# URBANIZATION TRENDS AND MULTIPLE CHALLENGES FACING CITIES

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Curitiba, Brazil © Flickr / Thomas Locke Hobbs



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# RIO+20 OUTCOME DOCUMENT
# THE FUTURE WE WANT

**Approved by all Member States, paragraph 134 states under the heading "Sustainable Cities and Human Settlements":**

"We recognize that, if they are well planned and developed, including through integrated planning and management approaches, cities can promote economically, socially and environmentally sustainable societies."



Curitiba Graphics and Photo © Karl Gude - Scientific American

# TECHNICAL SUPPORT TEAM ISSUE BRIEF ON SUSTAINABLE CITIES AND HUMAN SETTLEMENTS

- Substantive **preparation for Member States** in advance of Sustainable Cities and Human Settlements discussion in the 7th session of the Open Working Group on Sustainable Development Goals

- Co-led by **UN-Habitat and UNEP with** contributions from **12 other agencies, funds, programmes and commissions** including ECLAC, ESCAP, IFAD, ILO, UNDP, UNFPA, UNICEF, UNISDR, UN-Women, WHO, WMO and the World Bank.


Interactive process of three rounds of comments/drafting with the effective result of a **common interagency position.**

UNFPA

UNITED NATIONS ESCAP
Economic and Social Commission for Asia and the Pacific

NACIONES UNIDAS
UNITED NATIONS
CEPAL
ECLAC

WORLD BANK

IFAD
Enabling poor rural people to overcome poverty

UNISDR
The United Nations Office for Disaster Risk Reduction

World Health Organization

UN WOMEN

unicef

UNDP

World Meteorological Organisation

ILO

# STOCKTAKING

# KEY TRENDS

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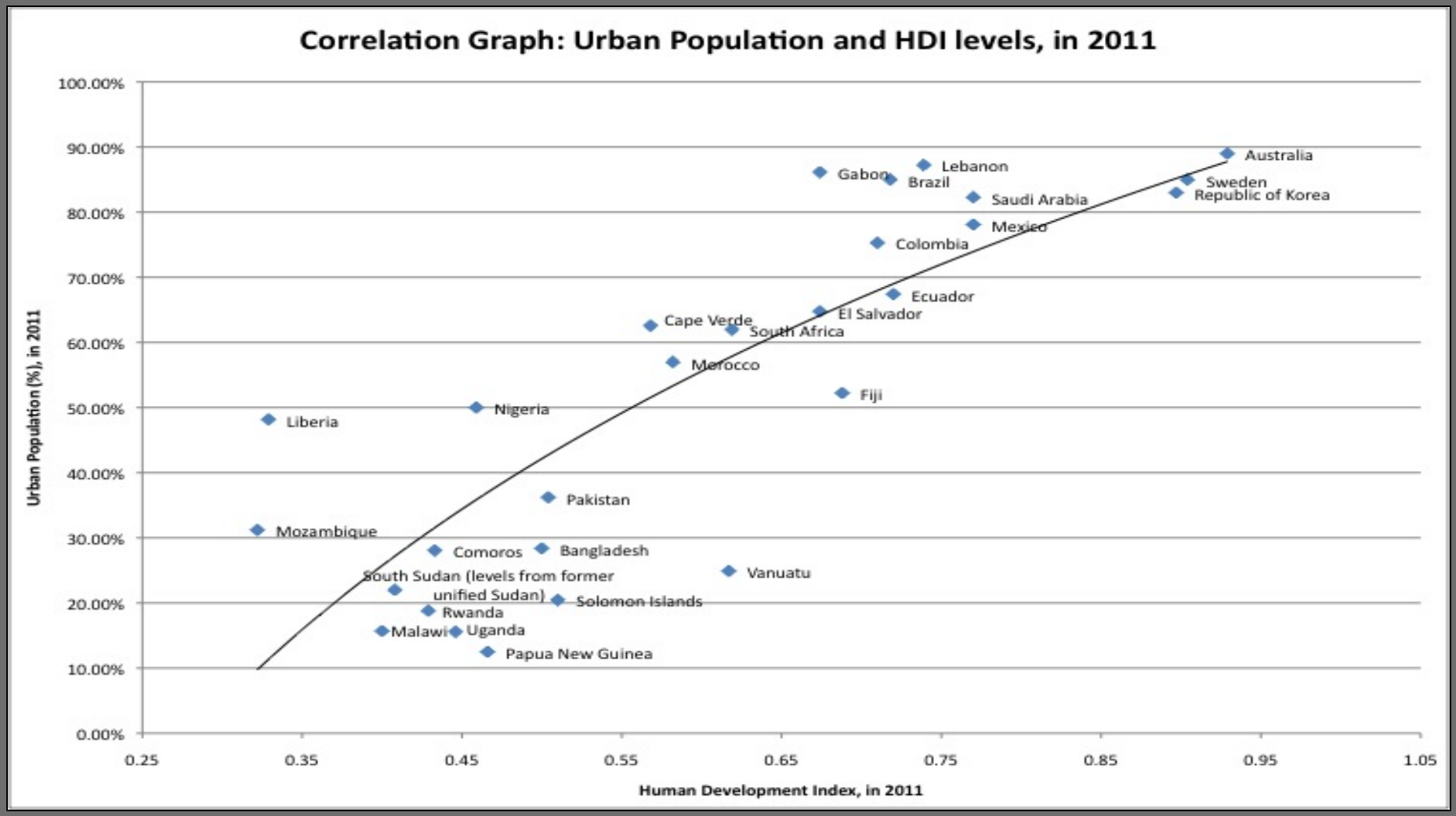
Humanity will increase from 50 to 70% urban by 2050.

60% of the area expected to be urban in 2030 remains to be built.

Mumbai © www.digitalstudio.in

# URBANIZATION & HUMAN DEVELOPMENT




Data: United Nations Development Programme (2011)

# KEY TRENDS

Natural increase, rural-urban migration and reclassification drive rapid growth in small to intermediate sized cities in the developing world.

Backlogs and resource constraints to overcome.

Street Market, Dire Dawa, Ethiopia © Flickr / A. Davey

# KEY TRENDS

Cities in the developed world may have to retrofit for more sustainable consumption and production patterns.

Kibae Park, Seoul © UN-Habitat

Proposal for transformation to a car-free, bike and tram facilitated Melbourne on an already existing road © HWT Image Library

# KEY TRENDS

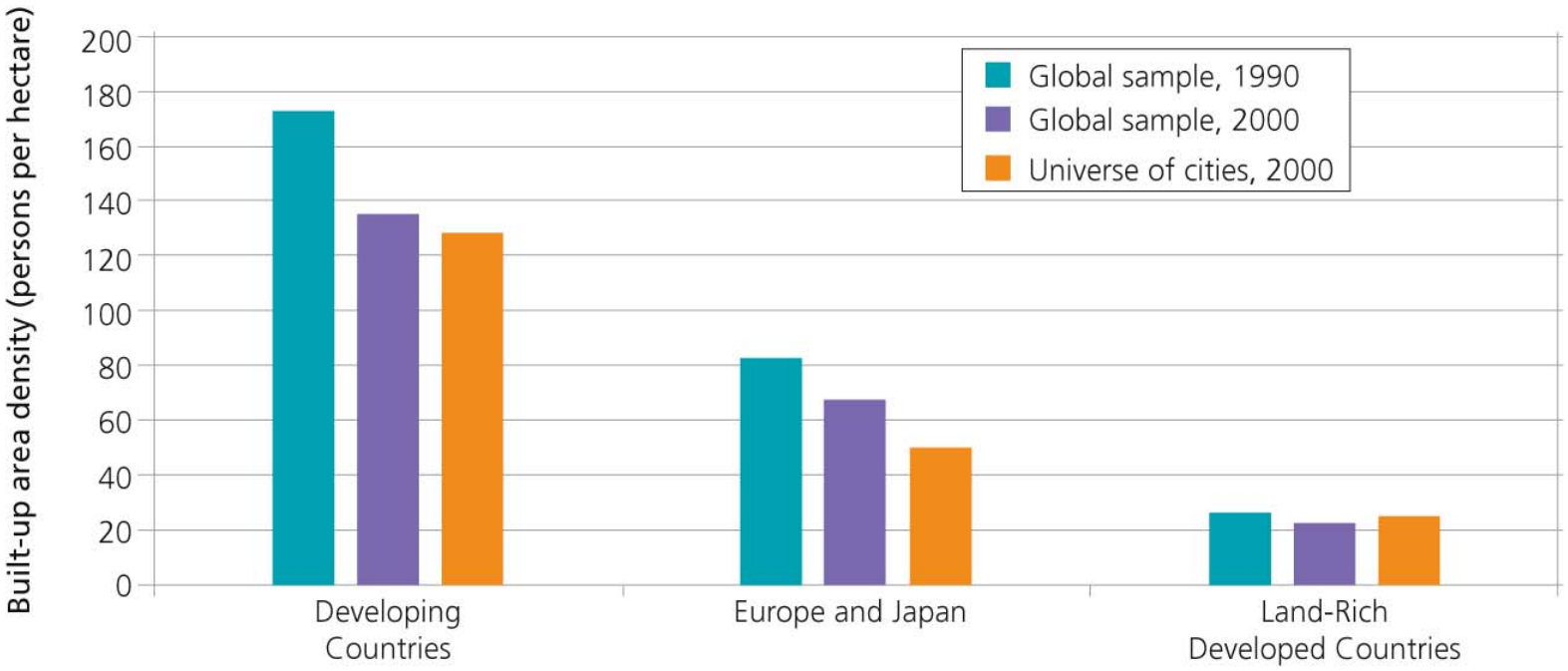
However, many cities are forfeiting their agglomeration advantages.

- Accelerating urban sprawl
- High transport and infrastructure costs.
- Higher rates of environmental degradation.

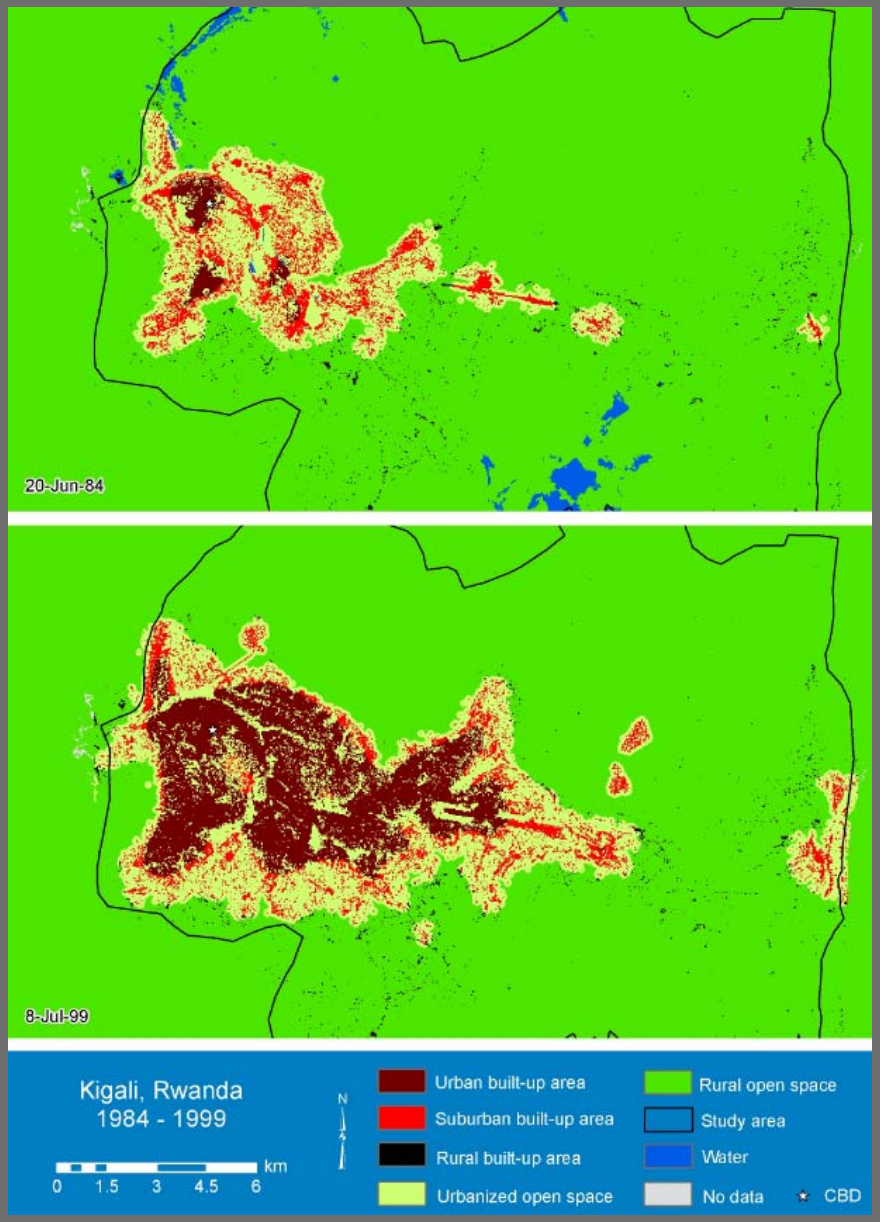
Mass Housing in Ixtapaluca, Mexico © www.imagenesaereasdemexico.com

# KEY TRENDS - URBAN SPRAWL

Figure II: **Average Built-up Area Densities in Three World Regions**

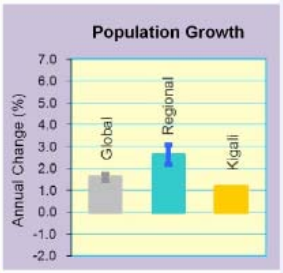


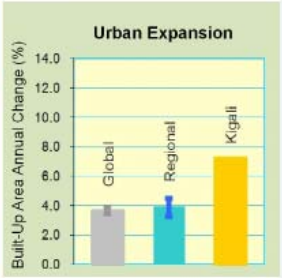

*Source: Making Room for a Planet of Cites, by Shlomo Angel, Jason Parent, Daniel L. Civco, and Alejandro M. Blei. © 2011. Lincoln Institute of Land Policy, Cambridge, MA.*

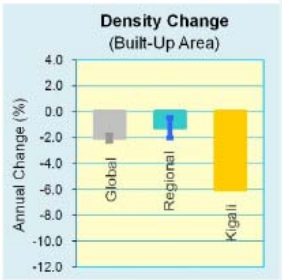


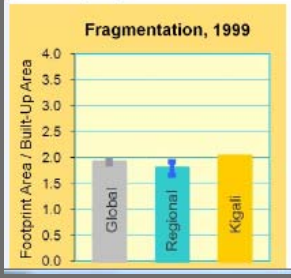

## Kigali, Rwanda (Sub-Saharan Africa)

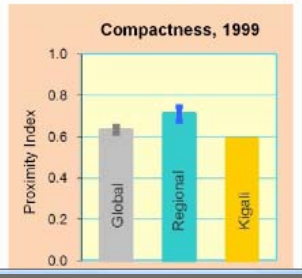
| Metric | 20-Jun-1984 | 8-Jul-1999 | Annual Change (Percent) |
|---|---|---|---|
| Population | 296,879 | 354,273 | 1.2 |
| Built-up Area (Hectares) | | | |
| Total | 1,517 | 4,502 | 7.2 |
| Urban | 253 | 3,097 | 16.6 |
| Suburban | 1,048 | 1,210 | 1.0 |
| Rural | 216 | 195 | -0.7 |
| Open space (Hectares) | | | |
| Urbanized Open Space | 2,911 | 4,642 | 3.1 |
| City Footprint | 4,428 | 9,144 | 4.8 |
| Density (Persons / Hectare) | | | |
| Built-up Area Density | 195.7 | 78.7 | -6.1 |
| City Footprint Density | 67.0 | 38.7 | -3.6 |
| Fragmentation | | | |
| City Footprint / Built-up Area | 2.92 | 2.03 | -2.41 |
| Openness Index | 0.68 | 0.41 | -3.35 |
| Compactness (Roundness) | | | |
| Proximity | 0.56 | 0.59 | 0.33 |
| Cohesion | 0.64 | 0.74 | 0.96 |
| New Development (Hectares) | | 2,982 | Percent |
| Infill | | 1,376 | 46.13 |
| Extension | | 1,043 | 34.98 |
| Leapfrog | | 563 | 18.89 |

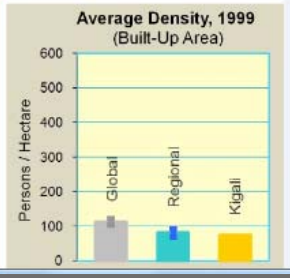


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# STOCKTAKING

# SOCIAL AND ENVIRONMENTAL IMPLICATIONS

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Reduced **access to goods**, **services and jobs**, **increased rates of crime** and violence and poor health are occurring in increasingly unequal ways.


Juarez. Image source: Architectural Review Jan 2013

# SOCIAL AND ENVIRONMENTAL IMPLICATIONS

In many cities the **spatial trap of slums** consolidates and intensifies these inequalities.

Particularly vulnerable groups are also experiencing discrimination and harassment.

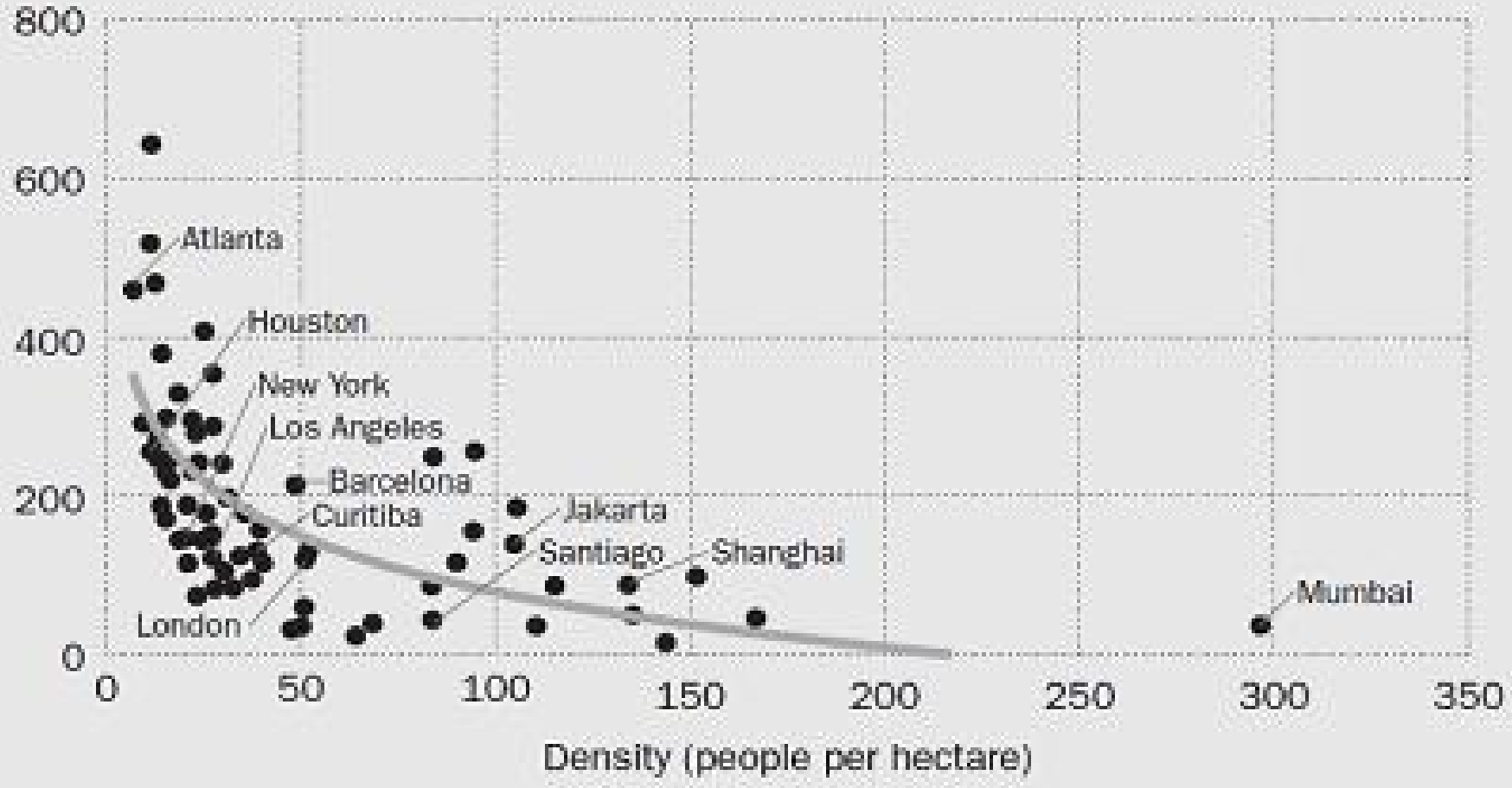
# SOCIAL AND ENVIRONMENTAL IMPLICATIONS

Despite their potential efficiencies, cities (particularly in the west) remain high consumers of energy and relatively high producers of waste and GHG emissions.

Much of this is already beyond the earth's carrying and regenerative capacity.

Denver 2001 © Glenn Asakawa / Denver Post

## Transport-related emissions per capita, 1995 (kilograms)



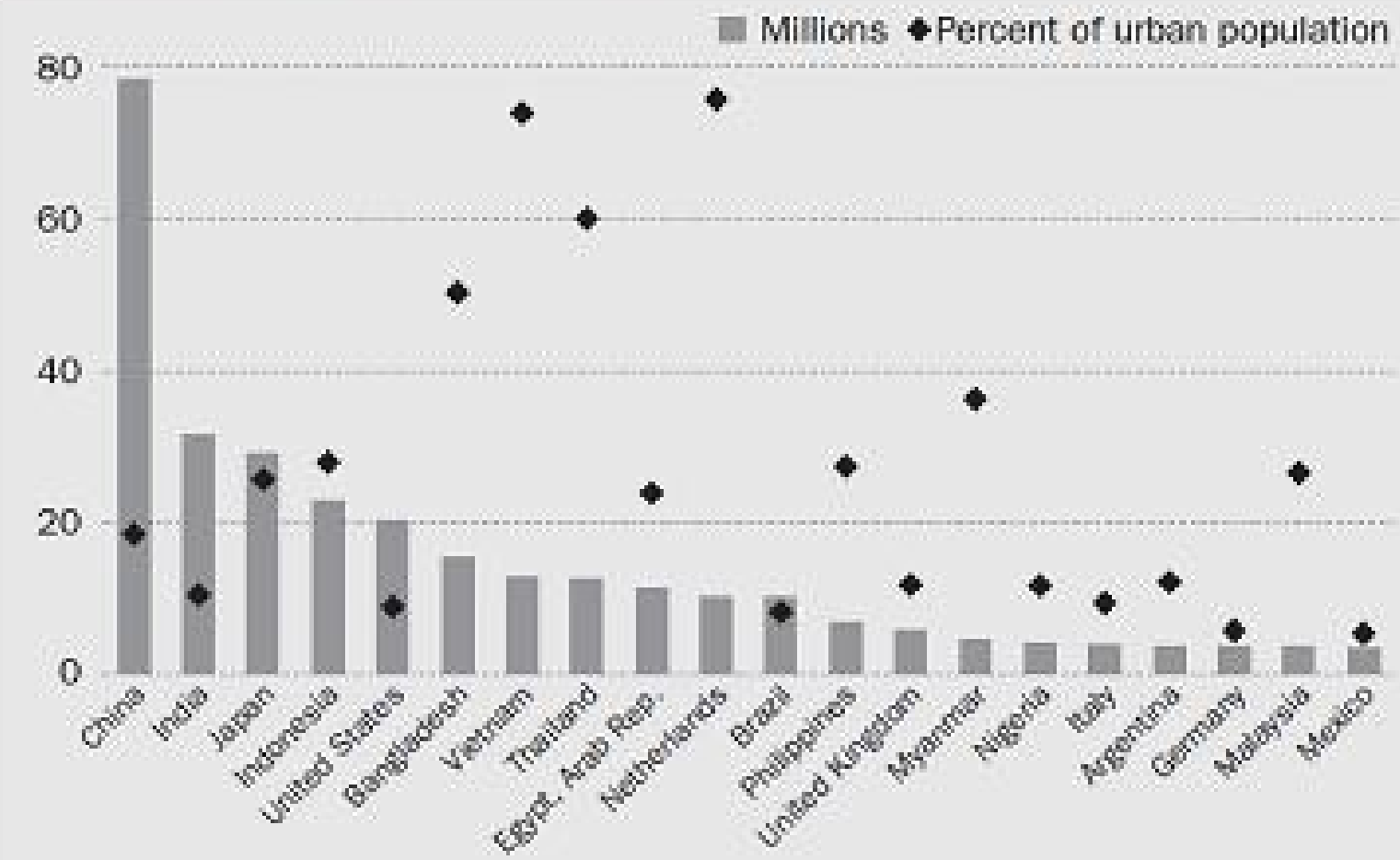

Source: Kenworthy and Laube 2001; City Mayors 2007.

# SOCIAL AND ENVIRONMENTAL IMPLICATIONS

Peripherally dispersed urban development is also **fragmenting natural habitat** and increasing urbanities' **exposure to natural disasters**.

Gonaives, Haiti © UN / Marco Dormino

## Countries with highest urban populations living in the low-elevation coastal zone, 2000




Source: CIESIN 2007.

# STOCKTAKING

# OPPORTUNITIES AND APPROACHES

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Yet cities remain preeminent engines of growth.

If their efficiencies are properly harnessed they can deliver optimal levels of economic growth, social cohesion and environmental outcomes.


Hong Kong © Foter

# OPPORTUNITIES AND APPROACHES

A holistic focus on space and configuration are key to effectively integrating urban sectors in their pursuit of sustainability

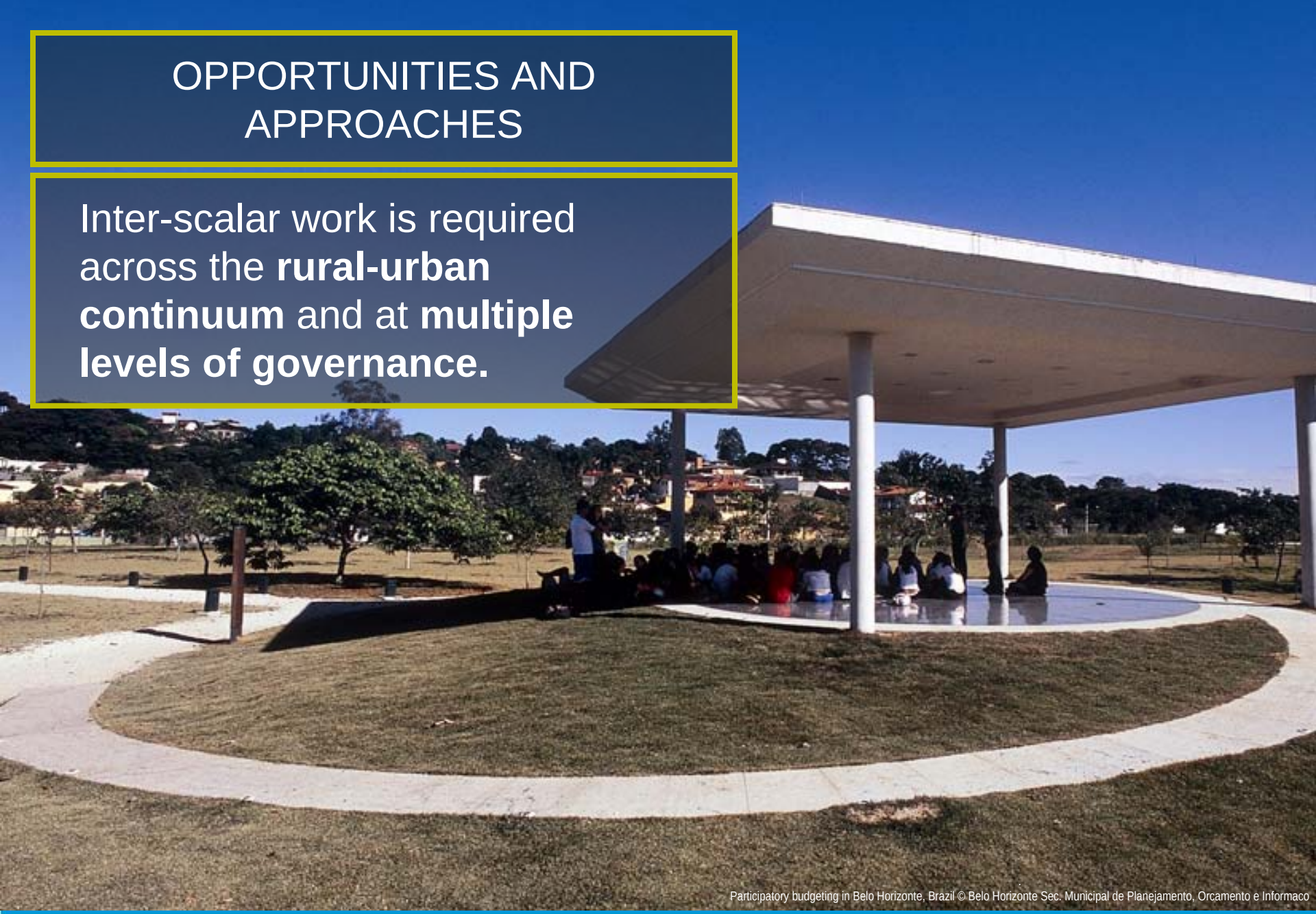
From motorway to Public Space. Cheonggyechon River, Seoul. © John Dolci

# OPPORTUNITIES AND APPROACHES

Integrated planning and gender responsive design can produce **compact**, mixed-use cities that offer a **higher quality of life** at lower rates of environmental degradation and greater levels of **social cohesion**, particularly via public space.

# OPPORTUNITIES AND APPROACHES

Inter-scalar work is required across the **rural-urban continuum** and at **multiple levels of governance.**



Participatory budgeting in Belo Horizonte, Brazil © Belo Horizonte Sec. Municipal de Planejamento, Orcamento e Informaco

# OPPORTUNITIES AND APPROACHES

Ensuring alignment between education supply and labour market demand.
Access to decent employment and social safety nets are critical.

Medellin, Colombia © UN-Habitat / Laura Petrella

# SUSTAINABLE CITIES INTERVENTIONS

NEW BUILD/NEW CONSTRUCTION

INTEGRATED/ SYSTEMATIC

NETWORK BASED

RETROFIT/EXISTING CITIES

**NEW URBAN DEVELOPMENTS AS 'INTEGRATED ECO-URBANISM'**

E.g Treasure Island
Masdar
Dongtan
Auroville
Gaviotas

**CONSTRUCTING NEW 'URBAN NETWORKED TECHNOLOGIES**

E.g Hydrogen fuel infrastructure
District heating and cooling
Piped grey water

**RECONFIGURATING CITIES AS 'SYSTEMIC URBAN TRANSITIONS'**

E.g 'Low Carbon' cities
'Liveable' cities
'Post Carbon' cities

**RETROFITTING EXISTING 'URBAN NETWORKED INFRASTRUCTURES'**

E.g Supply of desalinised water
Modern rickshaw technologies
Curitiba's Bus System
Orangi Pilot Project

http://www.sustainabilityinstitute.net/newsdocs/documents/doc_details/488-cities-decoupling-and-urban-infrastructure-scoping-the-challenges

# CONCLUSION: Why prioritizing sustainable cities and human settlements?

## *Integration, Transformation, Universality*

1. Educate and **focus attention** on urgent urban challenges and future opportunities
2. Mobilize **and empower all urban actors** around practical problem solving
3. Address the specific challenges of **urban poverty** and access to infrastructure
4. Promote **integrated and innovative** infrastructure design and service delivery
5. Promote **land use** planning and efficient spatial concentration
6. Ensure **resilience** to climate change and disaster risk reduction

Curitiba, Brazil © Flickr / Thomas Locke Hobbs

# Thank You!

And please…