

Comments from the HEI Review Committee

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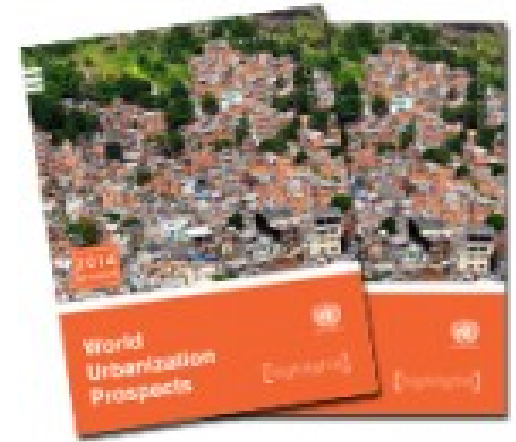
HEI Annual Meeting

Alexandra, VA

May 1, 2017

World's population is increasingly living in urban areas

- Globally, 54% of the population lives in urban areas
 - Expected to be nearly 70% by 2050
- ~7% in megacities (>10 million people) in 2014
- 10 megacities in 1990 → 28 megacities in 2014



Megacities

1. Tokyo (38 million)
2. Delhi (25 million)
3. Shanghai (23 million)
4. Mexico City (21 million)
5. Mumbai (21 million)
6. Sao Paulo (21 million)
7. Osaka (20 million)
8. Beijing (20 million)
9. New York-Newark (18.5 million)
10. Cairo (18.5 million)

<http://www.un.org/en/development/desa/news/population/world-urbanization-prospects-2014.html>



The world's megacities

April 9, 2010 -- Updated 0350 GMT (1150 HKT)



The world's megacities

Megacities are described as "large urban areas" by Demographia, and they may include population estimates and size estimates from neighboring cities, states and regions. (Source: Demographia, March 2010)

Air pollution models

- Previous air pollution exposure models have been largely two dimensional
- Air pollution operates in three dimensions
- Population mobility

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- RFA 13-1: Improving Assessment of Near-Road Exposure to Traffic Related Pollution
- Reviewed draft of final report (February 2017)
- Comments to investigators (March 2017)
- Revised report expected (June 2017)

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- Impressive amount of work and data
- Several challenges in process
 - Resourceful workarounds
- Responsive to Committee suggestions

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- Important lessons learned
- Number of measurements and degree of precision necessary
- How to evaluate / compare exposure models that have different and important limitations
 - Is complex necessarily better?
- How to evaluate impact on epidemiologic results
 - How do we define “better” or “stronger”?
- Generalizability of approach and results

Questions?