

Supplementary Note 1

This document is a supplementary note to “Assessment of gridded population data for SDG11 monitoring of slums using community generated data” by Dana R. Thomson, Hazem Mahmoud, Forrest R. Stevens, Robert Chen, Argyro Kavvada, Andrew Tatem, Andrea E. Gaughan

In addition to the data source citations provided in the manuscript, we include direct hyperlinks here for easy access to the open data used, and links to our analysis code.

Data Availability

Nearly all data used in this analysis are publicly available; the only exceptions were Nairobi and Lagos citywide “slum” boundary datasets which were obtained directly from colleagues.

1. Gridded population datasets – also see Figure 3:
 - Gridded Population of the World (GPWv4.11): <https://doi.org/10.7927/H4F47M65>
 - Global Human Settlement Population Layer (GHS-POP2):
<https://doi.org/10.2905/2FF68A52-5B5B-4A22-8F40-C41DA8332CFE>
 - High Resolution Settlement Layer (HRSLv1.5):
https://data.humdata.org/dataset?dataseries_name=Data%20for%20Good%20at%20Meta%20-%20High%20Resolution%20Population%20Density%20Maps%20and%20Demographic%20Estimates
 - Geo-Referenced Infrastructure and Demographic Data for Development (GRID3-NGAv2.1): <https://wopr.worldpop.org/?NGA/Population>
 - LandScan Global (LandScan-G): <https://landscan.ornl.gov/>
 - LandScan-HD: <https://landscan.ornl.gov/>
 - WorldPop Global Unconstrained (WorldPop-U):
<https://hub.worldpop.org/geodata/listing?id=69>
 - WorldPop Global Constrained (WorldPop-C):
<https://hub.worldpop.org/geodata/listing?id=79>
 - WorldPop-Peanut Butter (WorldPop-PB): <https://apps.worldpop.org/peanutButter/>
2. KnowYourCity Campaign “slum” boundaries and populations downloaded from:
<https://sdinet.org/explore-our-data/>, and processed and reported on GitHub:
<https://github.com/hazemmahmoud88/KnowYourCity-data-for-research>.
3. GADM city administrative boundaries – also see Figure 7: <https://gadm.org/data.html>
4. City-wide “slum” boundary datasets – also see Figure 7.
 - Dhaka, Bangladesh: www.hindawi.com/journals/dpis/2014/172182/#dataset-files
 - Accra, Ghana: <https://slummap.net/index.php/geoknowledge/>
 - Mumbai, India:
https://github.com/datameet/Municipal_Spatial_Data/tree/master/Mumbai
 - Hyderabad, India: <https://edoc.hu-berlin.de/bitstream/handle/18452/17563/kit.pdf>
 - Nairobi, Kenya: <https://doi.org/10.1080/17538947.2018.1554010>
 - Lagos, Nigeria: <https://doi.org/10.1016/j.compenvurbsys.2019.101369>

5. Demographic and Health Surveys (user registration and agreement required):
<https://dhsprogram.com/data/available-datasets.cfm>

Processed datasets used for our “slum” accuracy and SDG 11.1.1 assessments are available on GitHub: https://github.com/danathomson/Accuracy_of_GridPops_in_Slums

Additionally, we collated Slum Dweller International’s KnowYourCity Campaign data (original and cleaned) in a research-friendly format on GitHub for further analysis, and to use as auxiliary data in future gridded population modelling: <https://github.com/hazemmahmoud88/KnowYourCity-data-for-research>.

Code Availability

The R code used to prepare data and analyze gridded population dataset accuracy and suitability for SDG 11.1.1 estimation is available on GitHub:

https://github.com/danathomson/Accuracy_of_GridPops_in_Slums