Demographia World Urban Areas
(Built-Up Urban Areas or Urban Agglomerations)
12th Annual Edition: April 2016

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1. DEMOGRAPHIA WORLD URBAN AREAS

Demographia World Urban Areas (Built-up Urban Areas or Urban Agglomerations) is the only annually published inventory of population, corresponding land area and population density for urban areas with more than 500,000 population. Unlike metropolitan area lists, *Demographia World Urban Areas* applies a generally consistent definition to built-up urban areas.[1]

This report contains population, land area and population density for all 1,022 identified built-up urban areas (urban agglomerations or urbanized areas) in the world with 500,000 or more population. The total population of these urban areas is estimated at 2.12 billion, 53 percent of the world urban population in 2016.[2]

A number of smaller urban areas are also listed. Overall, data is provided for 1,744 urban areas of all sizes, which comprise a population of 2.27 billion people, 56 percent of the world urban population.

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[1] Other regularly published urban agglomeration lists do not contain consistently defined entities. They tend to mix metropolitan areas, municipalities (parts of metropolitan areas) and urban areas (built up urban areas or agglomerations). None of these lists include urban land area data. The United Nations list is unique in providing notes that clarify the nature of its each of its listings (core cities, metropolitan areas, urban areas and others).

[2] Calculated using United Nations data.

2. REVISIONS IN THE 12th EDITION

Revised Data: Highlights

New census data and estimates as well as later satellite imagery has led to some substantial revisions in the 2016 edition of *Demographia World Urban Areas.* The most notable are indicated below:

- The Mumbai built-up urban area has been expanded to incorporate the Bhiwandi, Kalyan and Vasai-Virar urban areas. This is generally consistent with the definition of the Census of India, with the exception that *Demographia* includes Bhiwandi.

- A new estimate for Kinshasa has been developed, from 2014 data provided by the Institut National de la Statistique of the Democratic Republic of the Congo (DRC). The data was not sufficient, however, to develop revised estimates for other built-up urban areas in the DRC.

- A new population census ends more than 30 years since the last in Myanmar. Built-up urban area estimates have been updated using this information.

- The lower range population estimates for the Lagos built up urban area have been largely confirmed by the *Africapolis* project (see Geographical Notes, below). There has been considerable controversy about the population of Lagos for years and local governments had claimed the census of Nigeria had severely under-counted its population. The new information is generally consistent with the Nigerian federal government population data.

- *Demographia World Urban Areas* has begun to use the *Africapolis* population and urban land area data where available, considering them to be the closest approximation to national census data on built-up urban areas. *Africapolis* data covers West African nations and most importantly, appears to provide reliable data on the built-up urban areas of Nigeria, where official data has often been challenged. The availability of the *Africapolis* data makes it unnecessary for *Demographia World Urban Areas* to develop independent built-up urban area data in West Africa outside Nigeria, where no difficulty in census data is indicated.

- A new urban area of more than 5,000,000 residents has been identified by *Africapolis*, Onitsha, Nigeria.

- New population estimates are available for some larger municipalities (prefectures) in China. Almost without exception, population growth has been well below projected levels, which are largely based on United Nations forecasts. Population estimates for built-up urban areas with base years before 2013 are likely to be high, as a result.

- Later local government population estimates (2015) in China indicate a further slowing of population growth. Beijing's population growth rate is reported to have been halved over the past year from the previous year. Shanghai sustained a small population loss, which is a substantial

turnaround from the 650,000 annual population increase registered between the 2000 and 2010 censuses.[3]

Revised Format

Tables have been simplified and reorganized. The population base, base year and estimates for built-up urban areas with less than 500,000 population are shown in Table 4 only. Table 4 contains all urban areas covered, in alphabetical order by Geography and built-up urban area name.

3. DISTRIBUTION OF WORLD POPULATION BY URBAN AREA SIZE AND CONTINENT

In recent years, the world has become more than one-half urban for the first time in history (54.5 percent in 2016). Yet, it would be a mistake to believe that the world's urban residents live in settings similar to 5th Avenue in New York or within the fourth ring road of Beijing or in inner Paris, or for that matter in large urban areas. Even in urban settings that are not particularly dense, such as suburban areas. Further, more than 70 percent of the world's population lives in urban

Figure 1

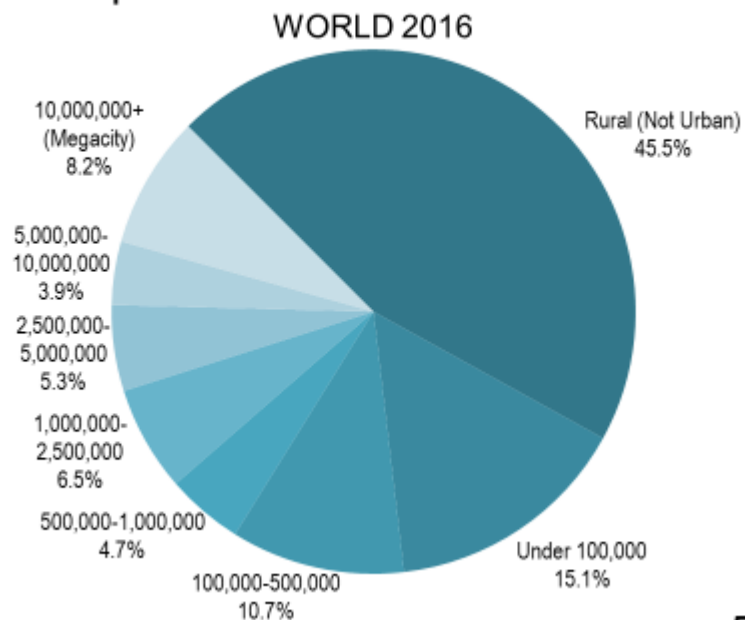areas with less than 500,000 residents[4] or in rural areas (See: *What is a Half-Urban World?*[5]).

Approximately one quarter (23.9 percent) of the world population lives in urban areas of 1,000,000 population or more. Less than 30 percent (28.6 percent) lives in urban areas with 500,000 or more population.[6] More than 70 percent of the world's population lives outside urban areas with 500,000 or more residents (Figure 1).[7]

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[3] Wendell Cox (2010), "The Evolving Urban Form: Shanghai,*" The New Geography,*
http://www.newgeography.com/content/002283-the-evolving-urban-form-shanghai
[4] The of urban areas under 100,000 is estimated by applying ratios from, *Making Room for a Planet of Cities* (Shlomo Angel, with Jason Parent, Daniel L. Civco, and Alejandro M. Blei) to the Demographia data.
[5] Wendell Cox (2012), "What is a Half-Urban World," *The New Geography*,
http://www.newgeography.com/content/003249-what-a-half-urban-world.
[6] Caution is suggest in comparing categories with data from last year's edition is not valid. Because urban areas shift (generally upward) in population categories, the urban area components of each population category have changed.
[7] The of urban areas under 100,000 is estimated by applying ratios from, *Making Room for a Planet of Cities* (Shlomo Angel, with Jason Parent, Daniel L. Civco, and Alejandro M. Blei) to the Demographia data.

A slight majority of the large urban area population lives in built-up urban areas with between 4,000 and 10,000 persons per square kilomter (approximately 10,000 to 25,000 persons per square mile). Approximately one-quarter live at higher densities and one quarter live at lower densities (Figure 2)

More than one-half of the population (53 percent) of large built-up urban areas

World Population by Urban Area Density
LARGE URBAN AREAS: PER SQUARE KILOMETER: 2016

20,000 - 40,000
(50,000 - 100,000)
4.8%

40,000 & Over
(1000,000 & Over)
0.9%

Under 2,000
(Under 5,000)
9.4%

2,000 - 4,000
(5,000 - 10,000)
15.2%

10,000 - 20,000
(25,000 - 50,000)
18.3%

4,000 - 10,000
(10,000 - 25,000)
51.4%

Approximate Per Square Mile Densities in (..)

Figure 2

(500,000 and over) are in Asia, living in 542 of the 1,022 large urban areas (Figure 3). The Asian areas comprise 57 percent of the world's large urban area population.

There are 36 megacities in the world (urban areas over 10 million population). A total of 79 urban areas are indicated with 5,000,000 or more population.

4. BUILT-UP URBAN AREAS: DEFINITIONAL ISSUES

An urban area ("built-up urban area,"[8] urbanized area or urban agglomeration)[9] is a continuously built up land mass of urban development that is *within* a labor market (metropolitan area or metropolitan region. An urban area contains *no* rural land (all land in the world is either urban or rural). In some nations, the term "urban area" is used, but does not denote an urban area as a built-up urban area.[10]

An urban area is best thought of as the "urban footprint" --- the lighted area that can be observed from an airplane (or satellite) on a clear night. National census authorities in Australia, Canada, Denmark, Finland, France, the Netherlands, Norway, Sweden, the United Kingdom and the United States designate urban

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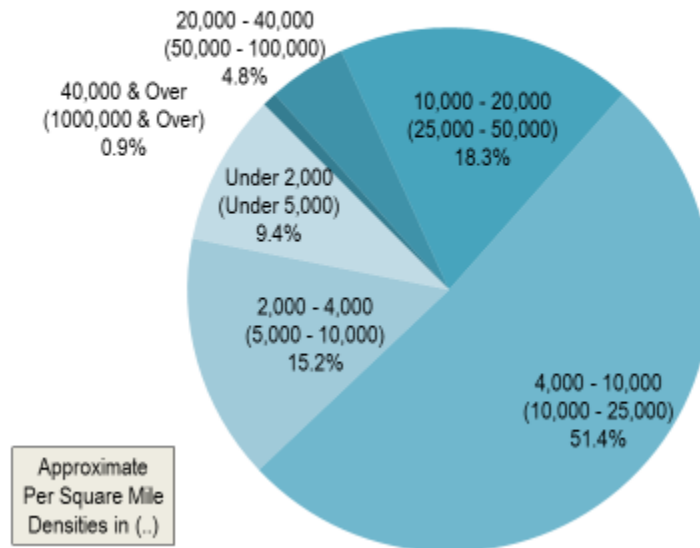[8] "Built up urban area" is the new urban area term now used by National Statistics in the United Kingdom. It may be the most descriptive short term for urban areas.

[9] Called a "population centre" in Canada and an "urban centre" in Australia. The term "urban area" is used (or translated into English) in China and New Zealand. However, in these countries "urban areas" extend well beyond the built-up urban area and are thus more similar to metropolitan areas.

[10] In China, sub-city or sub-regional districts called "shixiaqu" (市辖区) are sometimes referred to as urban areas. Shixiaqu, however are more akin to labor markets (metropolitan areas) and extend well beyond the urban footprint. Similarly, urban areas as defined in New Zealand are more akin to labor markets (metropolitan areas) because they extend beyond the urban footprint.

areas. Except in Australia, the authorities use a minimum urban density definition of 400 persons per square kilometer (or the nearly identical 1,000 per square mile in the United States).

By necessity, average data masks significant variations within urban areas. Within urban areas, urban population densities can range from below 400 per square kilometer (1,000 per square mile), particularly in North American urban areas, to over 1,000,000 per square kilometer (2,500,000 per square mile) in informally developed neighborhoods[11] of some Asian cities (such as in Dhaka).[12]

There are also significant differences in density variation within built-up urban areas. Average urban density

Built-Up Urban Area Population
BY CONTINENT: 500,000 & OVER

Asia 57.0%
Europe 10.2%
North America 12.8%
Oceania 0.7%
South America 8.2%
Africa 11.1%

Figure 3

does not provide any information on such variations, nor can it be assumed that an urban area with a higher average density will have higher neighborhood densities. For example, the population density of the Phoenix urban area is more than half-again higher than that of the Boston urban area. Yet, the highest population densities of Boston are at least five times that of the highest density areas in Phoenix. Moreover, Boston has a far larger commercial core ("central business district" or "downtown"). The difference is that the Phoenix suburbs are denser than the Boston suburbs. Higher density suburbs are also responsible for making Los Angeles the most densely populated large urban area in the United States, despite its much lower urban core densities relative to New York. This creates an irony that the city most associated with urban dispersion ("urban sprawl") in the United States is, in reality, the least dispersed (least "sprawling").

Similarly, London and Athens have similar population densities. Yet, the core densities in Athens are considerably higher than in London. The Athens suburbs, however, are among the least dense in the world. The Essen-Dusseldorf and Milan urban areas have almost identical densities, yet core densities are considerably higher in Milan. *Demographia World Urban Areas* defines the population and density of urban footprints, regardless of their internal density profiles.
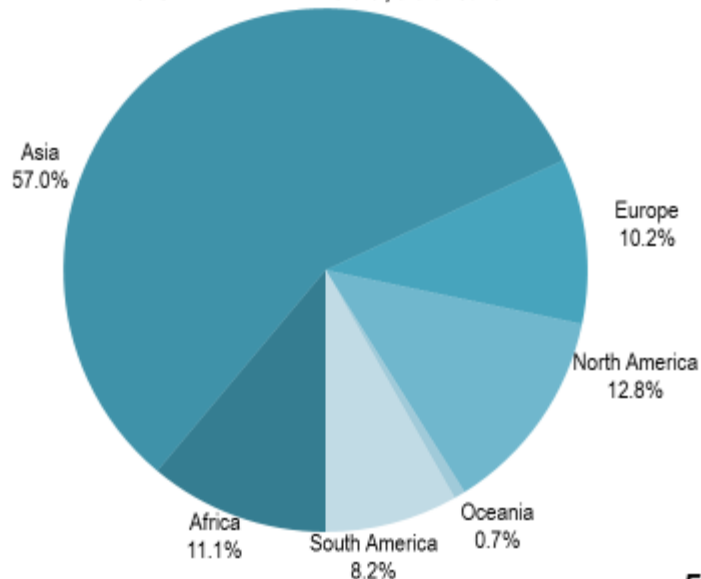
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[11] Called slums, shantytowns or favelas.
[12] See: Wendell Cox, (2012), "The Evolving Urban Form: Dhaka," *The New Geography*, http://www.newgeography.com/content/003004-evolving-urban-form-dhaka.

Urban Areas Contrasted with Metropolitan Areas

An urban area (built-up urban area or urban agglomeration) is fundamentally different from a metropolitan area. A metropolitan area is a labor market. It includes a principal built-up urban area (the largest urban area in the metropolitan area). It also includes rural areas and may include additional, smaller built-up urban areas. Both rural areas and built-up urban areas outside the principal built-up urban area are considered "exurban" (Figure 4).[13]

Urban Terms Illustrated
EXAMPLE: PARIS URBAN & METROPOLITAN AREA

EXURBAN: RURAL
(Non-urban)

EXURBAN
BUILT-UP URBAN AREA
(Example: Mantes-la-Jolie)

PRINCIPAL
BUILT-UP URBAN AREA
412 Municipalities Including Core
(Physical city: Area of
continuous urbanization)

CORE
1 Municipality
(Ville de Paris)

EXURBAN: RURAL
(Non-urban)

METROPOLITAN AREA
1,798 Municipalities including Urban Municipalities
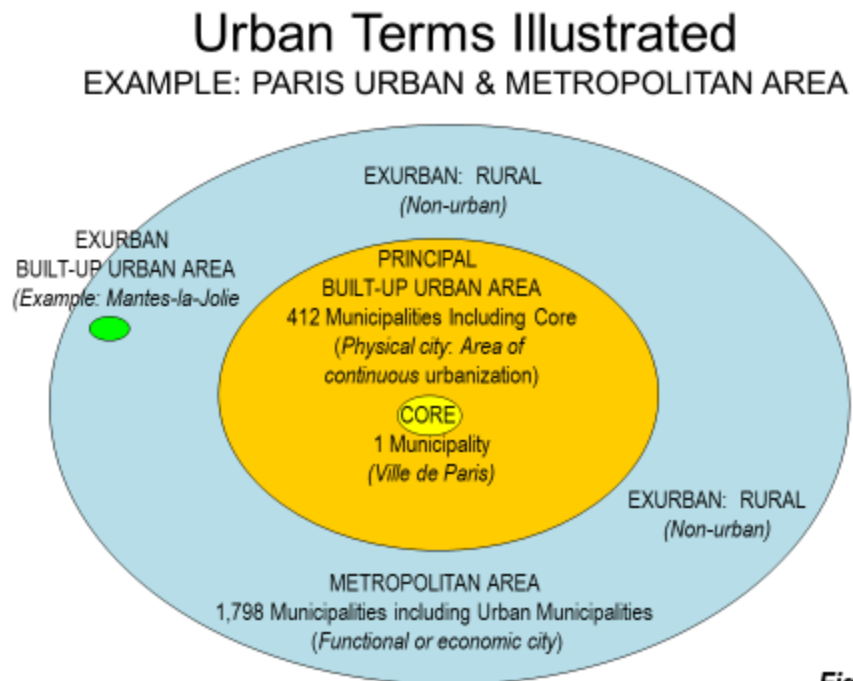(Functional or economic city)

Figure 4

Urban areas draw employees from a labor market area larger than the area of continuous development. For example, INSEE, the census authority of France defines the Paris urban area ("unité urbaine") as 2,845 square kilometers and the Paris metropolitan area (aire urbaine) as 17,100 square kilometers, indicating that more than 80 percent of the land area is outside the Paris urban area. Similarly, in the United States, the 52 metropolitan areas with more than 1,000,000 population had only 19 percent of land in urban use, with the remainder of 81 percent being rural.[14]

Because of the fundamental differences between urban areas (or urban agglomerations) and metropolitan areas, population comparisons should be made only within the two categories, not between.

Metropolitan Area Densities

Metropolitan area densities can be calculated, but are of limited value and can produce misleading results. This is because there are no international standards for delineating metropolitan areas, rendering them non-comparable (at best) between nations. Among the least useful metropolitan areas for density comparisons are those of the United States, where counties are used as the building blocks. The size of counties in the United States varies up to 1,500 times and, as a result, metropolitan densities are principally

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[13] All land is that is not urban is considered rural.

[14] Wendell Cox (2010), "Rural character in America's Metropolitan Areas, *The New Geography, "*
http://www.newgeography.com/content/004088-rural-character-america-s-metropolitan-areas

reflective of the rural densities.. The most expansive metropolitan area in the United States is Riverside-San Bernardino, at 27,300 square miles (71,000 square kilometers), not much smaller than Austria. Most of this area is well beyond commuting range, which means that it is not a genuine labor market. The situation is similar, but not as extreme in some other metropolitan areas of the United States. Metropolitan area densities in the United States therefore cannot even be validly compared even among themselves.

Further, metropolitan densities should not be confused with urban densities. Urban densities can be calculated only using urban populations and excluding populations of rural areas. All metropolitan areas have rural areas and thus no metropolitan density measure can be a genuine urban density measure.

Urban Areas and Urban Extents Contrasted

In some cases, urban areas have virtually grown together, yet are still considered separate urban areas. This report confines urban areas to a single metropolitan area (below) or labor market area. Continuous urbanization that extends beyond individual labor markets (metropolitan areas) can be called "urban extents."

What constitutes a particular metropolitan area is a matter of judgment and there are no generally accepted international principles for delineating metropolitan areas (unlike urban areas). However, it is necessary to "draw a line," especially where adjacent urban areas have "grown together," but remain essentially distinct labor markets. For example, the following urban extents are composed of more than one urban area:

- The coast of Japan from Tokyo-Yokohama to Osaka-Kobe-Kyoto has nearly "grown together." Yet, this ribbon of urbanization is far too large to be a single metropolitan area (labor market) and thus considered to be multiple urban areas (an urban extent).

- The Pearl River Delta urban areas of Shenzhen, Dongguan, Zhongshan, Jiangmen, Huizhou, Zhuhai, Guangzhou and Foshan in China's Guangdong province are very close to one-another and in some cases the built-up urban areas are virtually adjacent. Yet, this is not considered a single urban area there is not a single, unified labor market. *Demographia World Urban Areas* considers Guangzhou and Foshan as a single urban area, because they have become more economically integrated than the other urban areas. Each of the other areas in the Pearl River Delta economic region is classified as a separate urban area. The urban extent also includes Hong Kong. However, there is a second reason that Hong Kong is not a part of a Pearl River Delta urban area --- there is border control between Hong Kong and Shenzhen that does not permit the free exchange of labor.

- The Yangtze River Delta contains at least 11 nearby (though not always adjacent) urban areas stretching from Ningbo Shanghai, and Nanjing. This includes Ningbo, Shaoxing, Hangzhou, Jiaxing, Shanghai, Kunshan, Suzhou, Wuxi, Changzhou, Zhenjiang and Nanjing. Some sources consider this a single metropolitan area or even a single built-up urban area. It is neither. Moreover, there is considerable rural territory between some, breaking up the continuous urbanization. There is rural territory between Ningbo and Shaoxing, Hangzhou and Jiaxing, Jiaxing and Shanghai, Changzhou and Zhenjiang as well as between Zhenjiang and Nanjing. As a result, the Yangtze Delta urban extent, at most, stretches from Shanghai to Changzhou. It is composed of multiple metropolitan areas and thus multiple urban areas.

- The same applies to the Northeastern "megalopolis" of the United States. The continuous urban development that exists is has rural separations in some cases and each of the major metropolitan areas represents a separate labor market. Thus virtually continuous urban areas of the Northeast corridor are considered separate, including Hartford, New York, Philadelphia, Baltimore and Washington.

International Urban Areas

Urban areas (and metropolitan areas) are confined to a single nation, unless there is virtual freedom of movement (principally labor) between the adjacent nations. This is indicated by the lack of customs or immigration facilities at borders, or the broad access to work permits for working in adjacent countries. Currently, this condition is met only between some continental nations of the European Union. For example, the Lille urban area is in both France and Belgium yet is considered a single urban area because there is freedom of labor movement without trade, immigration or customs barriers. Treaty provisions render Geneva (Switzerland)-Annemasse (France), Basel (Switzerland) along with suburban areas of France and Germany as a single built-up urban area. Similarly, Milan together with Chiasso in Switzerland is a single built-up urban area.

However, Detroit-Windsor El Paso-Ciudad Juarez and San Diego-Tijuana are not considered single urban areas because of their border controls restricting the free movement of labor. As noted above, the Shenzhen and Hong Kong urban areas, despite their adjacency, are also considered to separate because of their international-style border controls.

Municipality (City or Commune)

An urban area is different from a municipality (also often called a city or a local government authority). Municipalities have political boundaries that usually constitute only a part of the urban area. For example, the city of Seoul represents less than one-half of the population (and a declining proportion) of the Seoul-Incheon urban area, which extends well beyond the municipality. On the other hand, a municipality may be considerably larger than an urban area and therefore contain considerable non-urban (or rural) territory. Zaragoza, Spain is an example. A large part of the municipality of Mumbai is rural, composed of the Rajiv Ghandi National Park and thus not included in the urban area.

The translated term "city" is generally used to denote sub-provincial (or in some cases provincial) government areas in China. These would be more appropriately called "regions" and many were formerly referred to as "prefectures." Generally, they extend far beyond their built-up areas (such as Beijing, Tianjin, Wuhan and Guangzhou). The city of Chongqing, which has the largest population of any entity called a city (municipality) in the world and the stretches far beyond any reasonable definition of a metropolitan area. Like the Riverside-San Bernardino metropolitan area, Chongqing covers a land area similar to that of Austria. Most of the municipality is well beyond the commuting range of the urban area.

Combined Urban Areas

In the United States, metropolitan areas may be combined into combined statistical areas, which are, in effect, larger metropolitan areas or metropolitan regions, with somewhat less stringent economic interchanges (employment commuting).[15] Where the urban footprint (composing a single labor market) materially extends beyond the metropolitan area to form a combined statistical area (CSA) Demographia creates a combined built-up urban area. For example, the New York urban area stretches from the New York metropolitan area, well into other parts of the New York combined statistical area (into the Bridgeport, New Haven and Trenton metropolitan areas). These continuous urban areas are considered a combined urban area.

In Canada, where the national census authority (Statistics Canada) also defines metropolitan areas, the Toronto, Hamilton and Oshawa metropolitan areas are also considered a single labor market and are combined into a single combined urban area. While Canada does not designate combinations of metropolitan areas, Statistics Canada has indicated that if criteria similar to that of the United States were applied the Toronto, Hamilton and Oshawa metropolitan areas could be combined.[16]

Other metropolitan areas are combined in nations that do not report built-up urban area data. For example, Guangzhou and Foshan, and Tehran and Karaj are combined because of strong transport links that make commuting feasible.

COMBINED URBAN AREAS Designated only in Nations Reporting Urban Agglomeration Data	
NATION	COMBINED URBAN AREA & Constituent Urban Areas (Source Code "N")
Canada	TORONTO: Hamilton, Oshawa, Toronto
United States	BOSTON: Boston, Nashua (NH)
United States	CHICAGO, Chicago, Kenosha (WI), Round Lake Beach
United States	DALLAS-FORT WORTH: Dallas-Fort Worth, Denton, McKinney
United States	HOUSTON: Houston, Conroe
United States	LOS ANGELES: Los Angeles, Riverside-San Bernardino, Mission Viejo
United States	NEW YORK: Bridgeport (CT), New Haven (CT), New York, Trenton (NJ), Danbury (CT), Twin Rivers (NJ)
United States	ORLANDO: Kissimmee, Orlando
United States	PHOENIX: Phoenix, Avondale, Buckeye
United States	SAN FRANCISCO: Concord, Livermore, San Francisco, San Jose, Vallejo
United States	SEATTLE: Seattle, Bremerton, Indianola
A combined urban area consists of adjacent urban areas that are located within the same labor market area	

5. SMALLER URBAN AREAS (LESS THAN 500,000 POPULATION)

Information is provided for some smaller urban areas. These urban areas are *not* representative of all urban areas under 500,000. Smaller urban areas are shown (1) to indicate urban areas often shown by international sources to be larger, (2) where national census authority data is produced for urban areas.

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[15] Metropolitan areas require a 25 percent employment interchange between constituent counties (US metropolitan areas are no longer based on central municipalities, but now use "central counties"). Combined statistical areas require a 15 percent employment interchange between adjacent metropolitan areas.
[16] Statistics Canada (2008), "Defining and Measuring Metropolitan Areas: A Comparison between Canada and the United States," http://www.statcan.gc.ca/pub/92f0138m/2008002/5002030-eng.htm.

The first instance is relevant to China. The Chinese term "shi" is popularly translated as "city" in English. Yet, "shi" does not denote urban. Chinese "shi" and equivalent terms are simply divisions of divisions of provinces or province equivalent. China is divided into more than 3,000 "shi," most of which are primarily rural (in land area), just as the United States is divided into more than 3,000 counties and France into more than 30,000 communes, with most of their respective land areas typically being rural.

None of these divisions is inherently urban. Analysts often refer to Chinese "cities" of more than 1,000,000 population that have little urbanization. For example, Laibin is a "shi" in Guanxi, with more than 2 million residents. The local authorities have designated an urban area of more than 900,000 population. Yet the urbanization of Laibin is estimated at less than 100,000 residents.

This year's edition shows smaller urban areas in Table 4. Tables 1, 2 and 3 contain information only on the larger urban areas (500,000 and over population).

6. GEOGRAPHICAL NOTES

Larger Geographical Areas

West Africa: *Demographia World Urban Areas* uses base population data (2010) from *Africapolis*, where available (West Africa).[17] *Africapolis* uses various techniques, including an analysis of satellite photographs to develop population estimates for built-up urban areas in West Africa. Moreover, the urban are definition used by *Africapolis* is consistent with the general approach by Western European governments that define built-up urban areas. The *Africapolis* data is particularly useful in West Africa, where most national statistical authorities (like those of most nations) do not report urban agglomeration data.

Nigeria: Unlike other nations of West Africa, there have been strong criticisms of the Nigerian census for decades, which makes the *Africapolis* built-up urban area data particularly important in Nigeria. For example, the most recent federal census (2006) been severely criticized by local officials in Legos state as having missed many people. The census indicated that Lagos metropolitan area population was approximately 9 million. By comparison, a local census conducted at about the same time indicated a population of 17.5 million. Authoritative neutral analysis generally finds lower population levels, more consistent with data from the federal census.[18] The detailed analysis by *Africapolis* is believed to be the most accurate population estimates for the urban areas of Nigeria.

Democratic Republic of the Congo: The government recently published provincial population estimates, which made it possible to produce a far more reliable estimate for the Kinshasa urban area, which constitutes nearly all of the population of Kinshasa province. Population estimates for other urban areas are not considered reliable. The last census was more than 30 years ago (1981) and reasonably current urban population estimates have not been identified.

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[17] Agencie Francaise de Develloppment, *Africapolis Urbanization Trends: 1950-2020: A Geo-statistical Approach West Africa,* http://www.afd.fr/webdav/site/afd/shared/PUBLICATIONS/THEMATIQUES/autres-publications/BT/Africapolis_Final-Report_EN.pdf.

[18] Adewale Maja-Pearce and Eleanor Whitehead (2014 , "Factsheet: Nigeria's Population Figures," *Africa Check: Sorting Fact from Fiction,* https://africacheck.org/factsheets/factsheet-nigerias-population-figures/

Pakistan: Population estimates are not considered reliable. Census data were reported for Karachi for 2011 in the Indian press, but there is no indication of such results from the Pakistani census authorities. No other data was reported. The last complete census was in 1998 and recent estimates have not been identified.

Specific Built-Up Urban Areas

The notes below notes identify *some* additional components that (1) might be thought to be separate, (2) are classified as separate by statistical agencies or are (3) listed to indicate to better describe the geography of an urban area. No attempt is made to otherwise provide an inventory of municipalities or other entities in urban areas, because of their large numbers For example, the Paris urban area has more than 400 local government authorities. Thus, the lack of a municipality name does not indicate that it is not included in an urban area.

Built-up Urban Area (Urban Agglomeration)	Notes
Aachen, Germany	Extends into the Netherlands; Includes Heerlen, Netherlands.
Amersfoort, Netherlands	Included in Utrecht.
Amman, Jordan	Includes Az-Zarqa.
Amsterdam, Netherlands	Includes Haarlem
Ansan, Korea	Included in Seoul-Incheon.
Avondale, AZ, USA	Included in Phoenix.
Bahadurgarh, Haryana, India	Included in Delhi.
Basel, Switzerland	Extends into France and Germany
Bataysk, Russia	Included in Rostov.
Bhiwandi, Maharashtra, India	Included in Mumbai (beginning in 2016).
Bogor, Indonesia	Included in Jakarta
Boston, MA, USA	Includes Worcester and Nashua.
Bridgeport, CT, USA	Included in New York.
Biuckeye, AZ, USA	Included in Phoenix.
Chanan (Shantou), GD, China	Included in Chaoyang
Chaoyang (Shantou), GD, China	Includes Chaonan
Chiasso, Switzerland	Included in Milan, Italy (single labor market)
Chicago, IL, USA	Includes Kenosha and Round Lake Beach
Choloma, Honduras	Included in San Pedro Sula
Chungli, China: Taiwan	Included in Taipei.
Concord, CA, USA	Included in San Francisco
Conroe, TX, USA	Included in Houston.
Dallas-Fort Worth, TX, USA	Includes Denton and McKinney
Danbury, CT, USA	Included in New York.
Darwin, NT, Australia	Includes Palmerston.
Daye, HUB, China	Included in Huangshui

Delhi, NCT, HA, UP, India	Includes Faridabad, Ghaziabad, Noida, Gurgaon and Bahadurgarh urban areas and New Delhi.
Denton, TX, USA	Included in Dallas-Fort Worth
Dhaka, Bangladesh	Nayaranganj included.
Dongguan, Guangdong, China	2010 census population was well below previous local estimates
Dongyang, ZJ, China	Included in Yiwu (Jinhua)
Dubai, UAE	Includes Sharja
Ezhou, Hubei, China	Includes Huangzhou (Huanggang).
Faridabad, Haryana, India	Included in Delhi.
Foshan, Guangdong, China	Included in Guangzhou-Foshan
Francisco Morato, Sao Paulo, Brazil	Included in Sao Paulo
Fukuoka, Fukuoka, Japan	Shown as a separate urban area. Some sources combine Fukuoka with Kitakyushu (such as the United Nations).
Geneva, Switzerland	Extends into France
Ghaziabad, Uttar Pradesh, India	Included in Delhi.
Guangzhou-Foshan, Guangdong, China	Includes Foshan
Gurgaon, Haryana, India	Included in Delhi.
Haarlem, Netherlands	Included in Amsterdam.
Hague, Netherlands	Included in Rotterdam-Hague
Hamilton, ON, Canada	Included in Toronto.
Heerlen, Netherlands	Included in Aachen, Germany.
Himeji, Hyogo, Japan	Included in Osaka-Kobe-Kyoto.
Hitachi, Japan	Included in Mito.
Houston, TX, USA	Includes Conroe.
Huangmei (Huanggang), HUB	Included in Jiujiang, JX.
Huangshui, HUB	Includes Daye (county level city)
Huangzhou (Huanggang), Hubei, China	Included in Ezhou.
Hubli, West Bengal, India	Does not include Dharwad.
Huiyang qu (Huizhou), Guangdong, China	Included in Shenzhen.
Huizhou, Guangdong, China	Huicheng qu only
Incheon, South Korea	Included in Seoul-Incheon,
Jakarta, Indonesia	Higher estimate than other sources (such as the United Nations), which are largely limited to DKI Jakarta. Continuous urbanization extends into Tangerang, South Tanerang, Borgor, Bekasi and Karawang.
Jianbizhen (qu), China	Included in Zhenjiang, JS
Jiangyin (Wuxi), GD, China	Included in Zhangjiaggang (Suzhou) JS
Jinjiang, Fuzhou, China	Included in Quanzhou.
Jiujiang, JX, China	Includes Huangmei (Huanggang), HUB.
Kalyan, Maharashtra, India	Included in Mumbai (beginning in 2016).
Kangbashi (Ordos), NM, China	See Yijinhuoluo-Kangbashi

Karaj, Iran	Included in Tehran.
Karawang, Indonesia	Included in Jakarta
Kenosha, WI, USA	Included in Chicago.
Kissimmee, FL, USA	Included in Orlando.
Kitakyushu, Fukuoka, Japan	Shown as a separate urban area. Some sources combine Kitakyushu with Fukuoka (such as the United Nations), which is not a part of the continuous urbanization of Kitakyushu.
Kuala Lumpur, Malaysia	The population is higher other agglomeration estimates (such as the United Nations), which does not include all of the continuously developed urban area. Includes Port Klang.
Lagos, Nigeria	Demographia uses the Africapolis estimate as the base. See discussion above on Nigeria.
Leiden, Netherlands	Included in Rotterdam-Hague
Leon, Mexico	Includes Silao
Lille, France	Extends into Belgium (single labor market)
Livermore, CA, USA	Included in San Francisco.
Los Angeles, CA, USA	Includes Riverside-San Bernardino and Mission Viejo.
Manila, Philippines	Higher than other estimates, which are largely limited to the National Capital Region. Continuous urbanization extends into Cavite, Laguna, Bulucan and Rizal.
Maputo, Monzambique	Includes Matola.
McKinney, TX, USA	Included in Dallas-Fort Worth.
Miami, FL, USA	Includes the former urban areas of Fort Lauderdale and West Palm Beach, which have been incorporated by the US Census Bureau.
Milan, Italy	The population is higher other agglomeration estimates (such as the United Nations), which does not include all of the continuously developed urban area, which stretches well into Como, Lecco and Varese provinces. Extends into Switzerland (single labor market). includes Chiasso, Switzerland.
Mission Viejo, CA, USA	Included in Los Angeles.
Mito, Japan	Includes Hitachi
Moscow, Russia	Demographia is indebted to Richard Forstall, who has provided local authority area population data for portions of Moscow Oblast within the Moscow urban areas. Other estimates (such as the United Nations estimate) largely limited to the municipality of Moscow,
Mumbai, Maharashtra, India	Includes Kalyan, and the Panvel urban area. As of 2016, also includes the Census of India urban areas of Bhiwandi, Kalyan, Vasai-Virar beginning in 2016.
Nara, Nara, Japan	Included in Osaka-Kobe-Kyoto.
Nashua, NH, USA	Included in Boston.
Navi Mumbai, Maharashtra, India	Included in Mumbai.
Nayaranganj, Bangladesh	Included in Dhaka.

New Delhi, NCT, India	Included in Delhi
New York, NY-NJ-CT, USA	Includes Bridgeport, New Haven, Trenton, Danbury and Twin Rivers urban areas
Noida, Uttar Pradesh, India	Included in Delhi.
Ordos, NM, China	See Yijinhuoluo-Kangbashi (Ordos), NM
Orlando, FL, USA	Includes Kissimmee.
Osaka-Kobe-Kyoto, Japan	Portions of the prefectures of Osaka, Kobe, Kyoto and Nara area included. Includes Himeji. United Nations estimates separate Osaka-Kobe and Kyoto and exclude both Nara and Himeji.
Oshawa, ON, Canada	Included in Toronto.
Palmerston., NT, Australia	Included in Darwin
Panvel, Maharashtra, India	Included in Mumbai.
Phoenix, AZ, USA	Includes Avondale and Buckeye (which are designated by the US Census Bureau as separate urban areas).
Port Klang, Malaysia	Included in Kuala Lumpur.
Quanzhou, Fuzhou, China	Includes Shishi and Jinjiang
Riverside-San Bernardino, CA, USA	Included in Los Angeles.
Rostov, Russia	Includes Bataysk.
Rotterdam-Hague, Netherlands	Includes Leiden
Round Lake Beach, IL, USA	Included in Chicago.
Saarbrucken, Germany	Extends into France
Salzburg, Austria	Extends into Germany (single labor market)
San Francisco, CA, USA	Includes San Jose, Concord, Livermore and Vallejo.
San Jose, CA, USA	Included in San Francisco.
San Pedro Sula, Honduras	Includes Choloma.
Sao Paulo, Sao Paulo, Brazil	Includes Francisco Morato.
Seoul-Incheon, Korea	Includes Suweon and Ansan.
Shanghai, China	Includes Taicang
Sharja, UAE	Included in Dubai.
Shenzhen, Guangdong, China	Includes Huiyang qu (Huizhou). 2010 census population was well below previous local estimates.
Shishi (shi), Fuzhou, China	Included in Quanzhou.
Silao, Mexico	Included in Leon
Strausbourg, France	Extends into Germany (single labor market)
Stuttgart, Germany	Lower estimate than some other sources (such as the Millennium City database)
Suweon, Korea	Included in Seoul-Incheon.
Taicang, China	Included in Shanghai.

Taipei, China: Taiwan	The population is higher than other estimates (such as the United Nations), which do not include all population within the continuously developed urban area (especially in Taipei County). Includes continuous urbanization in New Taipei and Taoyuan.
Taiyuan, Shanxi, China	Includes Yuci qu (Jinzhong).
Taoyuan, China: Taiwan	Included in Taipei.
Tehran, Iran	Includes Karaj.
Tokyo-Yokohama, Japan	Includes large areas Tokyo, Kanagawa, Chiba and Saitama prefectures and smaller areas of Gunma, Tochigi and Ibaraki prefectures.
Toronto, ON, Canada	Includes Hamilton and Oshawa.
Trenton, NJ, USA	Included in New York.
Twin Rivers, NJ, USA	Included in New York.
Utrecht, Netherlands	Includes Amersfoort.
Vallejo, CA, USA	Included in San Francisco.
Vasai-Virar, Maharashtra	Included in Mumbai (beginning in 2016).
Xi'an, Shaanxi, China	Includes Xiangyang.
Xiangyang, Shaanxi, China	Incluced in Xi'an.
Xicheng, Ningxia, China	Included in Yinchuan.
Yanzhou, Jiangsu, China	Includes Jiangdu shi.
Yinchuan, Ningxia, China	Includes Xicheng.
Yiwu (Jinhua), ZJ China	Includes Dongyang.
Yuci qu (Jinzhong), Shanxi, China	Included in Taiyuan.
Zhangjiaggang (Suzhou) JS	Includes Jianyin
Zhenjiang, Jiangsu, China	Includes Jianbizhen qu.

7. METHODOLOGY

The current year population estimate is modeled from the base year population, adjusted by population projections (largely from the United Nations or national statistics authorities).

National census authority population land area data is used where it is reported for urban areas.[19] For other urban areas, Demographia uses mapping software to estimate continuous urbanization. Demographia uses small area population data, where available, to match population estimates to urban land area.

Sources for Base Population & Land Area Estimates

A base year population is provided for all urban areas. The base year estimate uses the methodology indicated by the coding in the "Source: Population" column.

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[19] There are exceptions. *Demographia* provides separate estimates of some urban areas in India, where no build-up urban area data is reported (in some cases the Census of India reports municipality rather than urban area data). *Demographia* also provides a separate estimate for the land area of Marseille because the INSEE definition includes a large rural territory within the urban area (a mountain range, Chaine de etoile).

The tables indicate the method used to estimate both the land area and the base year population of each built-up urban area. The following codes are used:

Source Codes: Population and Land Area	
Code	Source of Land Area or Base Year Population Estimate
A	National census authority built-up urban area data (land area or population).
B	*Demographia l*and area estimate based upon map or satellite photograph analysis.
C	*Demographia* population from lower order jurisdictions, with downward adjustment for rural population.
D.	Population estimate based upon United Nations agglomeration estimate.
F	Other population estimate or other *Demographia* population estimate..
L	Local government population estimate.
N	Combined urban area using national census authority population or land area data
W	*Africapolis* population or land area estimate

Presentation of Source Codes in Tables: The source codes are listed in the "Pop:Area Source" column following this form: "C:B", where "C" indicates the source from which the base population was estimated and "B" indicates the source of the land area estimate. In this example, the population base is estimated by Demographia and the land area data is estimated by Demographia.

Reliability

The most reliable sources are as follows:

- National census authorities, where representative agglomeration data is available (such as in the United States, the United Kingdom, Canada, France, Sweden, Norway, India and Australia).

- Africapolis population and land area estimates (Source code W), which replicate the results that would likely be obtained if census authorities in West Africa reported built-up urban area data.

- Demographia population estimates developed by building up population estimates from lower order jurisdictional data to match the urban area boundaries. Estimated rural area populations are deducted. Data is from national census authorities (Source code C). It is intended that ultimately all population estimates not from national census authorities or *Africapolis* for urban area will be estimated by this method.

Urban Density Calculation

Demographia World Urban Areas provides average urban population density data. It is not possible to reliably coordinate the dates of current population estimates with land area estimates, except in cases where the built-up urban area population and land area are provided by national statistical authorities (Source Code A:A). In such cases, urban population densities are calculated using the base year population and the reported land area (These data are shown *only* on Table 4). In all other cases, urban population densities are calculated using the current year population and the land area estimate (these data are shown on Tables 1 through 4).

Built-up urban area population densities are expressed in rounded numbers (to the nearest 100 per square mile or square kilometer). Urban population densities should be considered reasonable approximations.

8. CAUTION: TREND ANALYSIS

Demographia World Urban Areas is a continuing project and attempts to provide "state of the art" data. Revisions are made as more accurate satellite photographs and population estimates become available. As a result, *Demographia World Urban Areas* is not intended for trend analysis.

Year-to-year changes indicated in population and land area may merely reflect better data that was not used before and may not, therefore indicate a trend. Moreover, the current year population estimates are nearly always a projection from a base year calculated from census or official estimate data. Changes in population projection rates can result in substantial current year population estimates that are not related to actual population growth or loss.

There is little or no historical urban area data and sources are continually improving. Moreover, nearly all of the data is estimated. Appropriate caution is therefore advised.

9. COVER ILLUSTRATION: ORTIGAS, MANILA

Ortigas, Manila (by author): Dispersion and decentralization have become dominant trends in world cities, with the exception of those with binding topographical or international boundaries, such as Singapore and Male (Maldives). Manila is one of the most decentralized cities in the world. Its central business district (CBD) has long since been exceeded in commercial influence by the Makati CBD. Ortigas is another expanding business center, just of Makati along the EDSA road artery.(Avenue Epifanio de los Santos). EDSA is perhaps the most important arterial in Manila, not only from the perspective of traffic but also for its role in political developments over the past three decades.

10. COMMENTS AND SUGGESTIONS

Demographia wishes to produce the most accurate possible estimates. This edition incorporates changes from suggestions that were deemed to be appropriate. Comments, suggestions, criticism and data are welcomed.

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