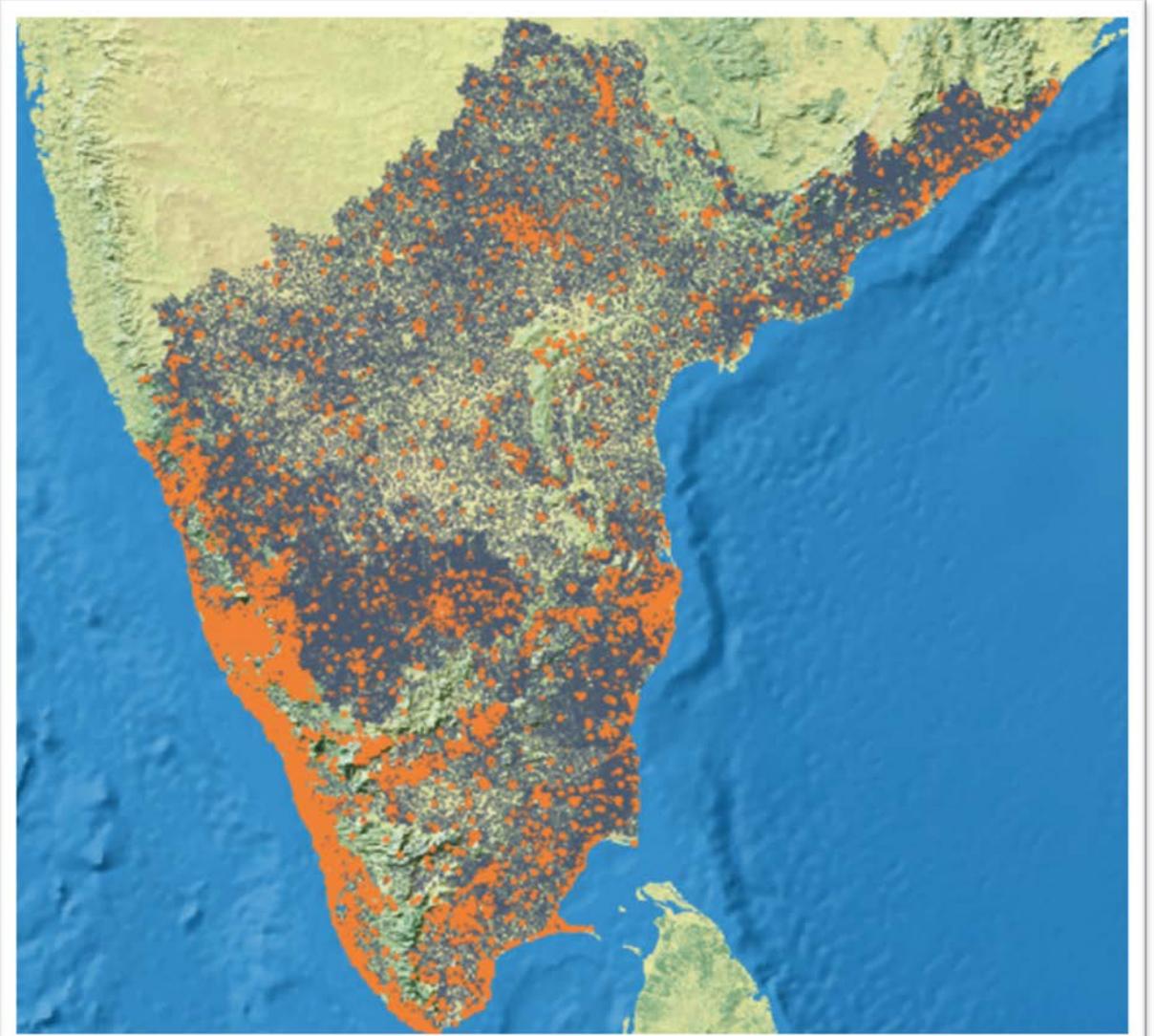
Census 2011



SENSITIVITY TO THE DEFINITION | LABOUR

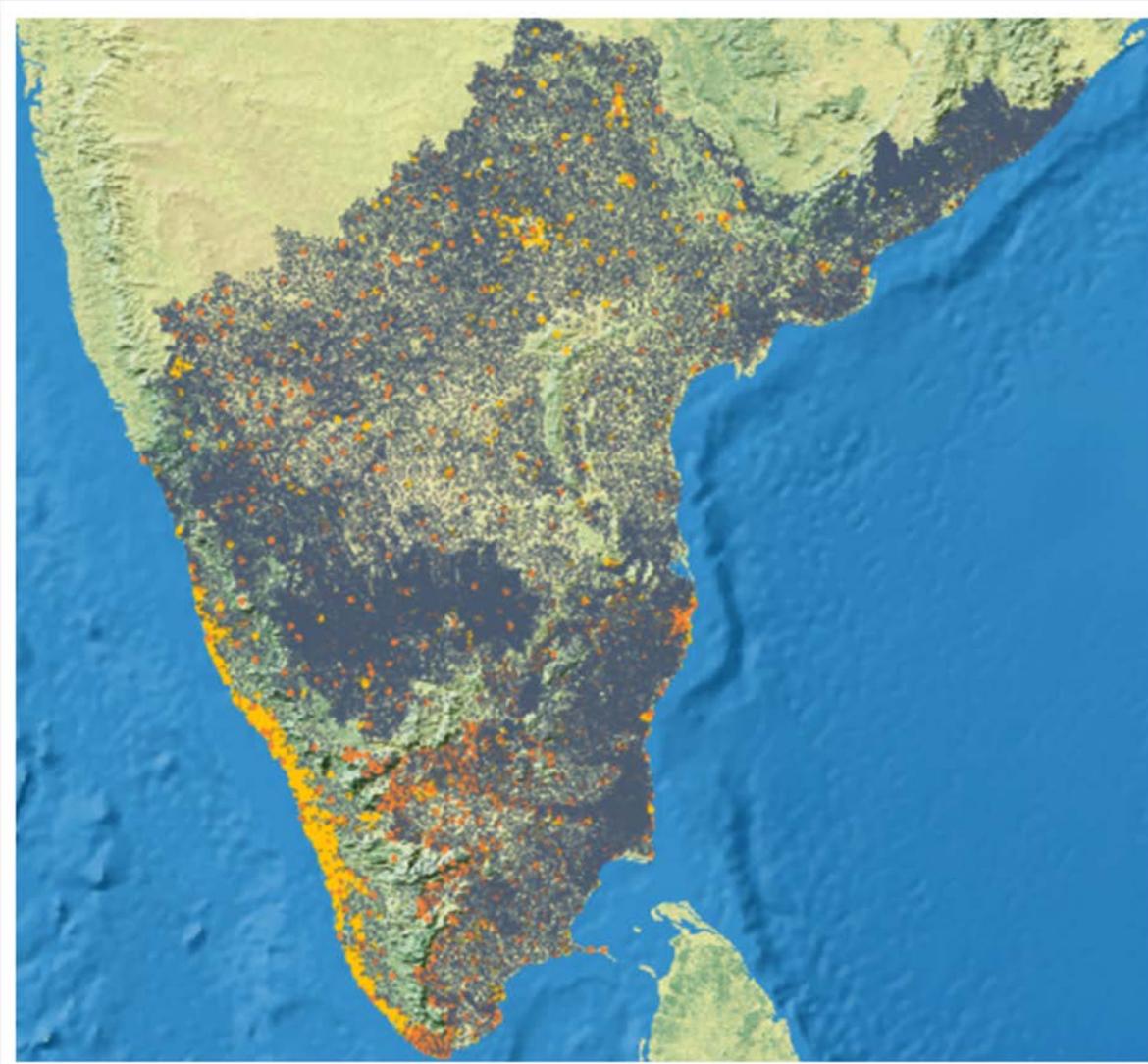


Official 2001

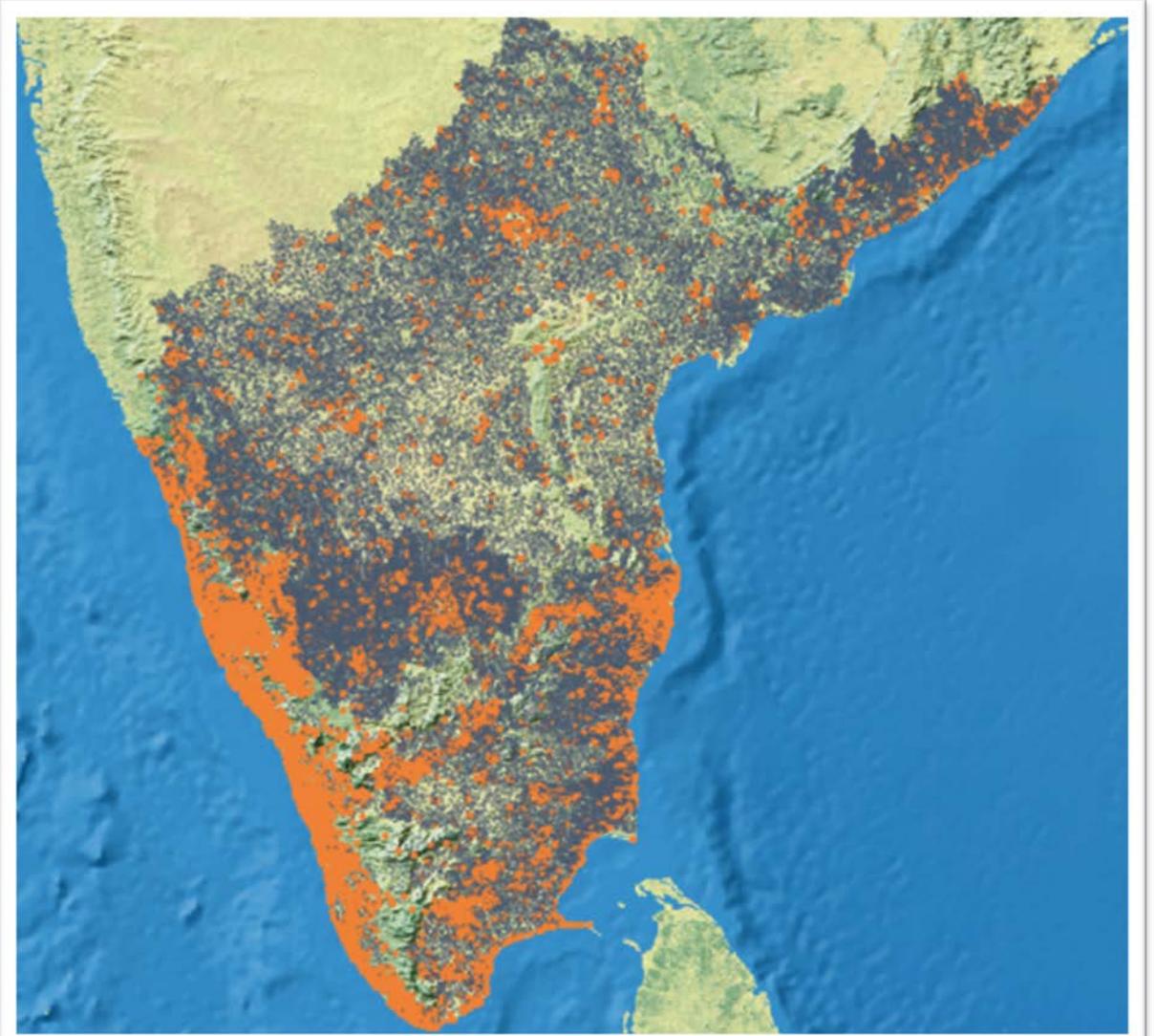


75% male main workers in non-agricultural pursuits, 2001

SENSITIVITY TO THE DEFINITION | LABOUR



Official 2011



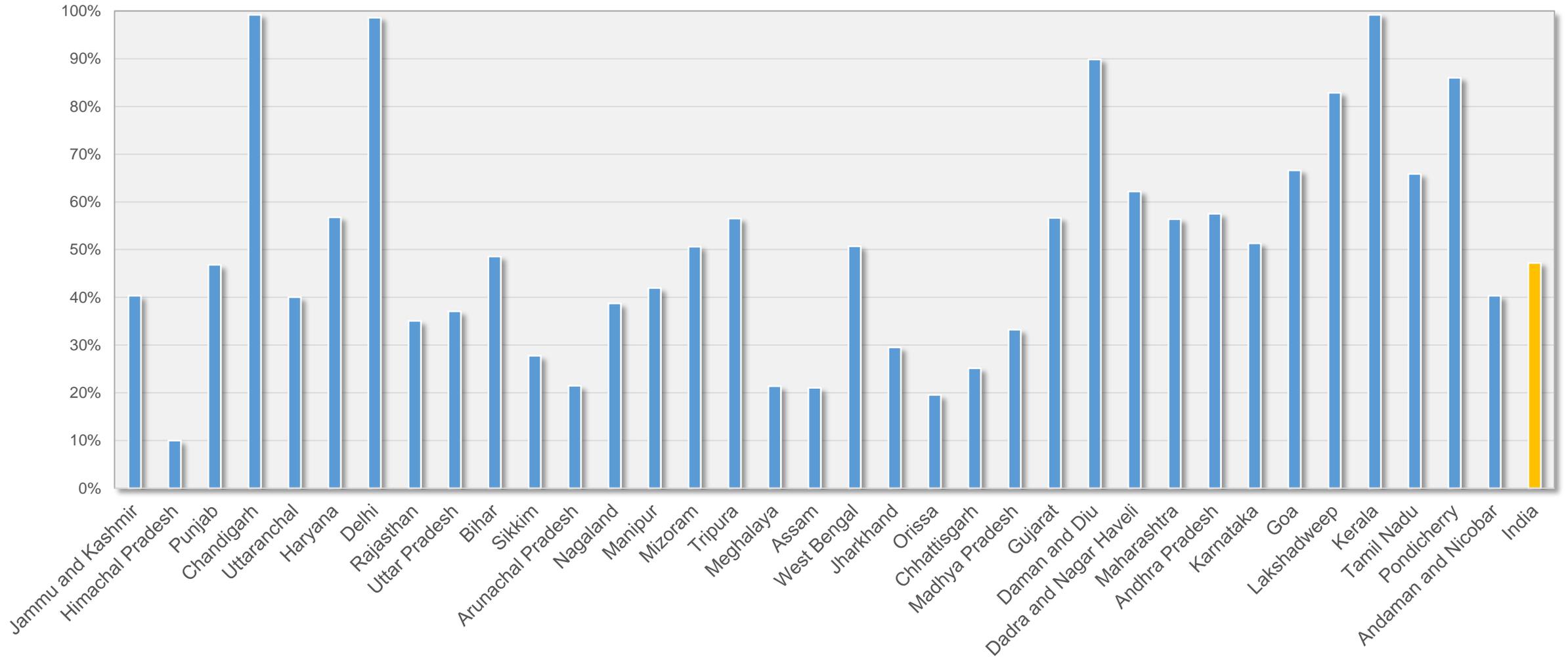
75% male main workers in non-agricultural pursuits, 2011

SENSITIVITY TO THE DEFINITION | POPULATION

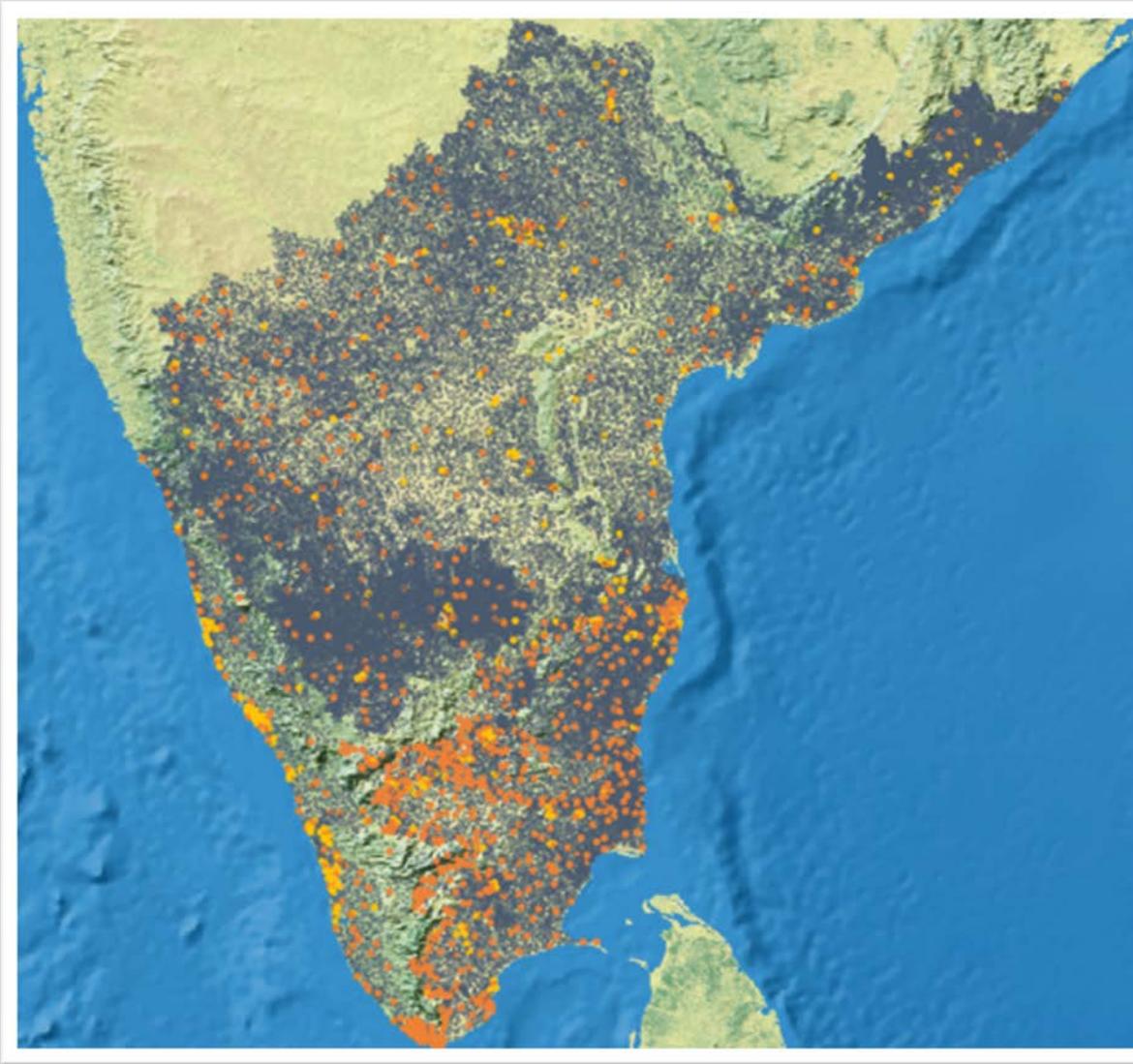
- ❑ Consider urban-like population size
 - ❑ Important in infrastructure provision
- ❑ But why 5,000 cut-off?
- ❑ France has a cut-off of 2,500
 - ❑ In equivalence, India would be approximately 66% urban
- ❑ UK has a cut-off of 10,000
 - ❑ In equivalence, India would be approximately 33% urban

SENSITIVITY TO THE DEFINITION | POPULATION

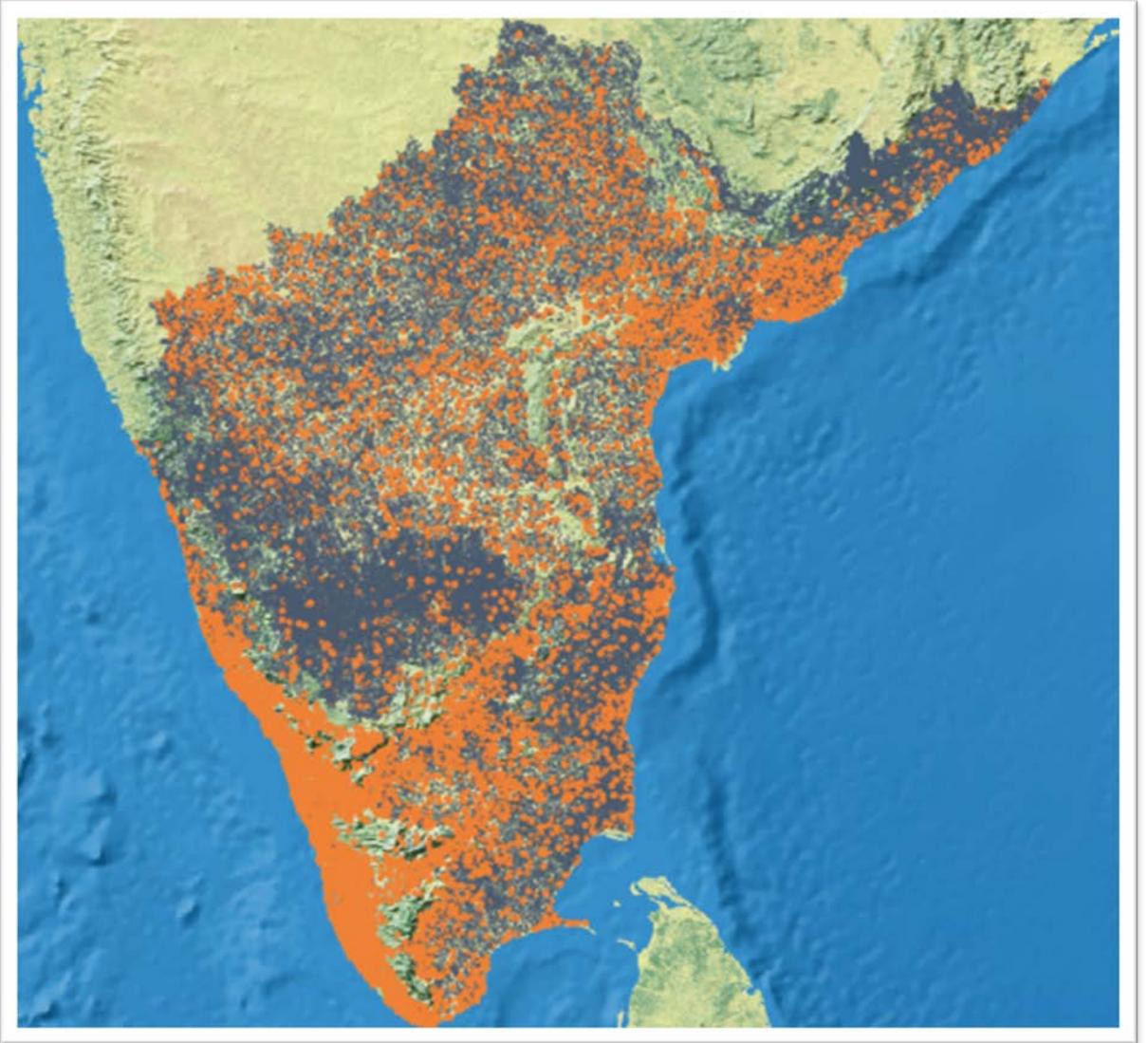
Percentage of urban population if population size greater than 5,000
Census 2011



SENSITIVITY TO THE DEFINITION | POPULATION

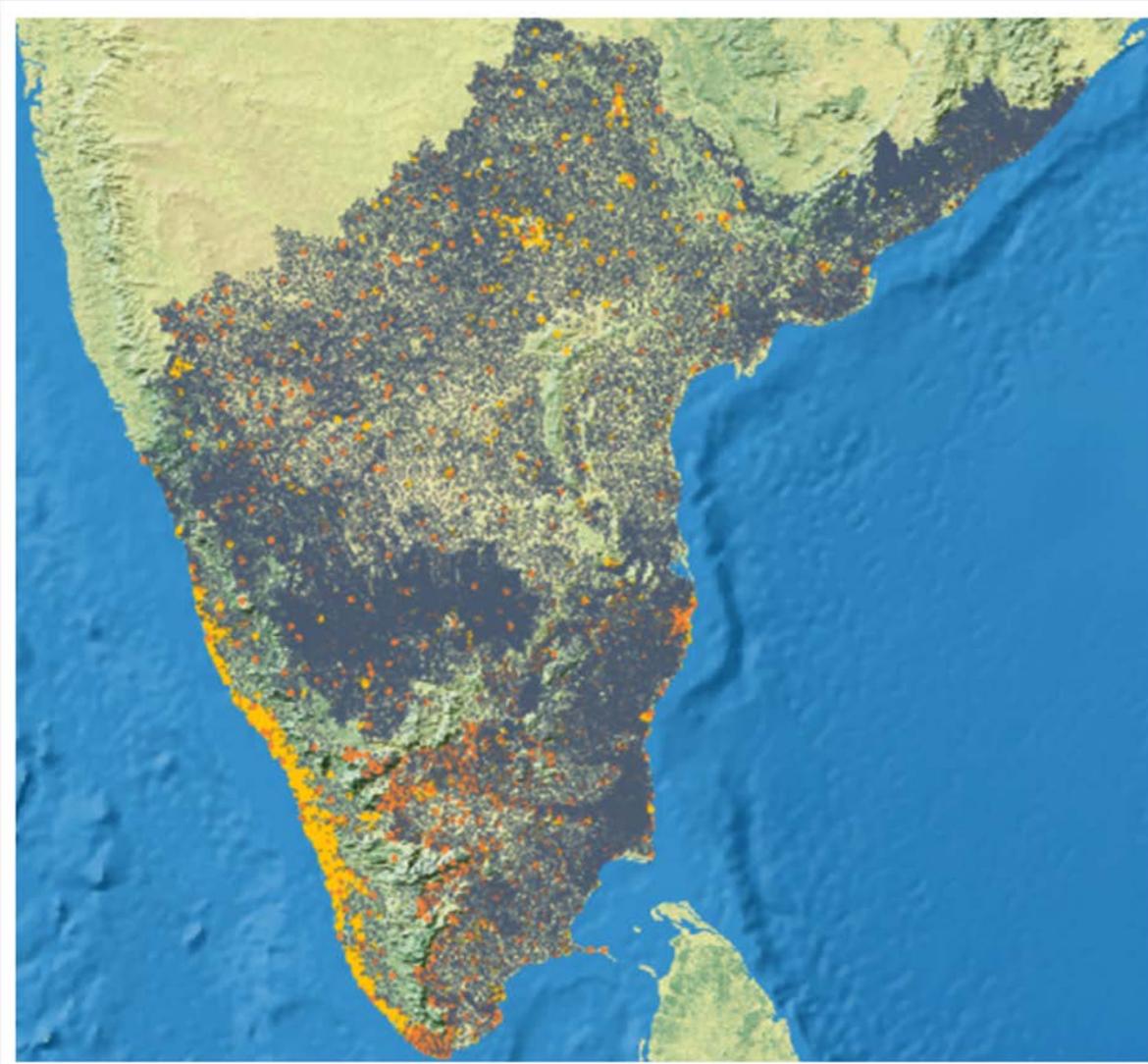


Official 2001

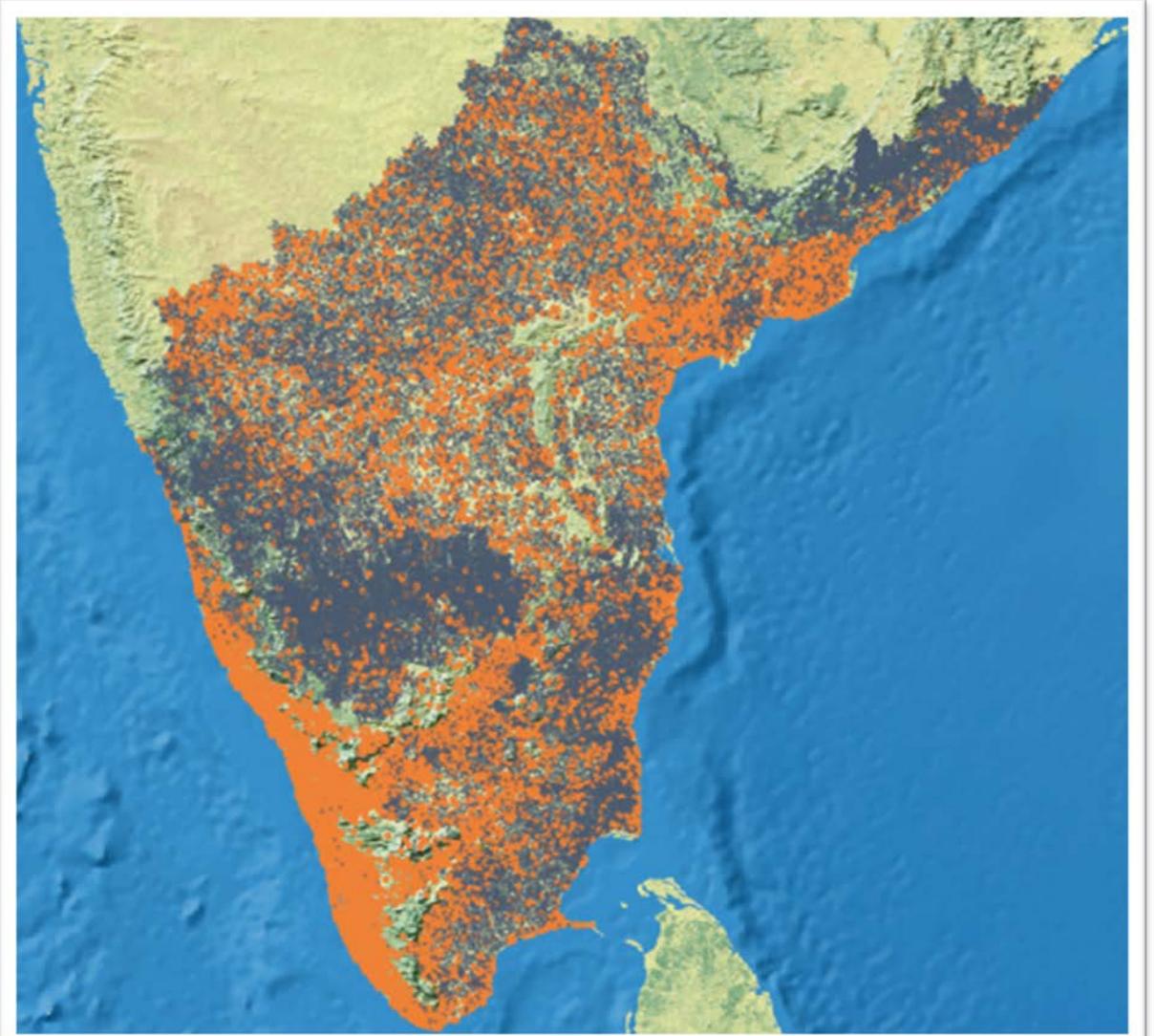


Population greater than 5,000, 2001

SENSITIVITY TO THE DEFINITION | POPULATION



Official 2011

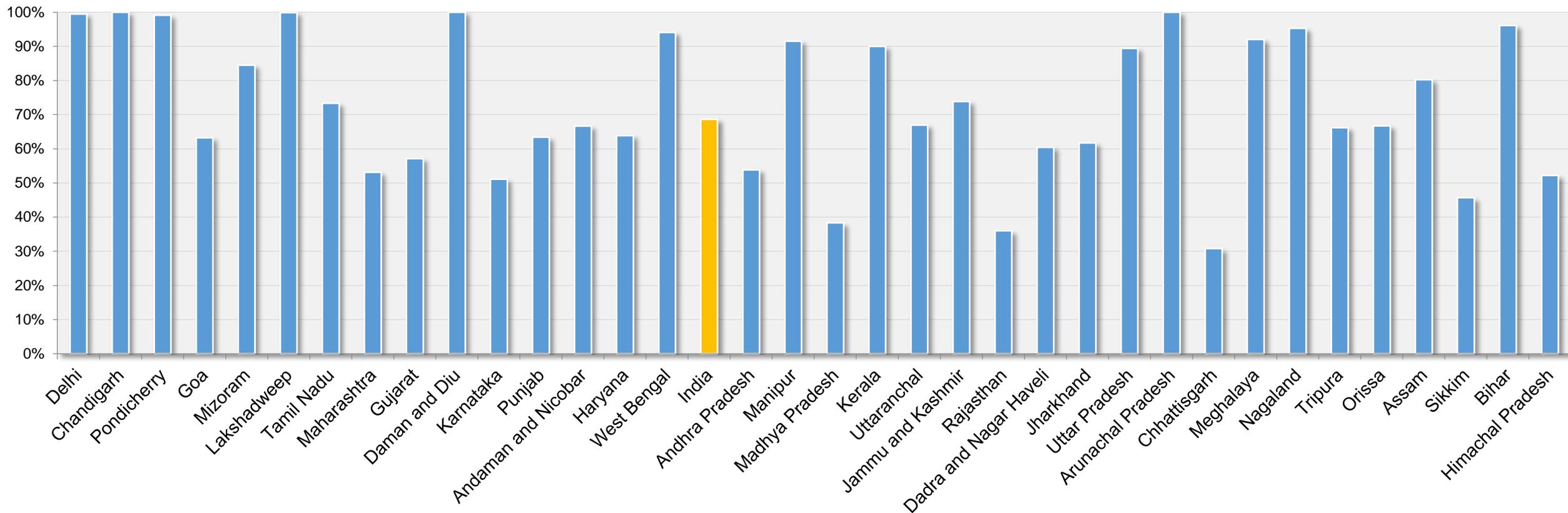


Population greater than 5,000, 2011

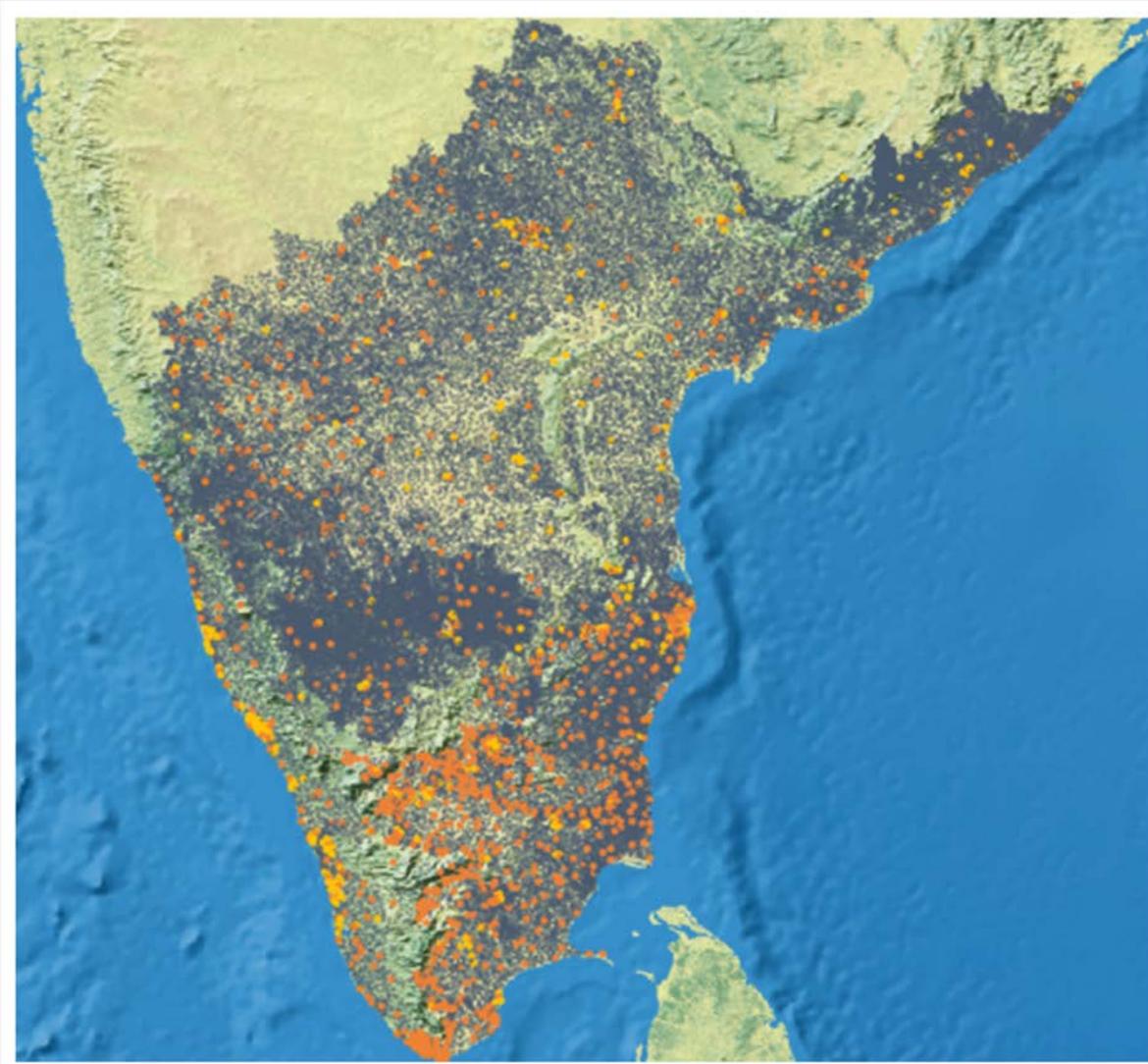
SENSITIVITY TO THE DEFINITION | DENSITY

- ☐ Finally urban-like density
 - ☐ Not uncommon internationally
 - ☐ Also very important in terms of infrastructure provision

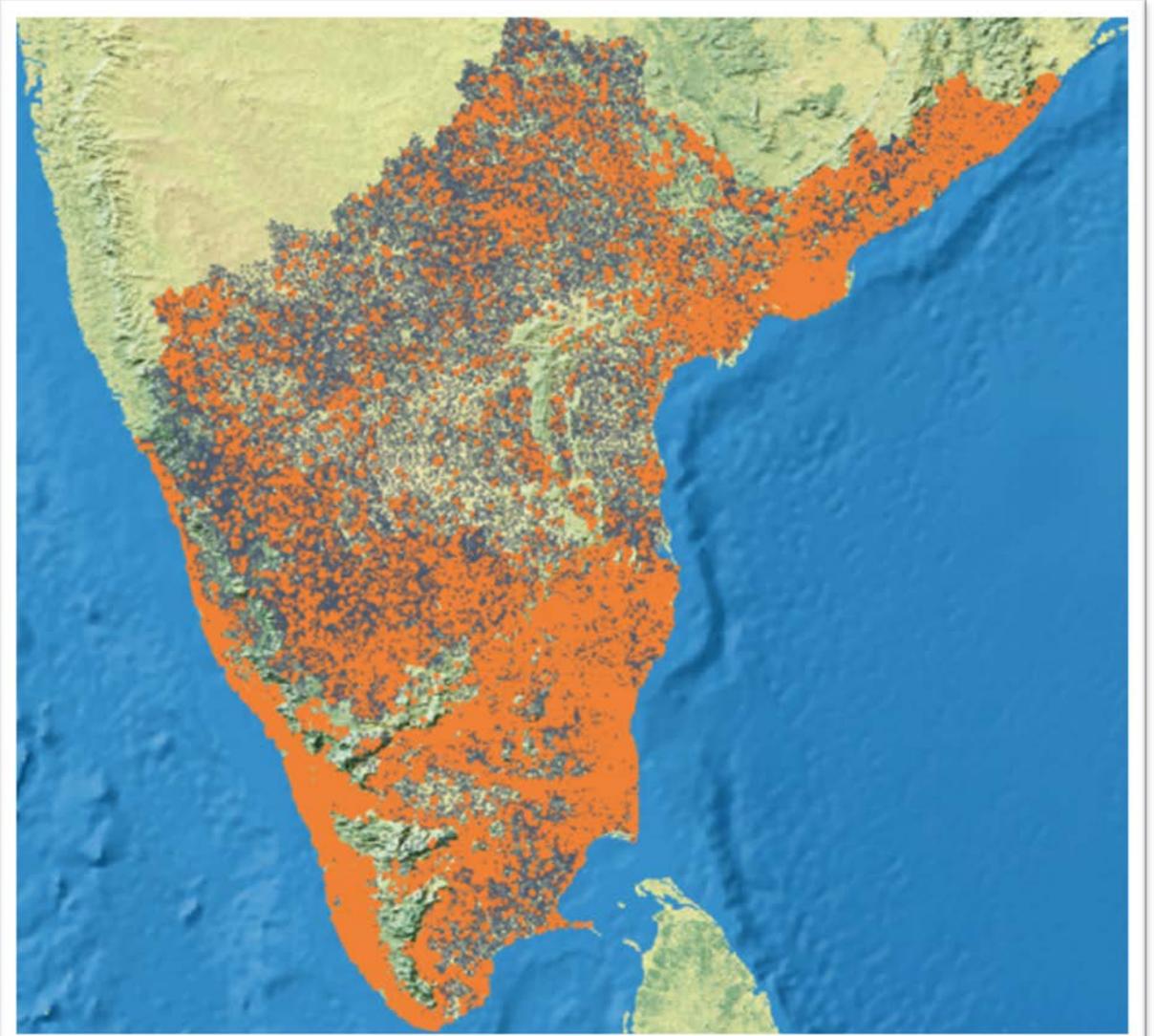
☐ But if density (400 persons per square kilometre) were the sole criteria – 69% of India would be urban (as of 2001)



SENSITIVITY TO THE DEFINITION | DENSITY



Official 2001

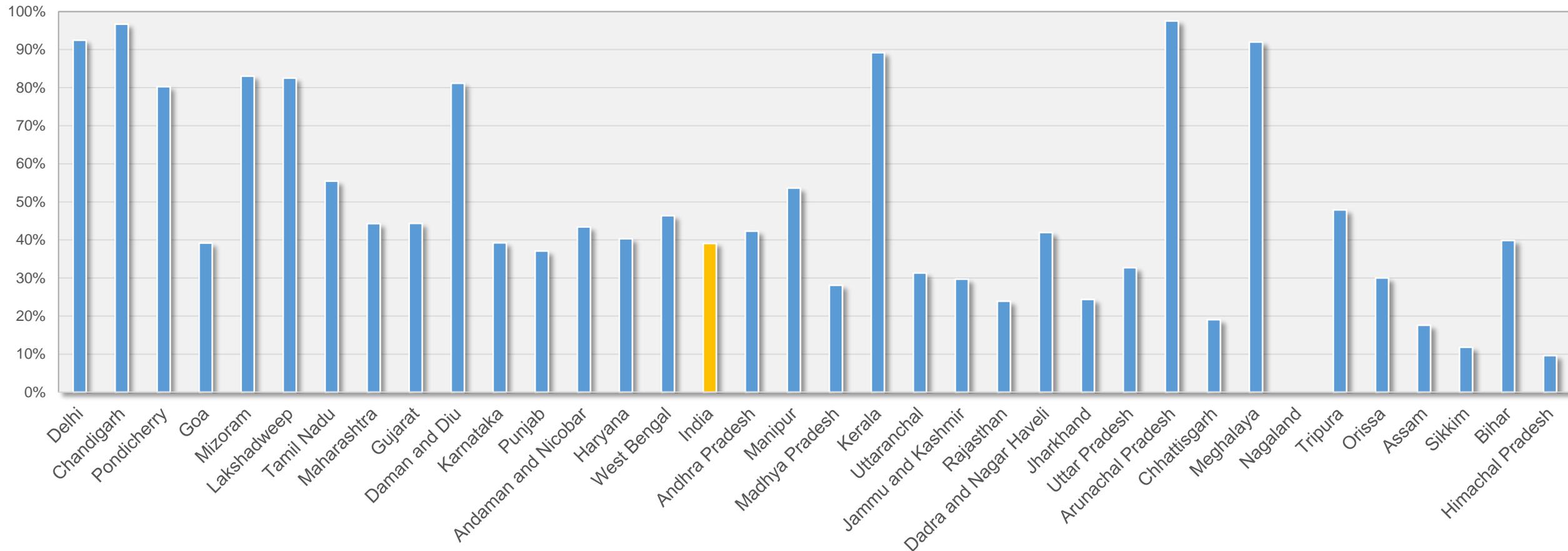


Density greater than 400, 2001

SENSITIVITY TO THE DEFINITION

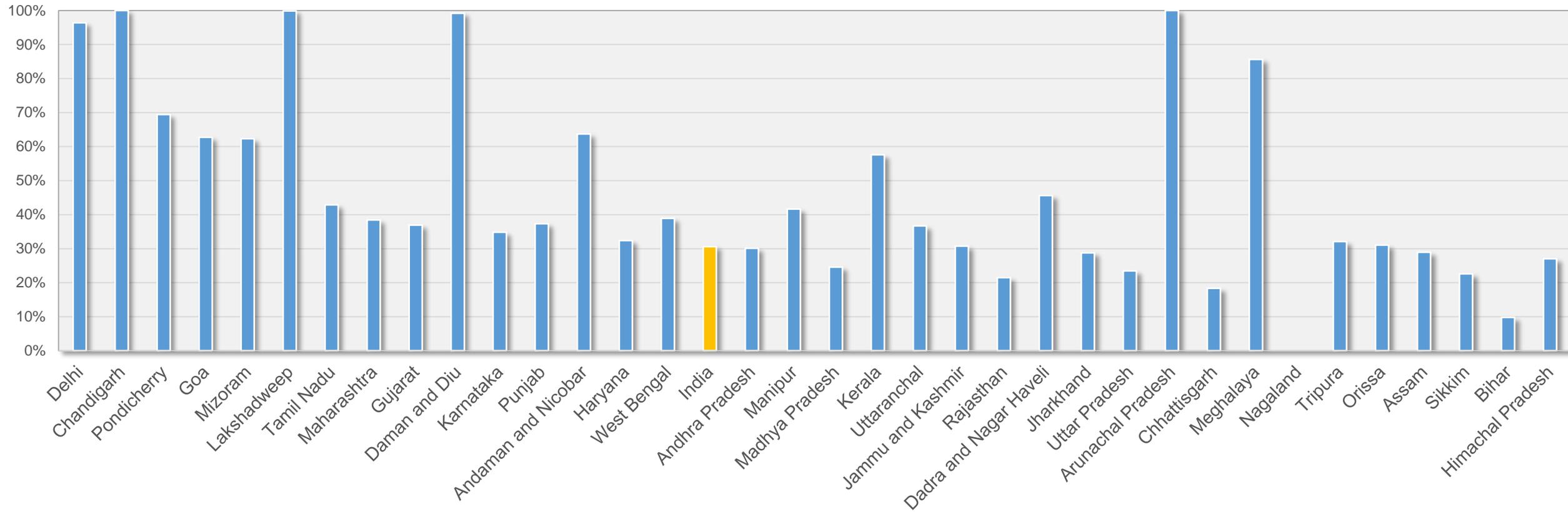
- A quick recap
 - Density is clearly the primary characteristic of urban-ness

What happens to the density based figures if we add population?



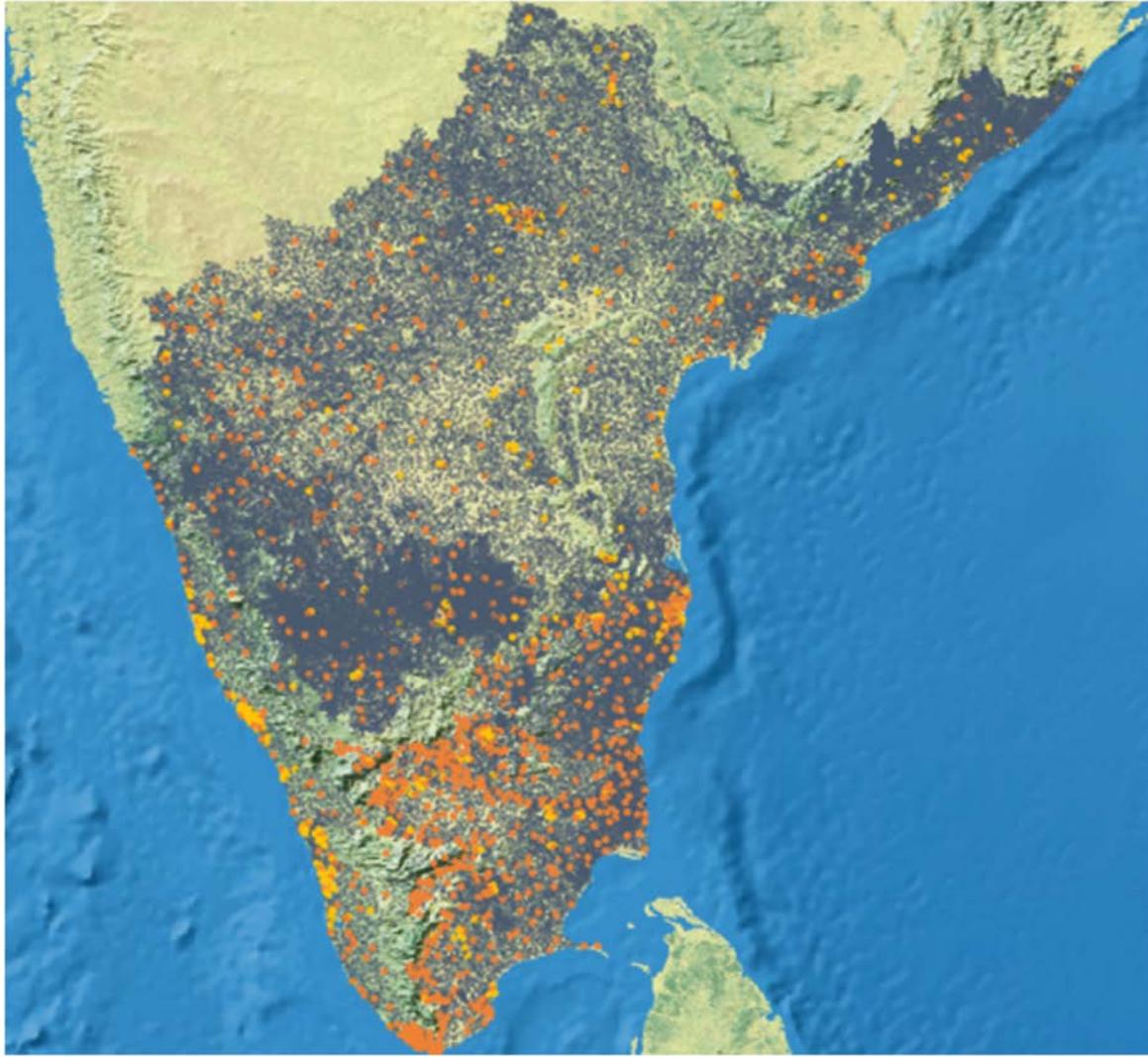
SENSITIVITY TO THE DEFINITION

What if we add labour?

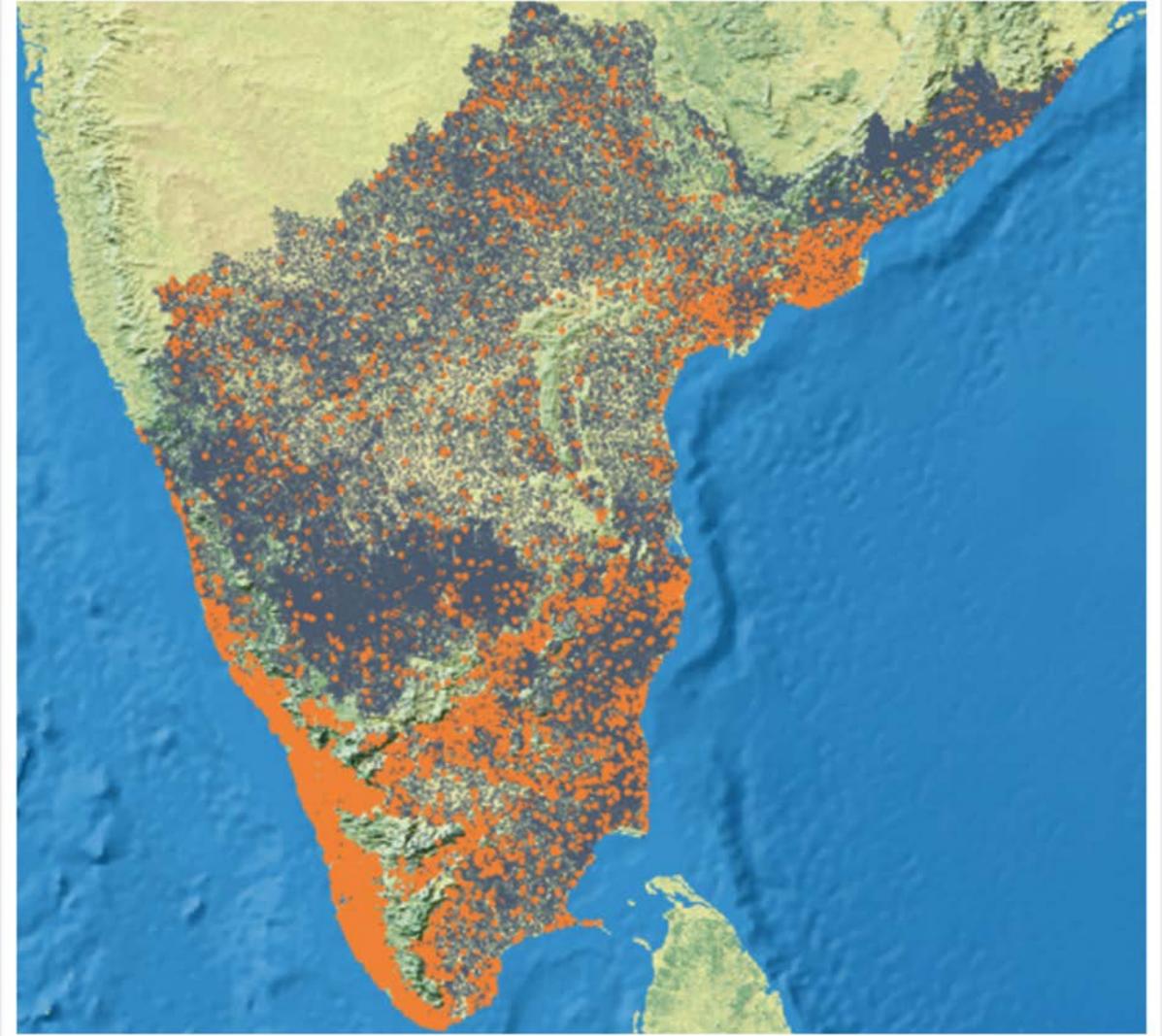


Clearly both population and labour are acting as limiting factors

SENSITIVITY TO THE DEFINITION

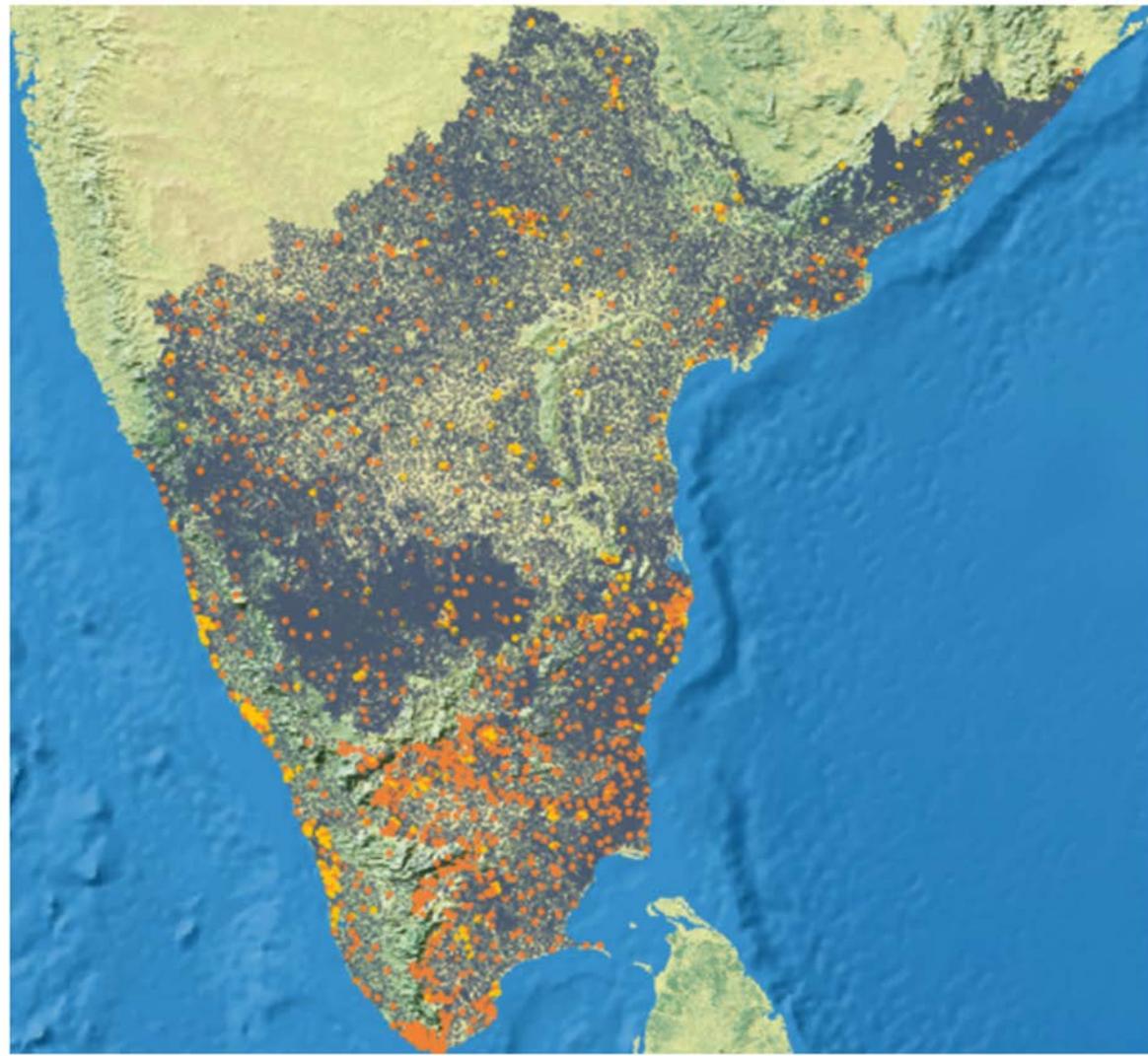


Official 2001

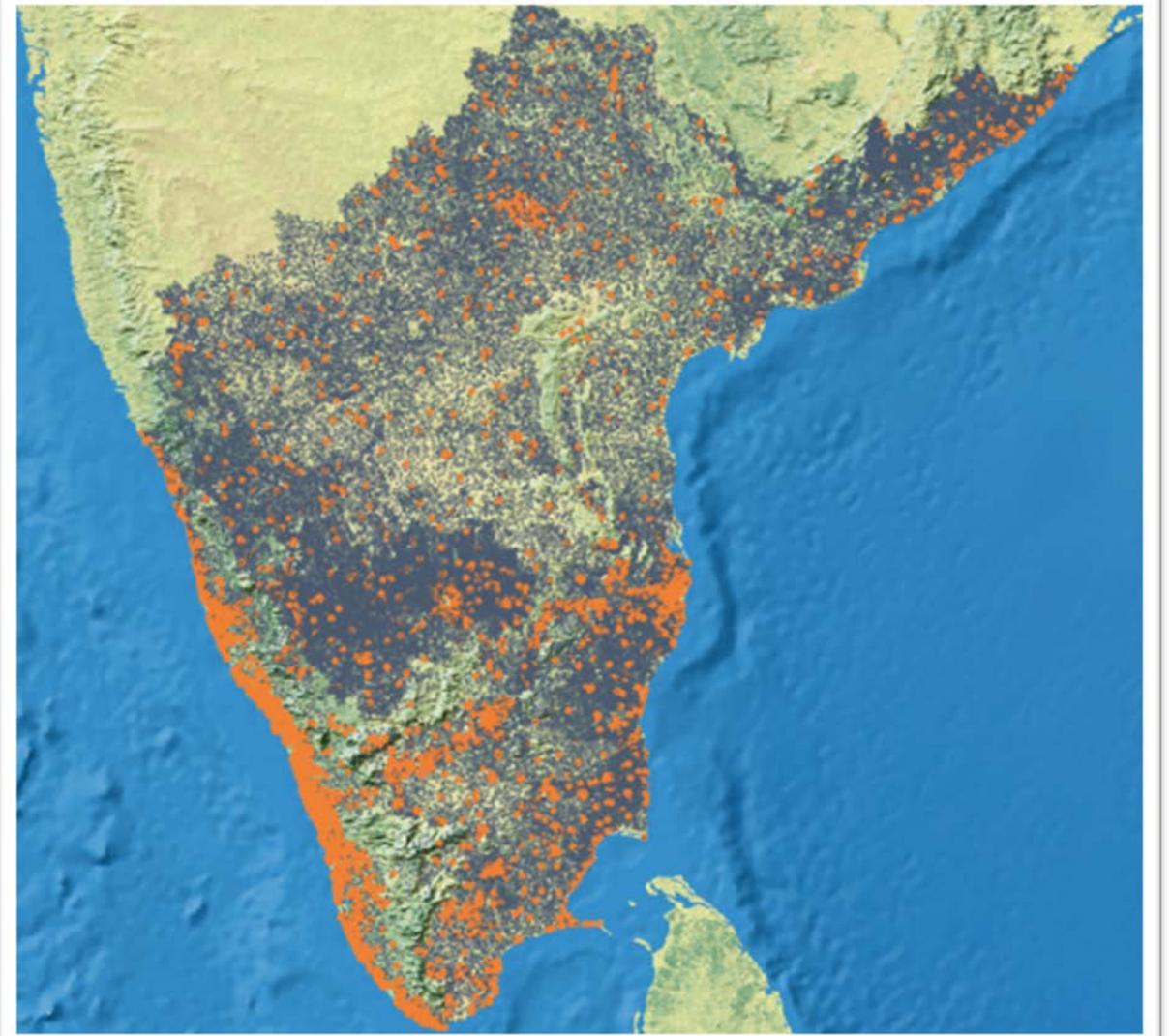


Population greater than 5,000 and
density greater than 400, 2001

SENSITIVITY TO THE DEFINITION



Official 2001

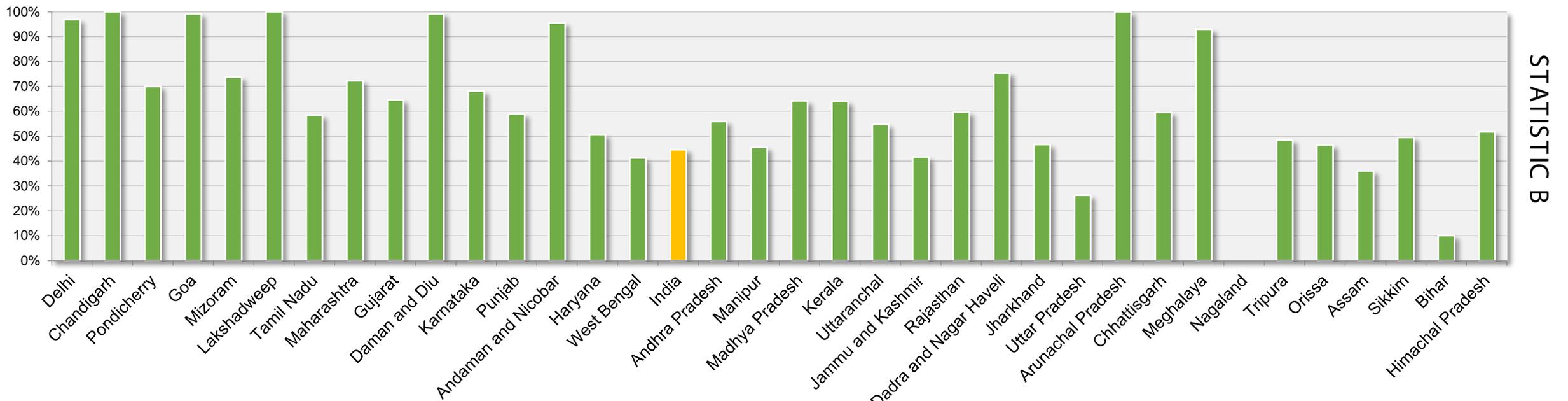
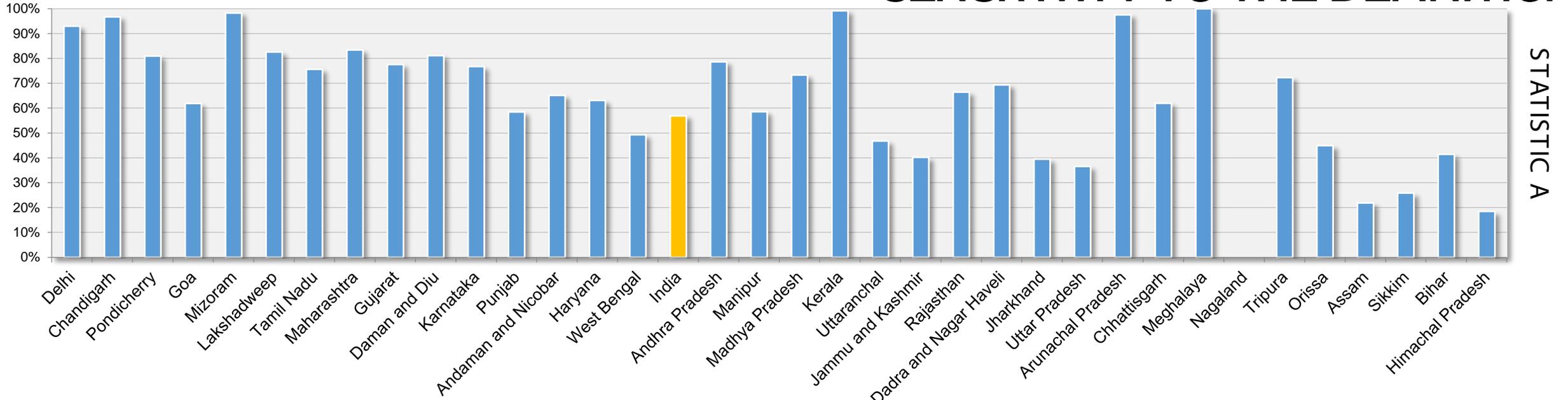


75% of male main workers in non-agriculture and density greater than 400, 2001

SENSITIVITY TO THE DEFINITION

- ❑ Clearly population size and labour conditions have a limiting effect on declaring densely populated areas “urban”
- ❑ But how do we measure these effects?
- ❑ Can we isolate their effect on density?
 - ❑ Some simple arithmetic allows us to do the following (and construct our first metric):
- ❑ Consider **Statistic A**: proportion of population that live in settlements that satisfy population and density conditions to the population that live in settlements that satisfy the density condition
- ❑ Consider **Statistic B**: proportion of population that live in settlements that satisfy labour and density conditions to the population that live in settlements that satisfy the density condition
- ❑ For a region, if **Statistic A** < **Statistic B**, then population would be the limiting factor for that region
- ❑ For a region, if **Statistic B** < **Statistic A**, then labour would be the limiting factor for that region

SENSITIVITY TO THE DEFINITION



SENSITIVITY TO THE DEFINITION

- ❑ Clearly two inferences can be drawn:
 - ❑ If Statistic A < Statistic B, then population is limiting factor
 - ❑ That implies, that in some regions, small, dense settlements with large non-agricultural labour force exist
 - ❑ For example, all the union territories, north-eastern states
 - ❑ If Statistic B < Statistic A, then labour is limiting factor
 - ❑ That implies, that in some regions, large and dense settlements with large agricultural labour force exist
 - ❑ For example, Uttar Pradesh, Bihar, West Bengal, Madhya Pradesh
- ❑ What are the policy implications of these inferences?

- ❑ The other aspect of measuring “urban” is to measure the sensitivity to process
- ❑ Why?
 - ❑ Ex ante identification of “urban” settlements by Census
 - ❑ Logical, but error prone
- ❑ Theoretically, four types of error possible
 - ❑ Persistently (false) rural – meet urban conditions in current and previous census, but rural in both.
 - ❑ Persistently (false) urban – do not meet urban conditions in current and previous census, but urban in both
 - ❑ Underestimated growth - designated as rural in current and previous census, did not meet urban criteria in previous census but does meet criteria in current census. .
 - ❑ Overestimated growth – designated as urban in current census, rural in last, but does not fulfill urban conditions.
- ❑ Each of these errors implies different potential political economy:
 - ❑ Why do some areas remain rural even after fulfilling conditions to be urban?
 - ❑ Why do some areas gain the urban designation even if they don't meet conditions.
 - ❑ How large are the over and under estimation – and does this imply anything about state knowledge of urbanisation and ability to project (important for infrastructure planning)?

- ❑ India is more “urban” than official estimates suggest

- ❑ Policy implications can be massive
 - ❑ Consider JNNURM, NREGA, etc.
 - ❑ Small change in percentage of urban population would imply large changes in resource allocations

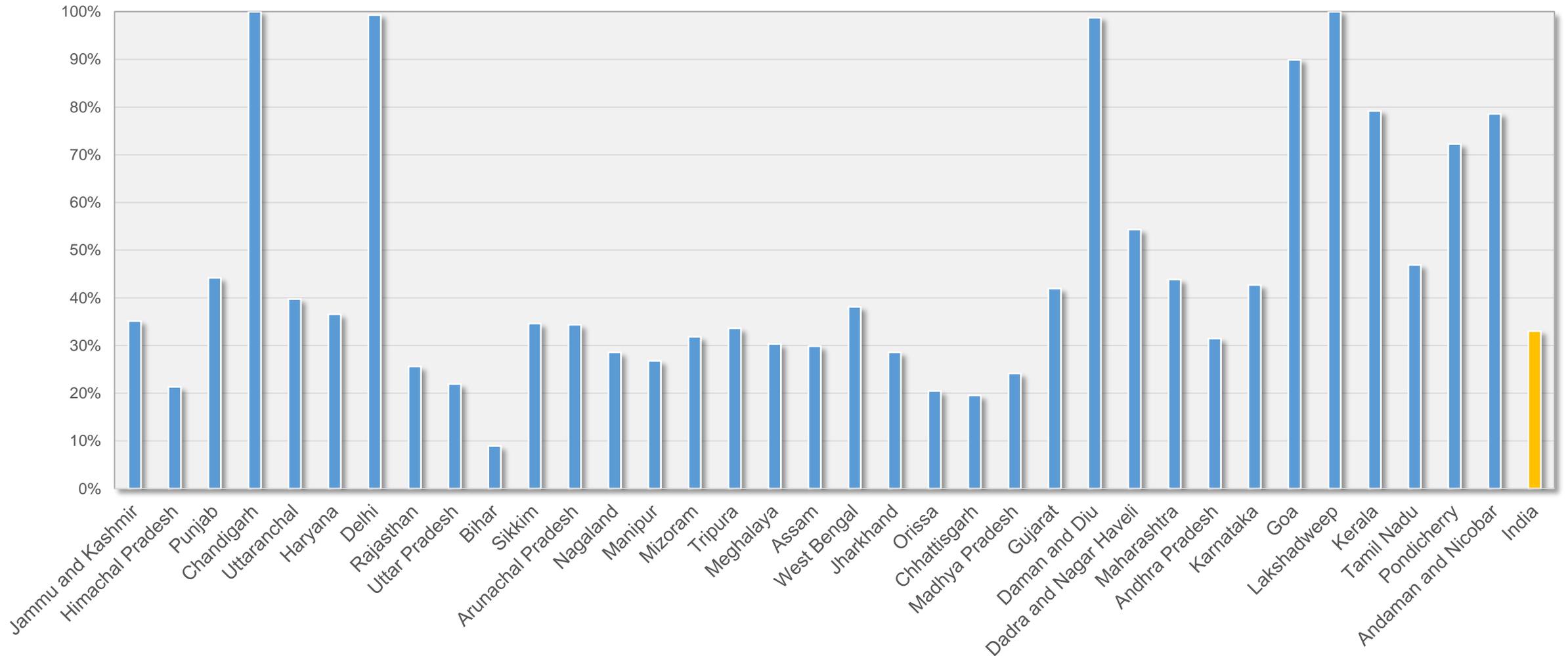
- ❑ Next steps:
 - ❑ Settlement level analysis for all India
 - ❑ Estimating the metrics discussed at various levels of geographical aggregation
 - ❑ Defining rural-urban as a range between 0-1 rather than the existing binary: 0-truly rural, 1-truly urban, and all settlements that fall in the errors forming the range between 0 and 1
 - ❑ Question whether truly urban and truly rural can exist

THANK YOU

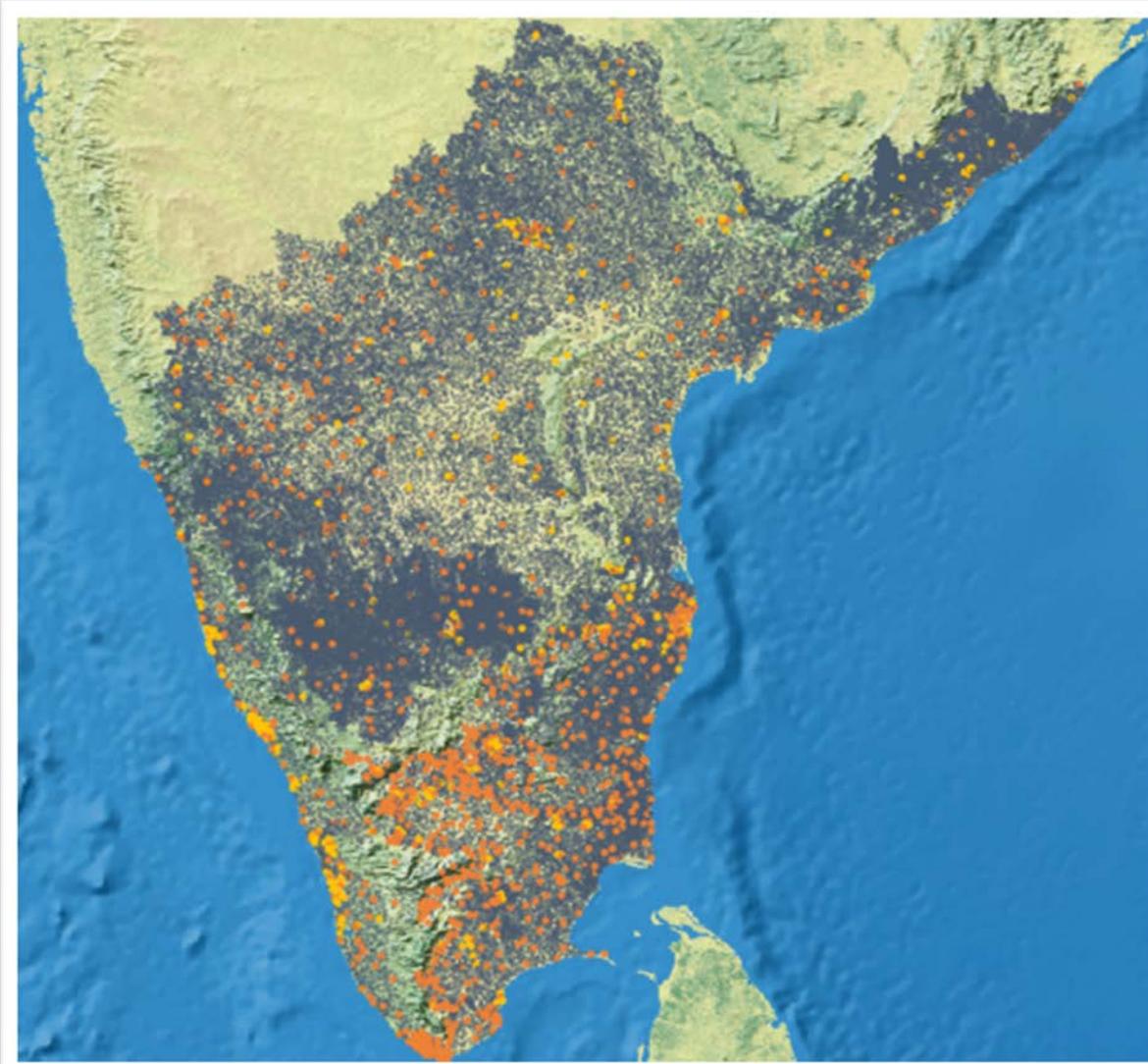
ADDITIONAL SLIDES – IN CASE RELEVANT QUESTIONS ARISE IN Q&A

SENSITIVITY TO THE DEFINITION | LABOUR

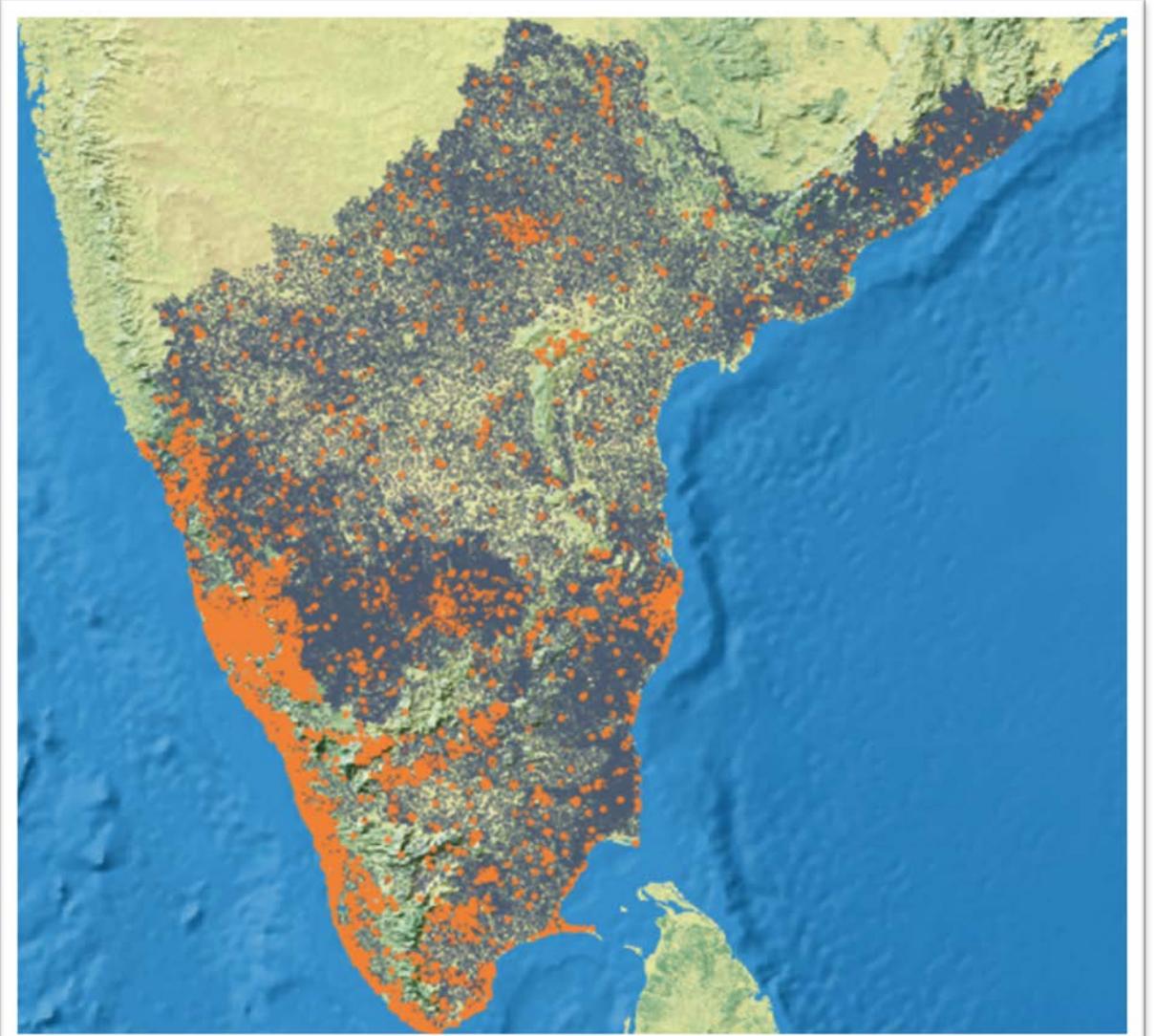
Percentage of Urban Population if at least 75% of workers work in non-agricultural pursuits
Census 2011



SENSITIVITY TO THE DEFINITION | LABOUR

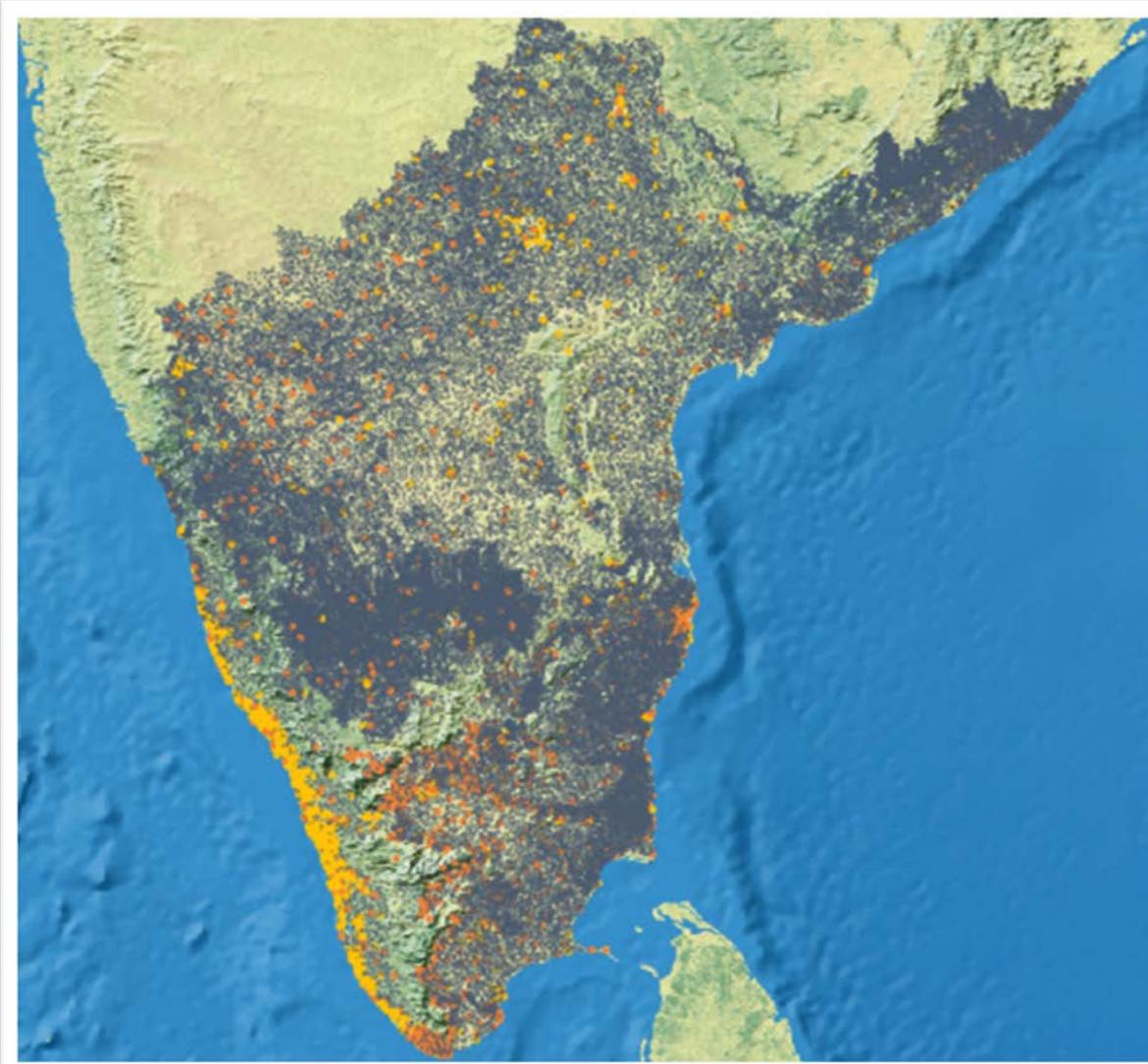


Official 2001

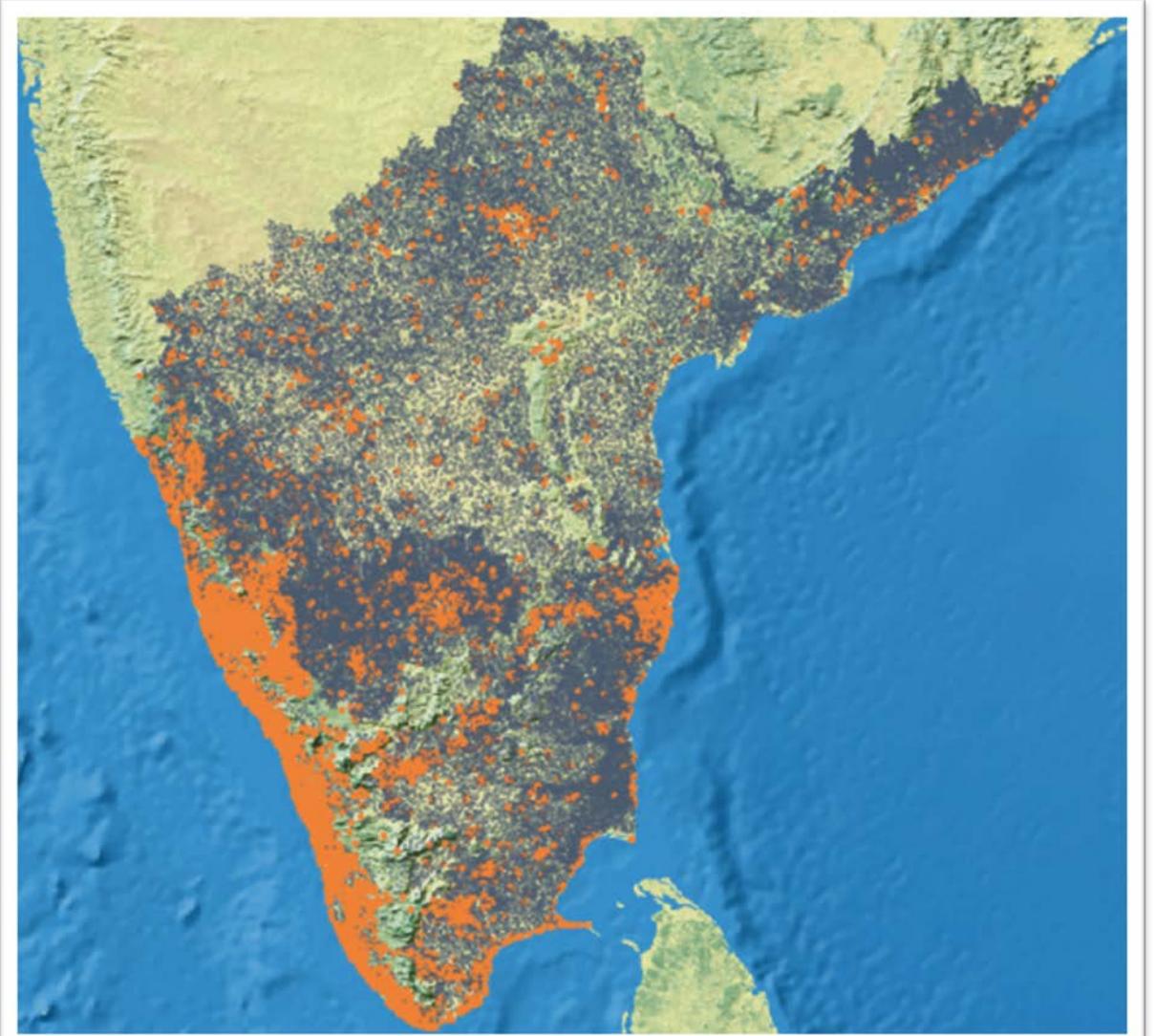


75% of all workers in non-agricultural pursuits, 2001

SENSITIVITY TO THE DEFINITION | LABOUR



Official 2011

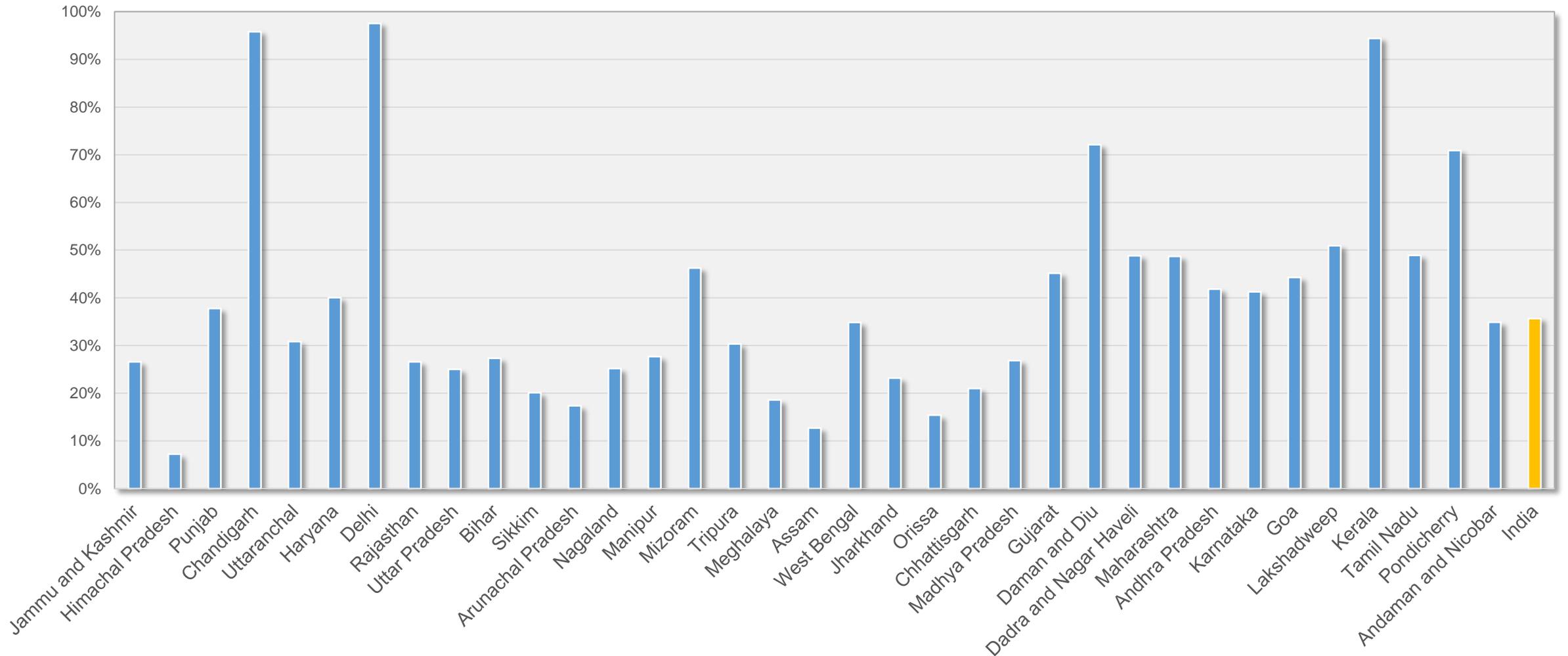


75% of all workers in non-agricultural pursuits, 2011

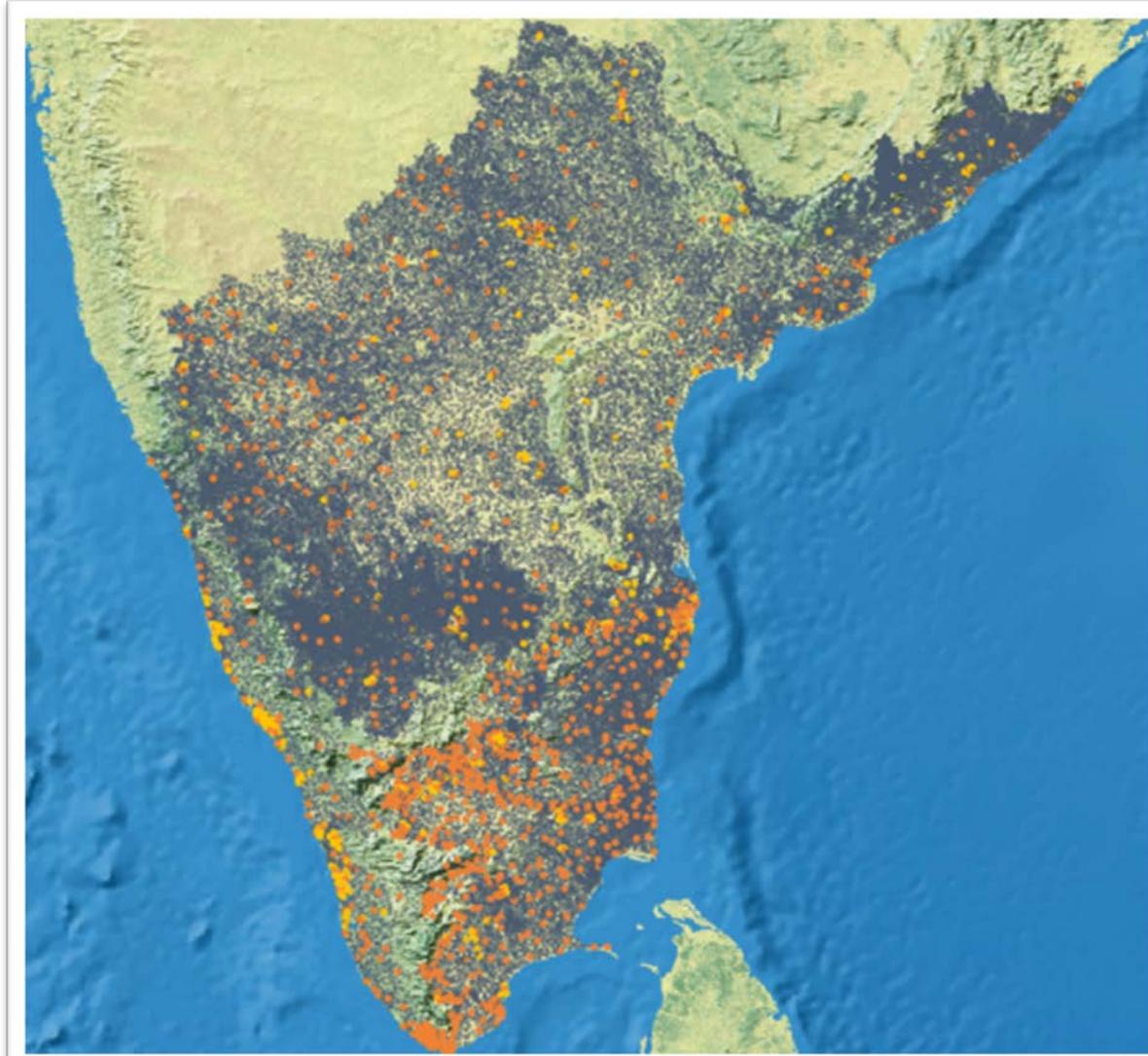
SENSITIVITY TO THE DEFINITION | POPULATION

Percentage of urban population if population size greater than 10,000

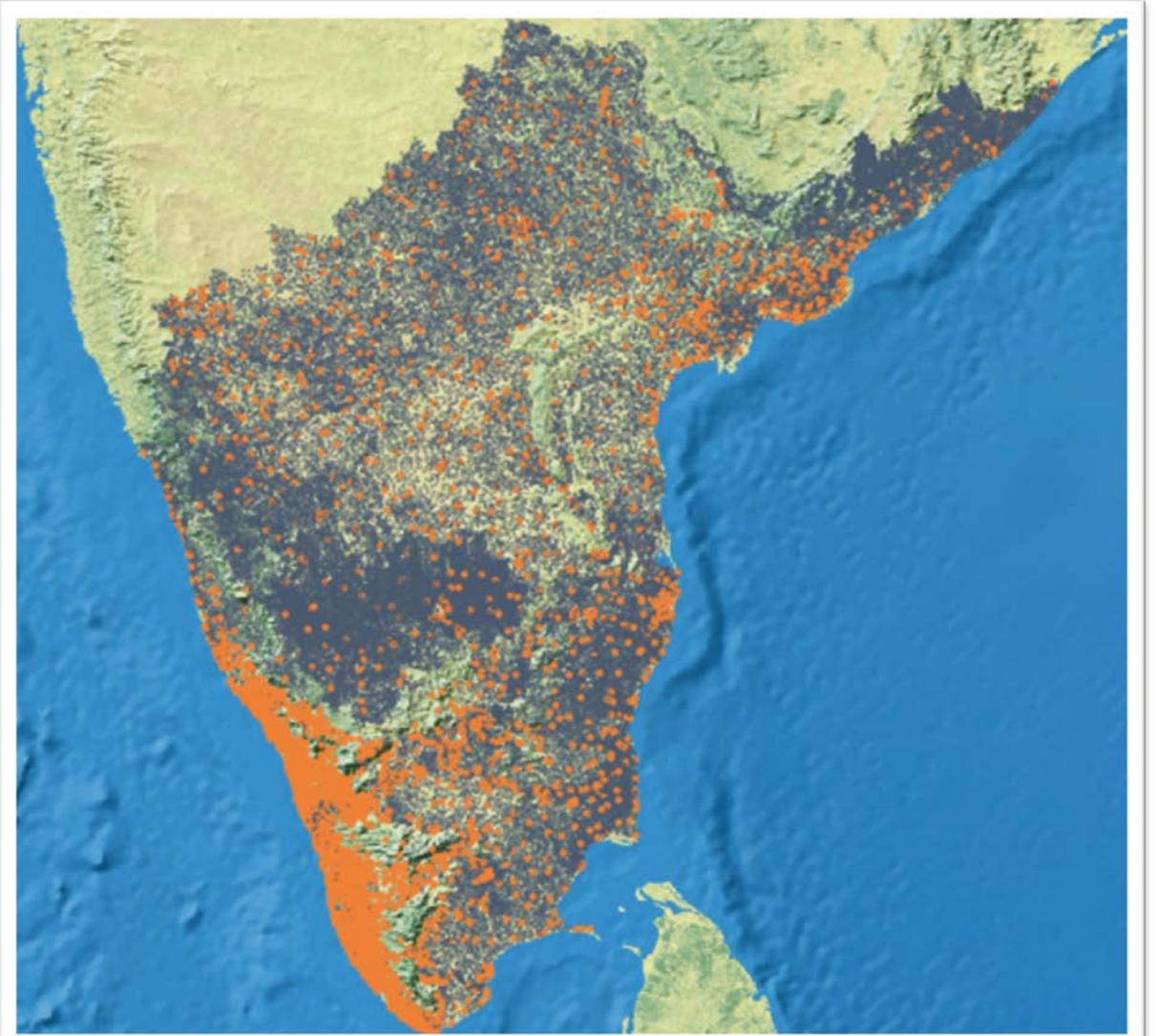
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SENSITIVITY TO THE DEFINITION | POPULATION

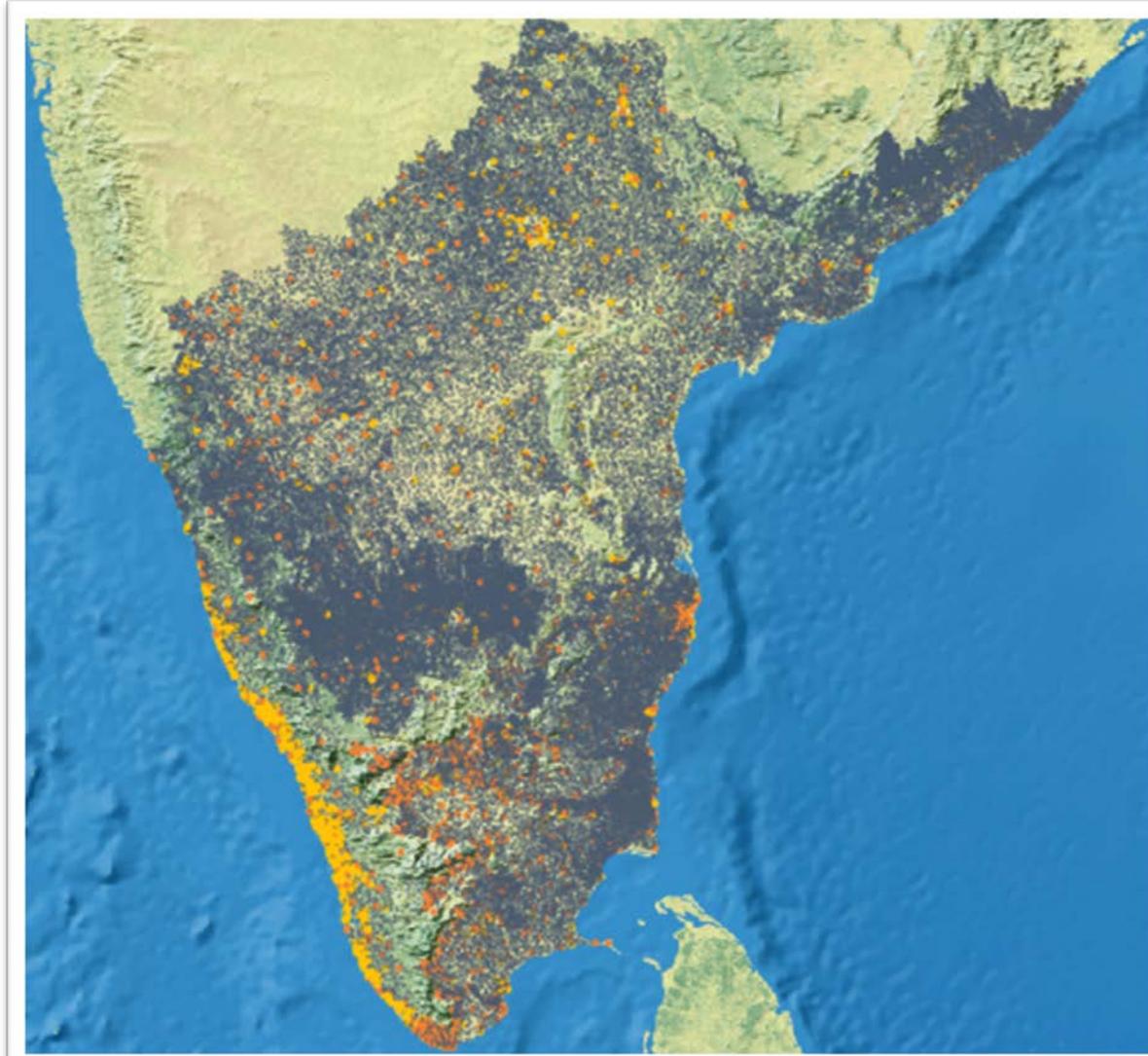


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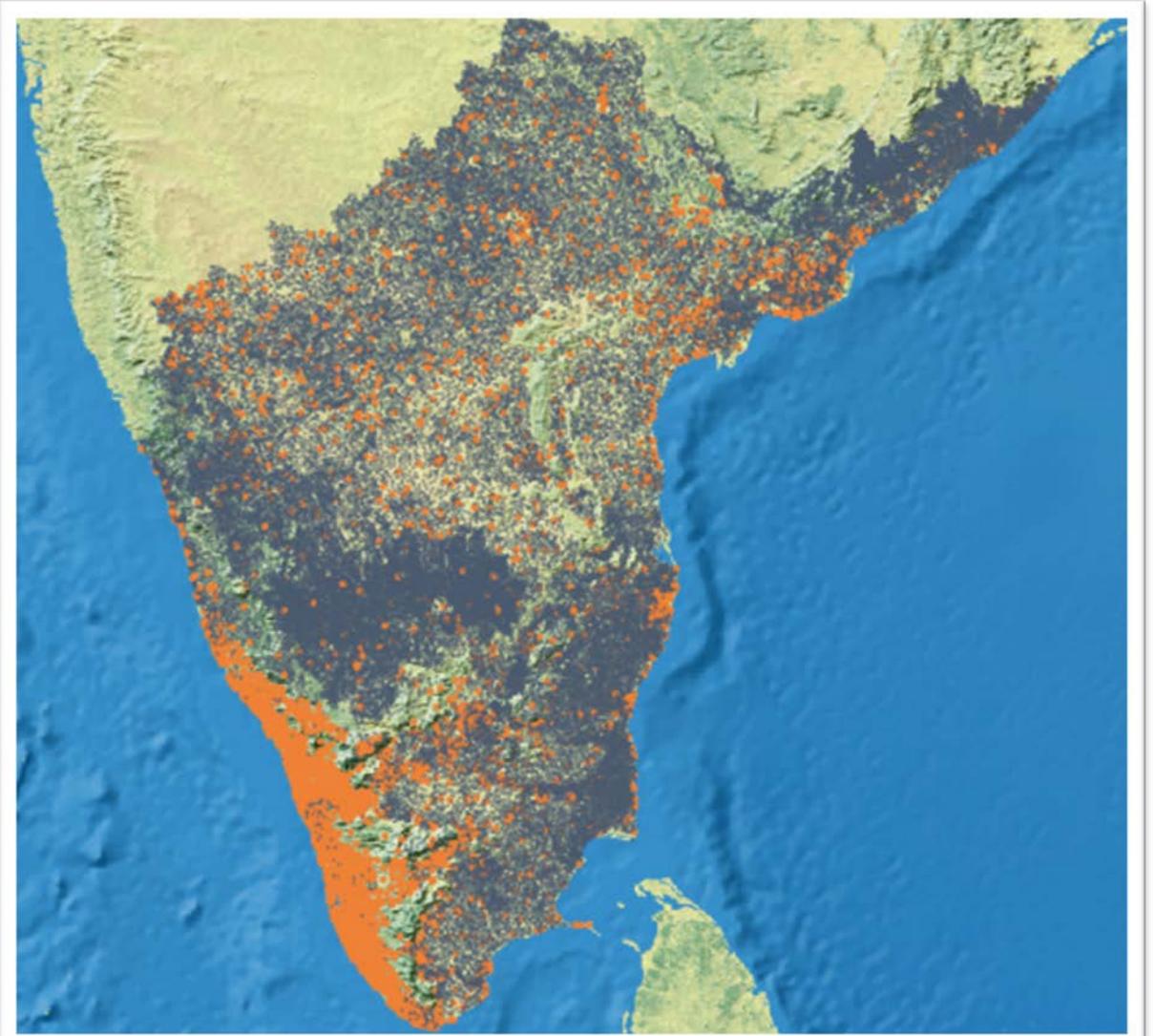


Population greater than 10,000, 2001

SENSITIVITY TO THE DEFINITION | POPULATION



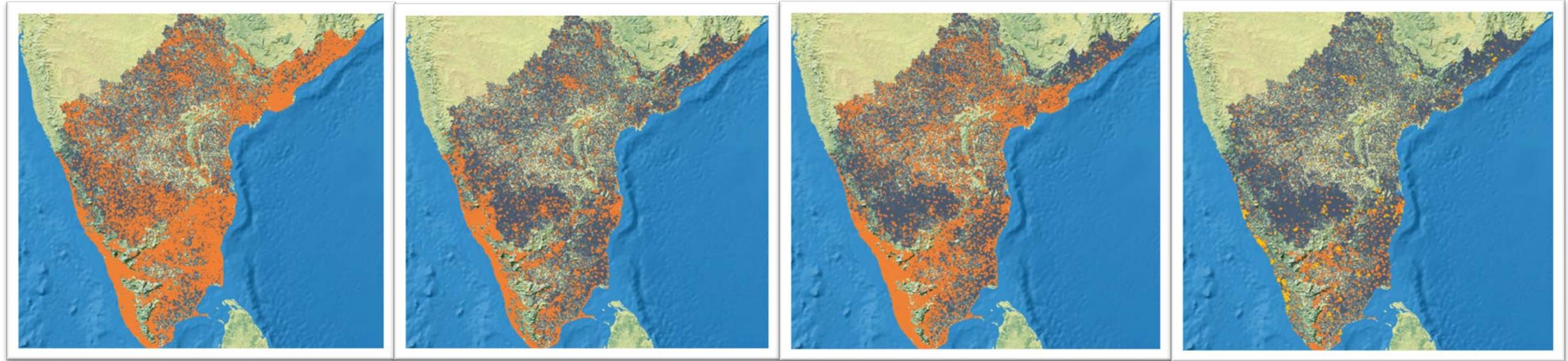
Official 2011



Population greater than 10,000, 2011

SENSITIVITY TO THE DEFINITION | POSSIBLE METRICS

❑ What other metrics could be designed to study sensitivity to definition?



Density

Labour

Population

Official

❑ Measure of dispersal from established urban centres based on different components?