

Supplementary Information

Table S1. Overview of the OSM tag classifications and filters for the two definitions used.

Category	OSM / Overture tag(s)	Conservative definition	Wide definition	Comments
Parks	leisure=park; Overture subtype=park	Included	Included	Most consistently mapped and most reliably public across regions (Ludwig et al., 2021)
Recreation grounds	landuse=recreation_ground	Included	Included	Low ambiguity of intended use
Dog parks	leisure=dog_park	Included	Included	
Playgrounds	leisure=playground	Included	Included	Low ambiguity of intended use
Village greens	landuse=village_green	Included	Included	Can be paved event spaces in some regions (Ludwig & Zipf, 2019)
Gardens	leisure=garden	Excluded	Included	
Forests & woodlands	landuse=forest; natural=wood	Excluded	Included	Vegetation probability as low as 0.71 in some regions (Ludwig & Zipf, 2019)
Grass, meadows & grasslands	landuse=grass/meadow/grassland; natural=grassland	Excluded	Included	
Scrub & shrubbery	natural=scrub; landuse=shrubby	Excluded	Included	
Nature reserves, cemeteries, allotments, heathland	leisure=nature_reserve; landuse=cemetery/allotments; natural=heath	Excluded	Excluded	Tag-to-vegetation and tag-to-access relationship too inconsistent across regions to treat consistently (Ludwig & Zipf, 2019)
Surface filter	surface != asphalt, concrete, paving_stones, cobblestone, paved, sand	Applied	Applied	Removes hard-surfaced designated spaces
Minimum area	≥ 0.5 ha (5,000 m ²)	Applied	Applied	(Battiston & Schifanella, 2024; Konijnendijk, 2022; WHO, 2016)
Access filter	access=private, access=no removed	Applied	Applied	access=* not used positively: present on <2% of polygons even in well-mapped cities (Ludwig et al., 2021)

Table S2. Walking-speed scenarios used for accessibility modelling. Road and built-up surface speeds are derived from the "usual" and "slow" outdoor walking pace categories reported by Murtagh et al. (2021) for the population younger than 65 years and aged 65 years or older, respectively. Non-road walking speeds are reduced by 14% following empirical estimates of walking-speed reductions on rough natural terrain reported by Gast et al. (2019).

Population group	Scenario	Road and built-up surfaces (km/h)	Non-road surfaces (km/h)
<65 years	Lower	4.57	3.93
<65 years	Mean	4.72	4.06
<65 years	Upper	4.86	4.18
≥65 years	Lower	2.77	2.38
≥65 years	Mean	2.95	2.54
≥65 years	Upper	3.10	2.66

Table S3. Population-weighted share of the urban population within a 15-minute walk of an urban green space, by World Bank region, age group and UGS definition, under the mean walking-speed scenario.

Region	Conservative UGS definition				Wide UGS definition			
	No. of cities	Population (millions)	Under 65 % (95% CI)	65 and older % (95% CI)	No. of cities	Population (millions)	Under 65 % (95% CI)	65 and older % (95% CI)
North America	398	153.8	92.7 (92.0–93.3)	76.2 (73.5–78.1)	398	154.0	96.6 (96.2–97.0)	84.8 (82.6–86.4)
Europe and Central Asia	1,458	362.0	85.8 (85.1–86.5)	75.5 (73.4–77.1)	1,481	363.6	94.9 (94.6–95.2)	91.8 (90.6–92.7)
Latin America and the Caribbean	1,037	339.6	77.7 (76.6–78.7)	61.8 (59.0–63.8)	1,070	341.9	89.7 (89.0–90.3)	77.5 (75.0–79.2)
Middle East and North Africa	583	216.3	53.8 (52.7–54.9)	46.6 (44.5–48.2)	707	230.4	59.4 (58.3–60.4)	52.5 (50.3–54.1)
East Asia and the Pacific	2,634	1,087.9	63.3 (62.2–64.4)	51.4 (48.9–53.3)	2,973	1,114.8	73.4 (72.4–74.4)	61.5 (59.1–63.2)
South Asia	1,117	494.8	42.1 (41.1–43.1)	27.3 (25.6–28.6)	1,724	545.8	47.4 (46.4–48.4)	32.6 (30.8–34.0)
Sub-Saharan Africa	488	283.8	21.0 (20.3–21.7)	15.3 (14.2–16.1)	1,085	350.6	42.0 (41.0–43.1)	29.8 (28.2–31.1)
Global	7,715	2,938.2	60.1 (59.1–61.0)	55.4 (53.0–57.1)	9,438	3,101.1	68.9 (68.0–69.8)	65.9 (63.9–67.5)

Figure S1. Overview and comparison of input and output data for Lagos, Nigeria. (a) City boundary defined according to the GHS Urban Centre Database (UCDB) R2024A. (b) Administrative boundaries of Lagos State; the light-blue outline indicates the city boundary shown in (a). (c) Green-space polygons identified using the conservative definition. (d) Green-space polygons identified using the wide definition. (e) Travel time (min) to the nearest green space under the conservative definition. (f) Travel time (min) to the nearest green space under the wide definition. (g) WorldPop population estimates for 2025, with a total population of 14.2 million. (h) GHS-POP population estimates for 2025, with a total population of 12.8 million. The comparison illustrates the sensitivity of the spatial inputs and resulting accessibility estimates to alternative definitions and population data sources. We used Google Satellite 2026 for background imagery.

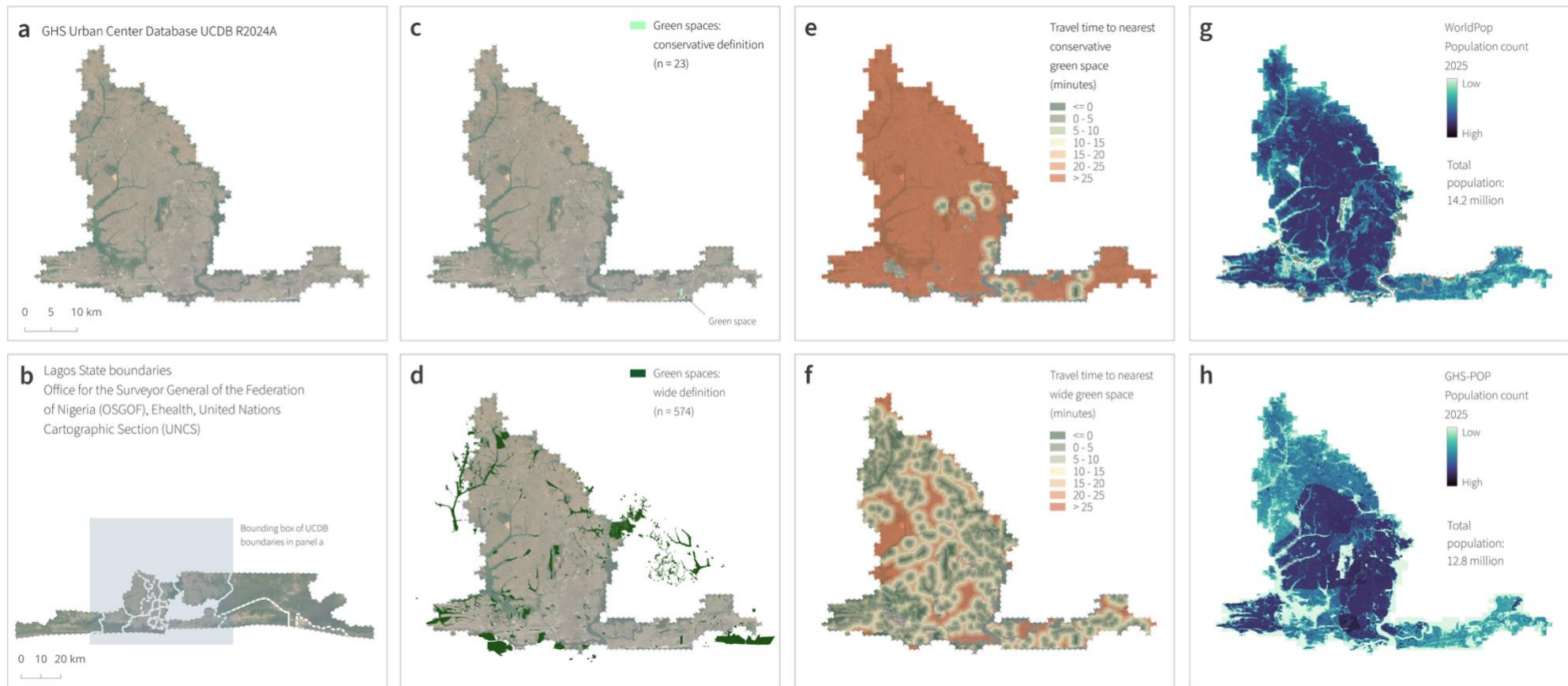


Figure S2. Comparison of city boundary delineation between EUROSTAT and the GHS Urban Centre Database for two cities in Italy: Milan and Turin. Background imagery is Google Satellite 2026.

