UN HABITAT
FOR A BETTER URBAN FUTURE

Global Partnership on Cities and Biodiversity

Bonn

6 September 2011

UN-Habitat's Urban Environment Work

1 **Sustainable Cities Programme and Localising Agenda 21**
1990/1995-2008

2 **Lake Victoria/City Development Strategies**
2002-2011

3 **Cities & Climate Change Initiative** 2008-Present

4 **Biodiversity, Green Economy & Planning**
2008/2010-Present

UN-Habitat's Experience with the Sustainable Cities Programme And Localising Agenda 21

1990-2008

120 Cities in 33 Countries

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Key Outcomes of SCP/LA21

- Strengthened capacities and enabled role of Municipal Authorities and urban institutions
- Mainstreamed environmental concerns in urban planning and management
- Broad-based stakeholder involvement became routine
- Bottom-up prioritization of environmental issues and decision making
- More sustainable city development strategies and urban services through better informed decision making
- Framework for multi-sectoral coordination

Lake Victoria/
City Development Strategies
2002-2011

Lake Victoria Initiative and CDS

- Sociogeographic context
- Environmental challenges
- Back-to-basics consultative planning

Mainstreaming Biodiversity into City Development Strategies

- Establish a focal point
- Develop a city environmental profile
- Undertake city consultations
- Develop a citywide biodiversity strategy
- Develop a strategic action programme
- Implement the programme
- Monitor and evaluate regularly

Lessons Learned

- Local Authorities are critical to biodiversity conservation plans
- Proper tools and assessments could help institutionalise an ecosystem approach
- Better education and public awareness
- Strengthened institutional frameworks and integrated management

UN-Habitat's Cities and Climate Change Initiative (CCCI)

2008-Present

Cities and Climate Change Initiative (CCCI)

Key Concern:

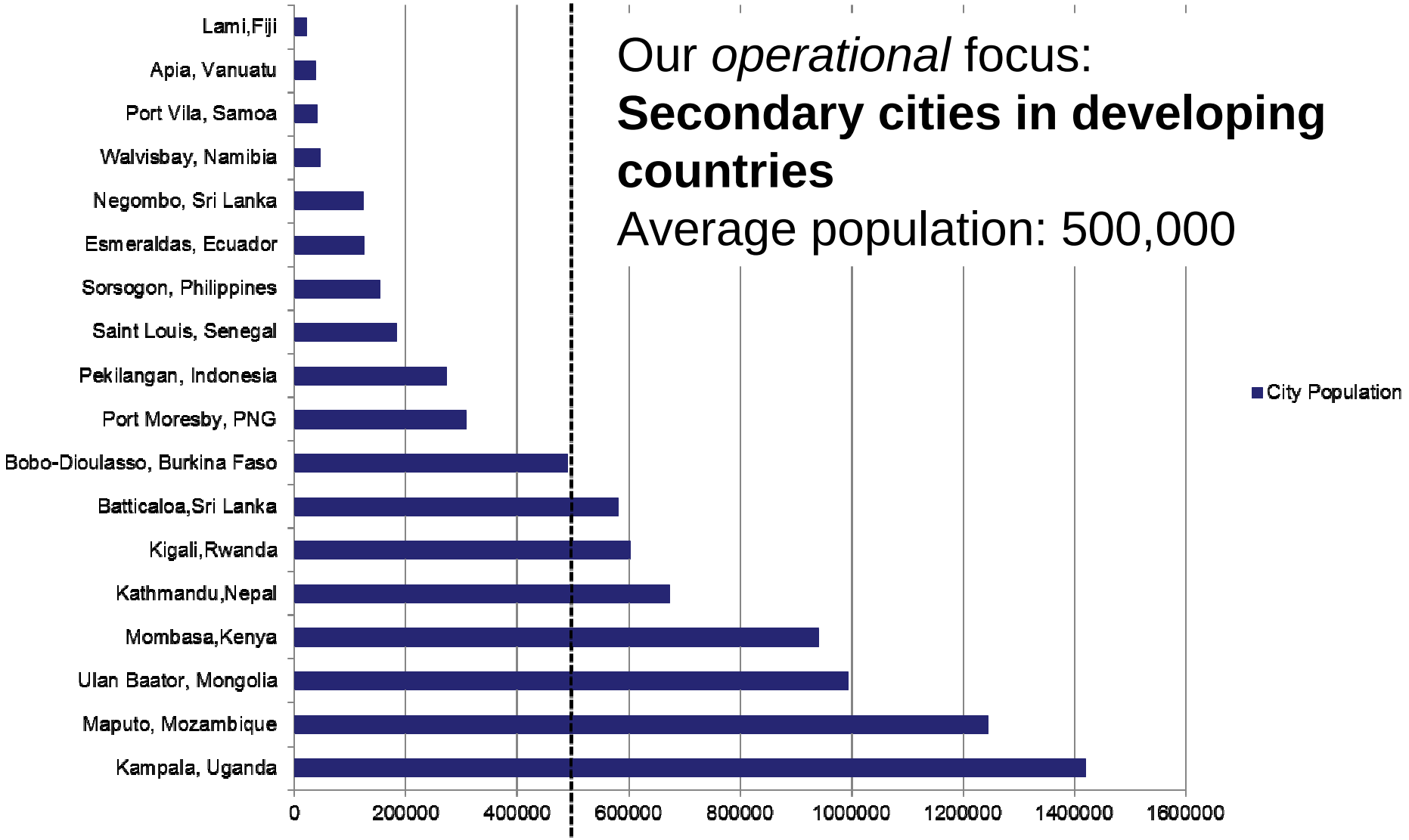
Urbanization affects climate change, resulting in impacts to cities, ecosystems and livelihoods. The severest burden is born by urban poor in slums. Local initiatives are often disconnected from national action plans.

Objective:

To enhance climate change mitigation and adaptation capacity of cities in developing & least developed countries.

Key Activities of CCCI

- Enhancing CC policy dialogues
- Mobilizing and promoting CC networks
- Developing tools for awareness, education & capacity building to support CC strategies
- Assessing conditions, identifying challenges and opportunities for cities
- Supporting cities by designing innovative and pro-poor pilot initiatives
- Stimulating learning, knowledge sharing and exchange of good practices



Our *operational* focus:

Secondary cities in developing countries

Average population: 500,000

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CCCI Lessons

Demonstrate links with infrastructure development, greening urban economy, job creation

Need for bringing together local/national policy makers on climate change and urban issues

Stakeholders in vulnerable cities demand the right to be part of the global solution

Combine work on regulations while supporting change agents in private sector

Scale up to country-wide frameworks and programmes that feed into global adaptation and mitigation plans, commitments and targets

Opportunity for strengthening governance systems: participation, equity, accountability, effectiveness

Strategic Urban Planning, Biodiversity and the Green Economy

2010-Present

The Urban Advantage

- Agglomeration/synekism
- Socioeconomic systems/patterns
- Three quintessential traits:
  - Density
  - Diversity
  - Opportunity

Emerging Cities Investigation

- Intermediate size (500,000 to 1 million people)
- Fast growing relative to regional context
- Part of larger urban corridor or cluster
- Cross-border/transboundary influence
- Not a national capital
- Not well known and/or undocumented
- Geographic balance

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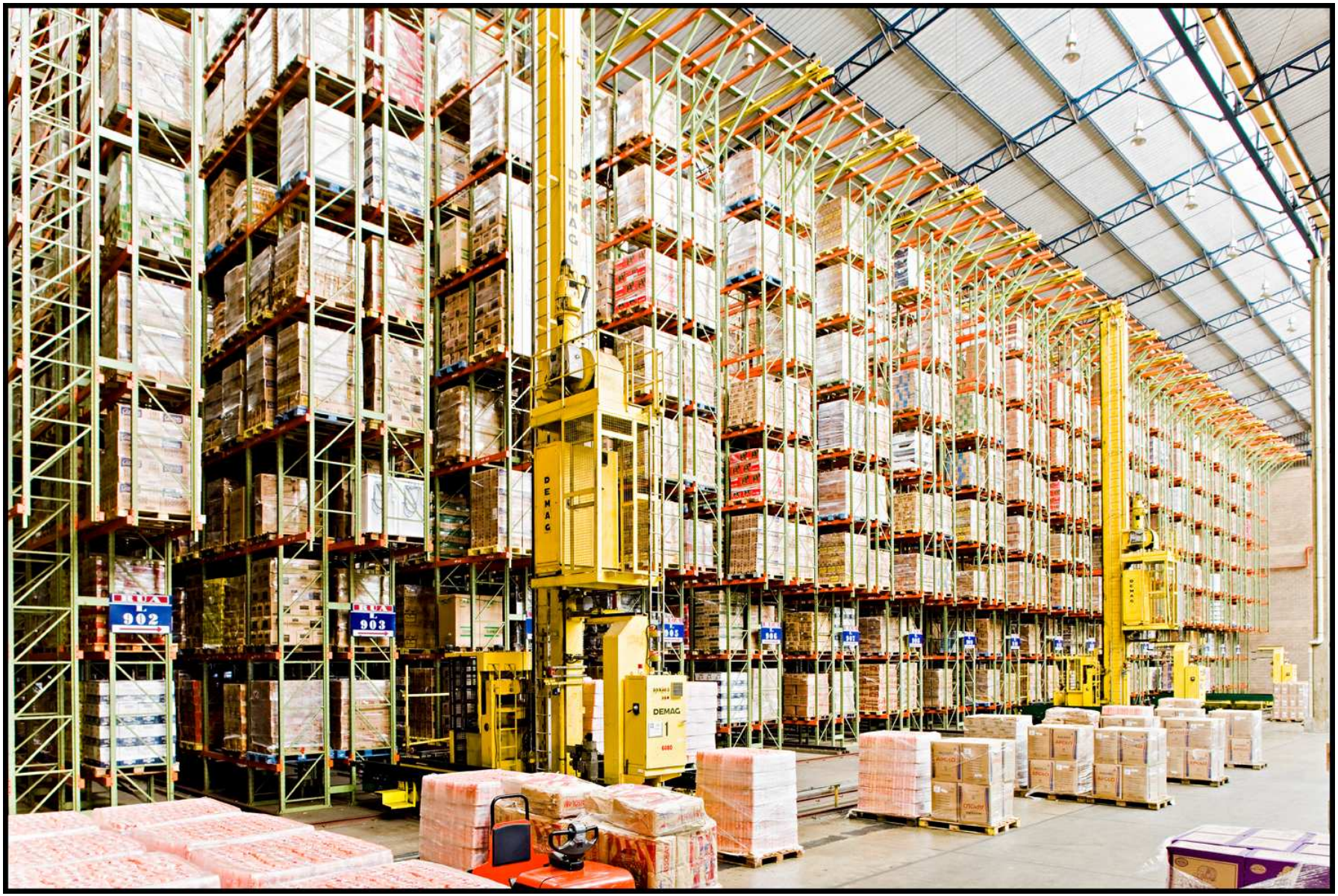
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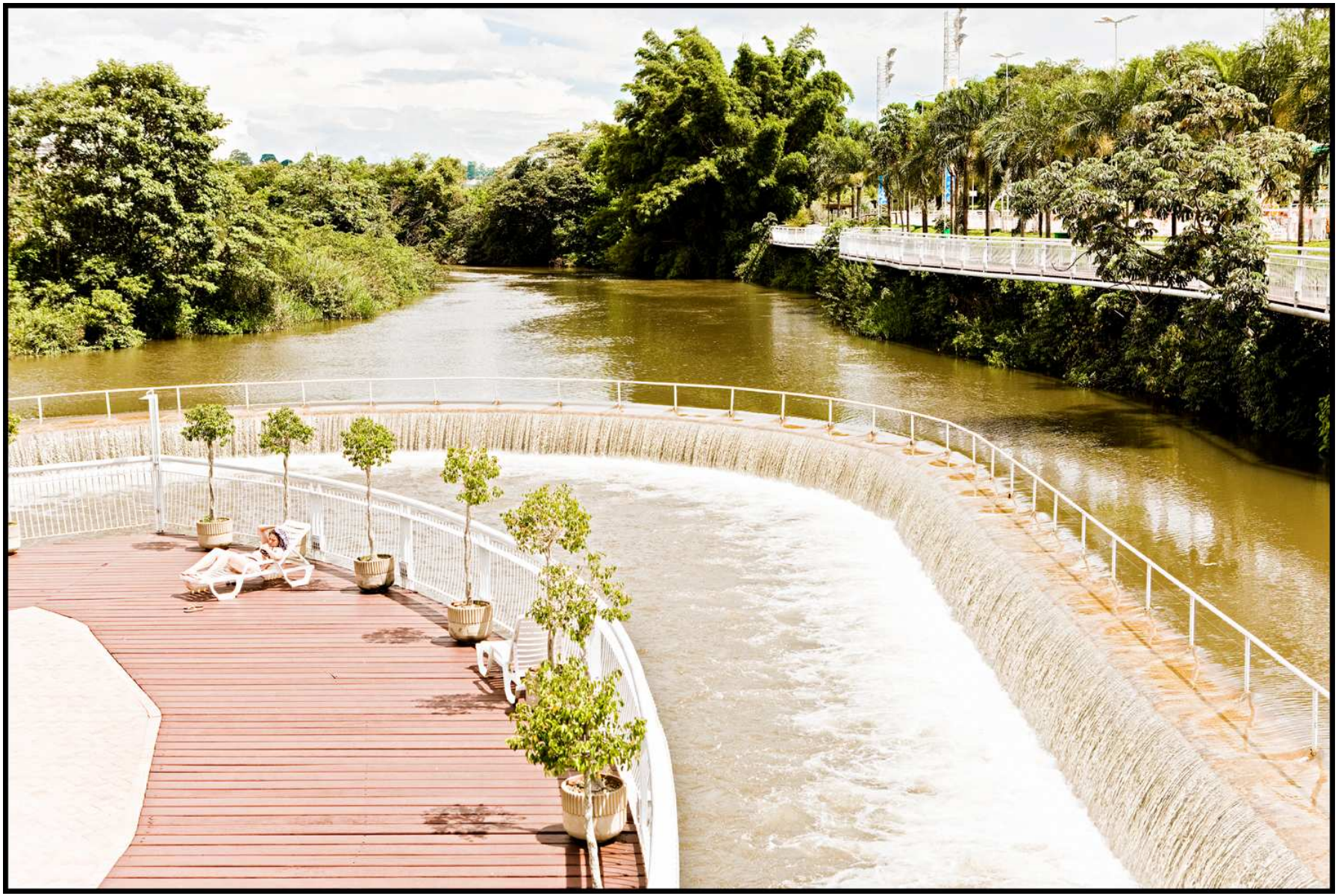
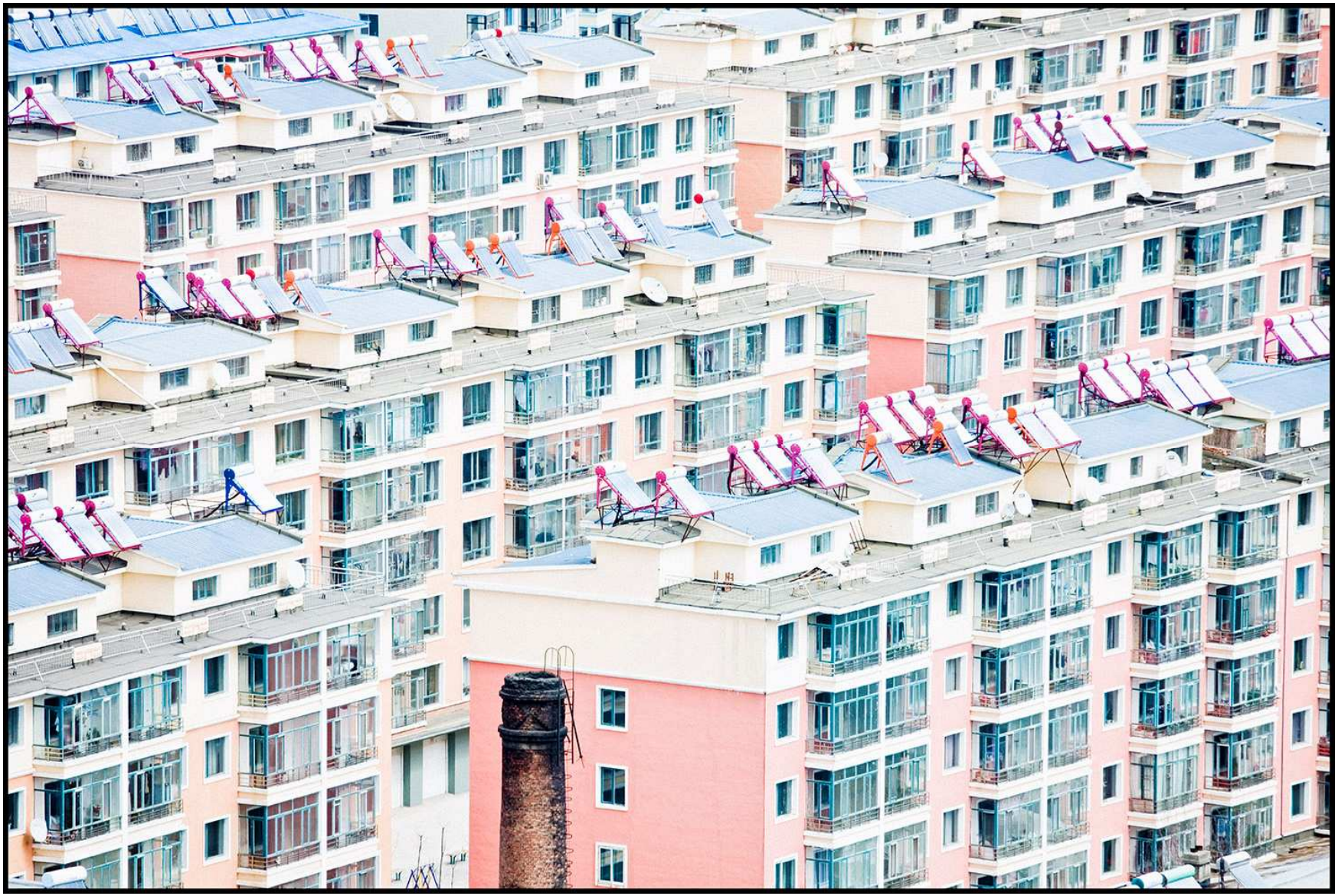
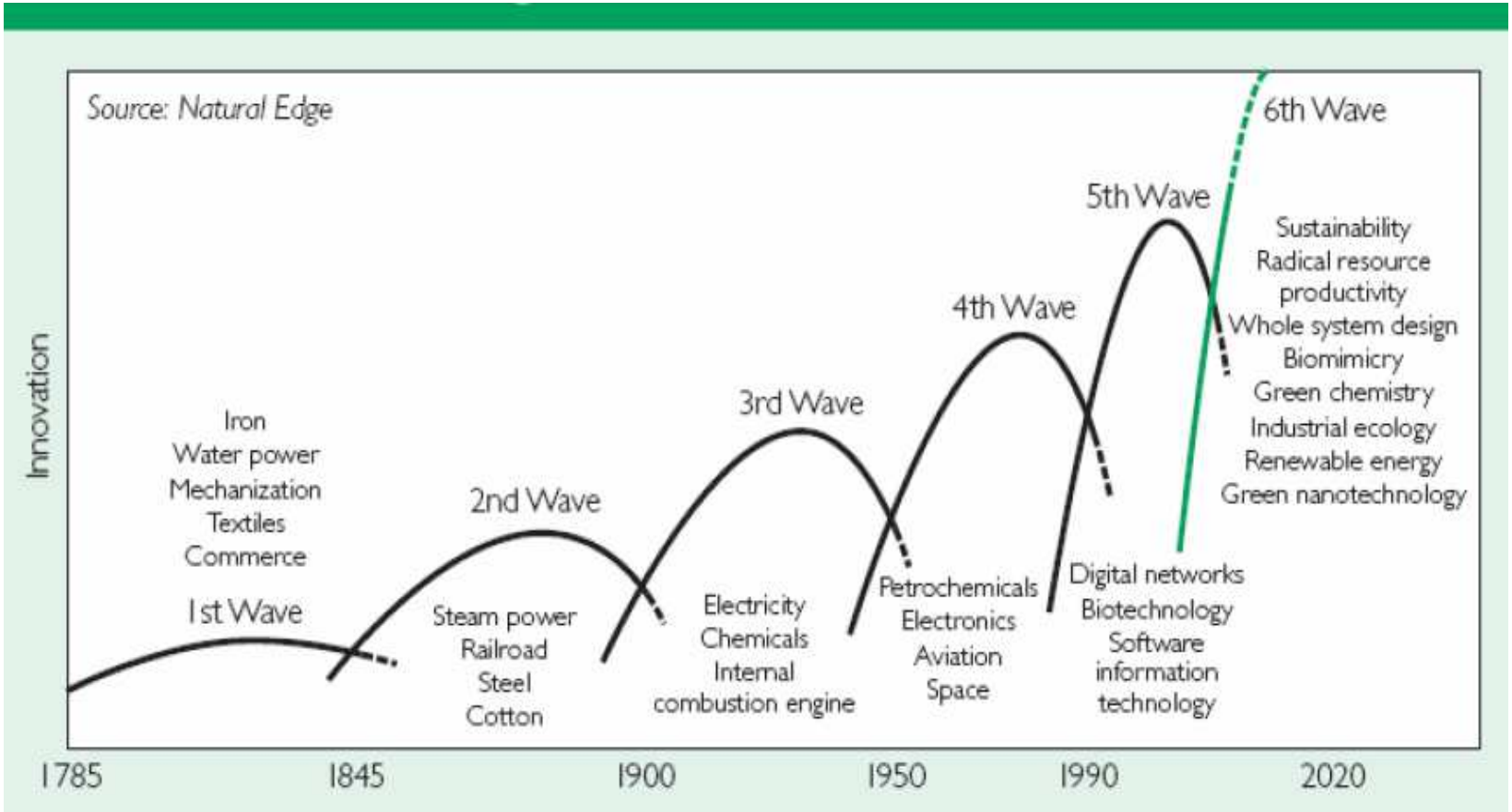




Cities and Innovation



Cities, Decoupling and the Green Economy

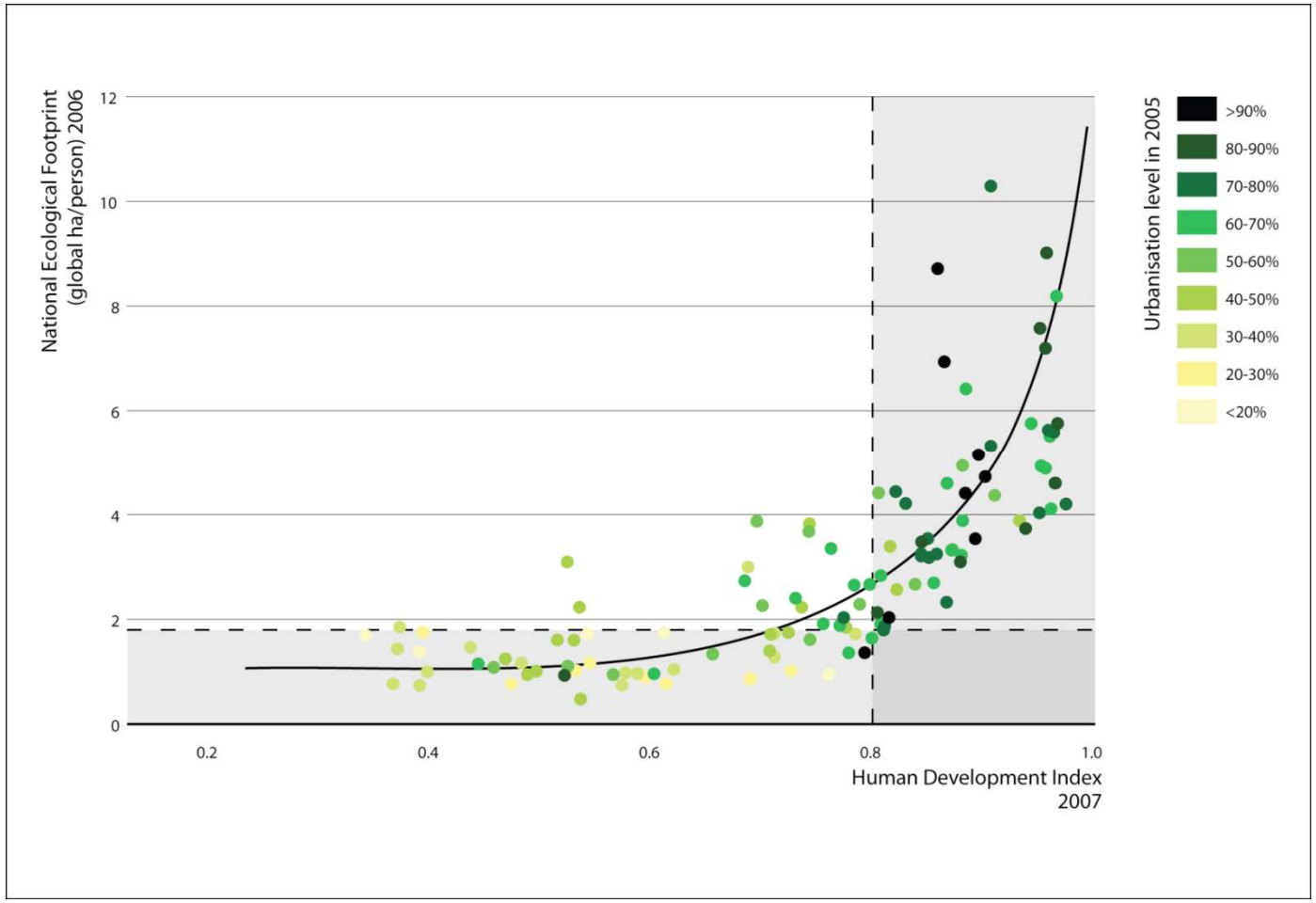
Cities and the Green Economy:

Promoting equitable urban growth with lower carbon, energy and resource intensity

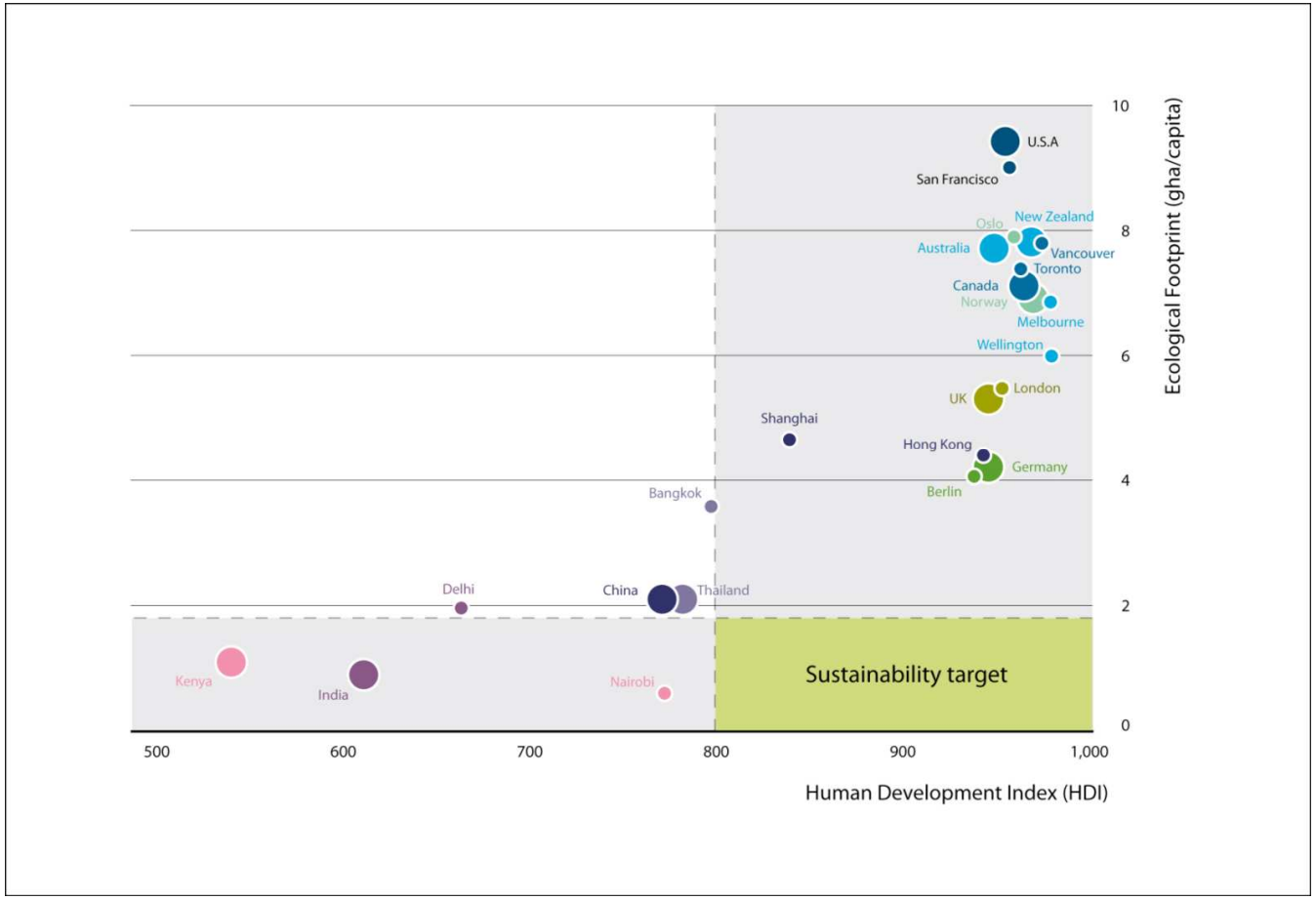
Focusing on cities:

Innovation, Density, Agglomeration, Resilience

Development and Environmental Footprint



Cities and Environmental Footprint



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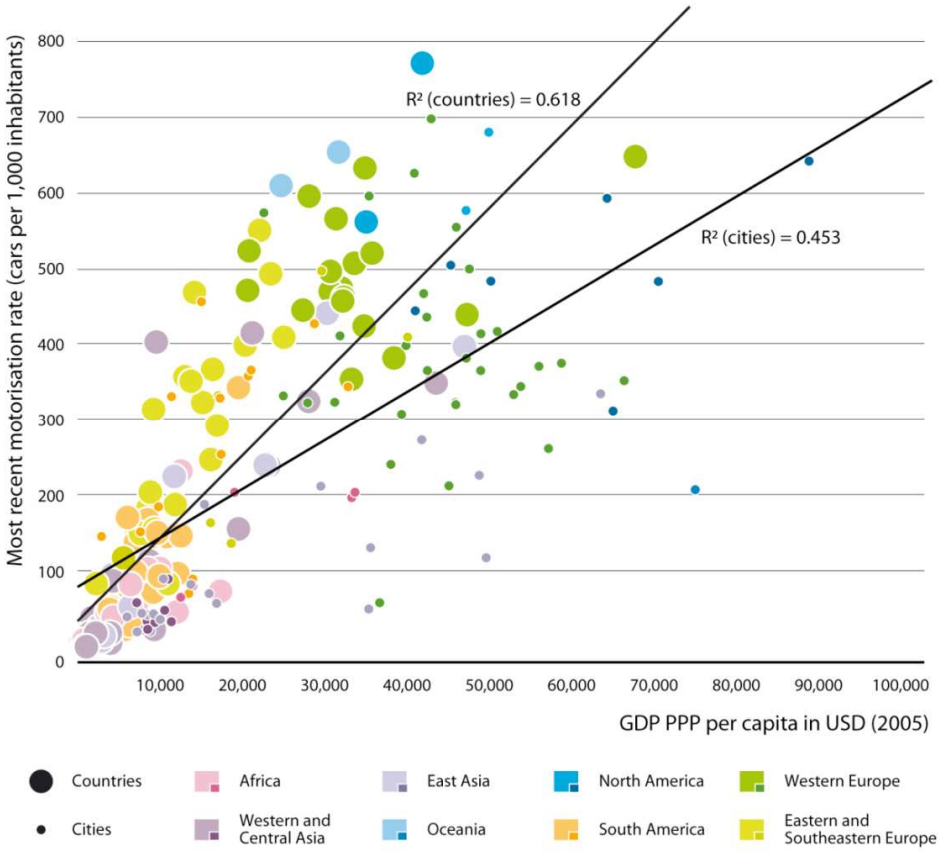
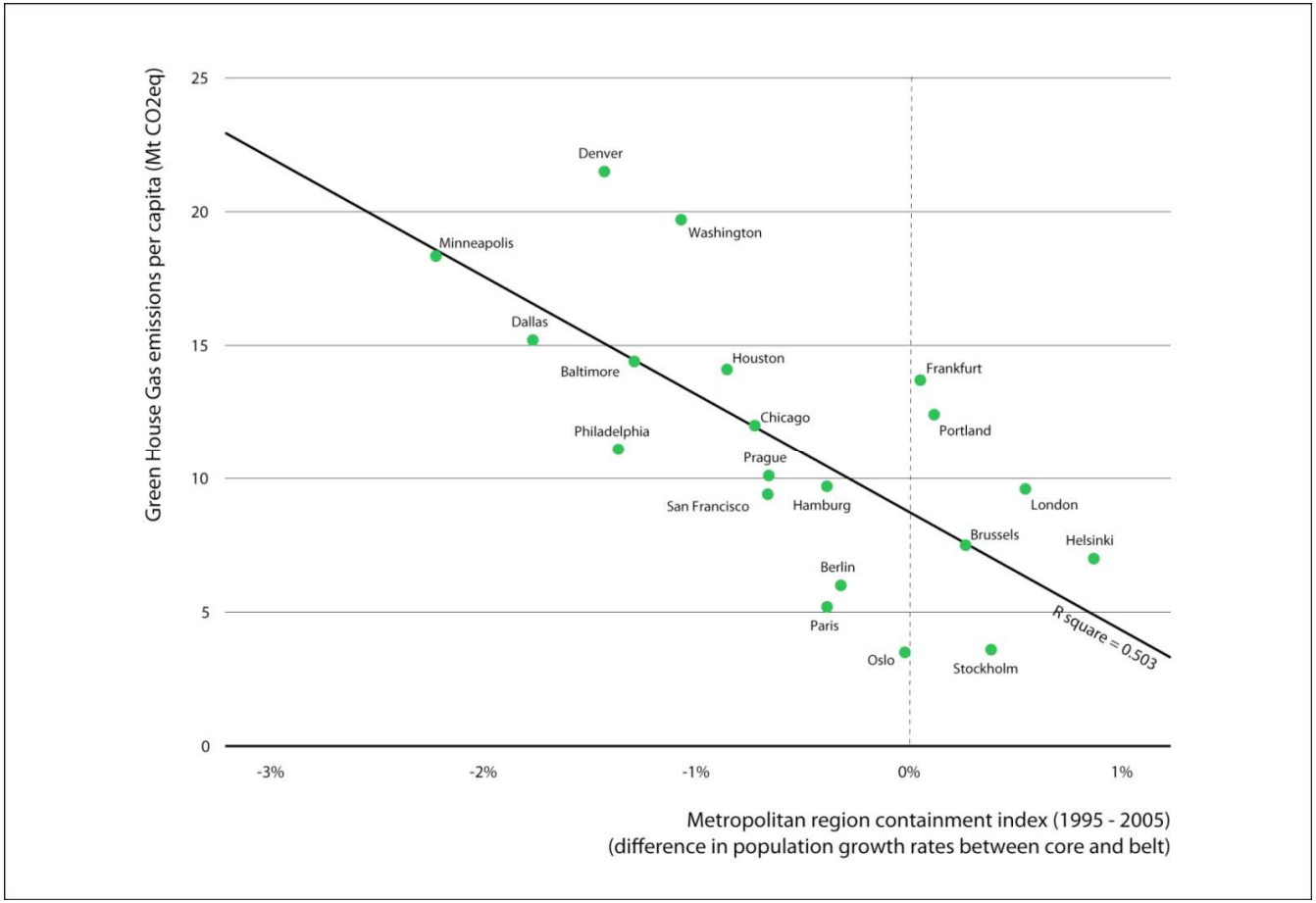
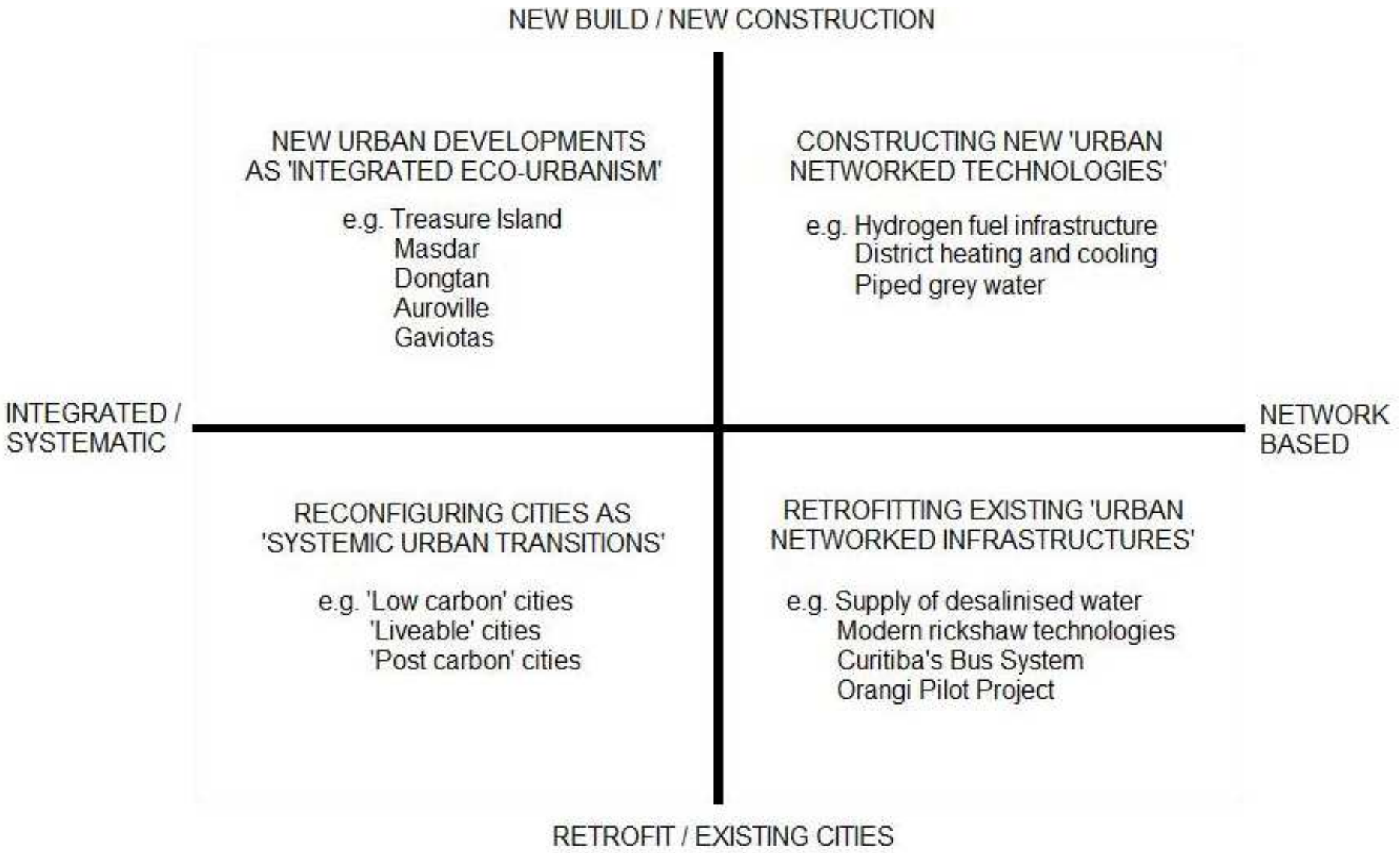
Urban Form and Environment



Urban Form and Environment



Sustainability Intervention Quadrant



City-Region and the Green Economy

- Area within which there is intensive economic activity (border not clearly defined)
- City-regions with population of 3.5 million people in an area of 60 x 90 km (5,400 km2)
- Usually one large city, but may be polycentric
- Often does not correspond closely to local government boundaries


FIGURE 2A: MEDELLIN
20 KM


FIGURE 2B: BERLIN
20 KM

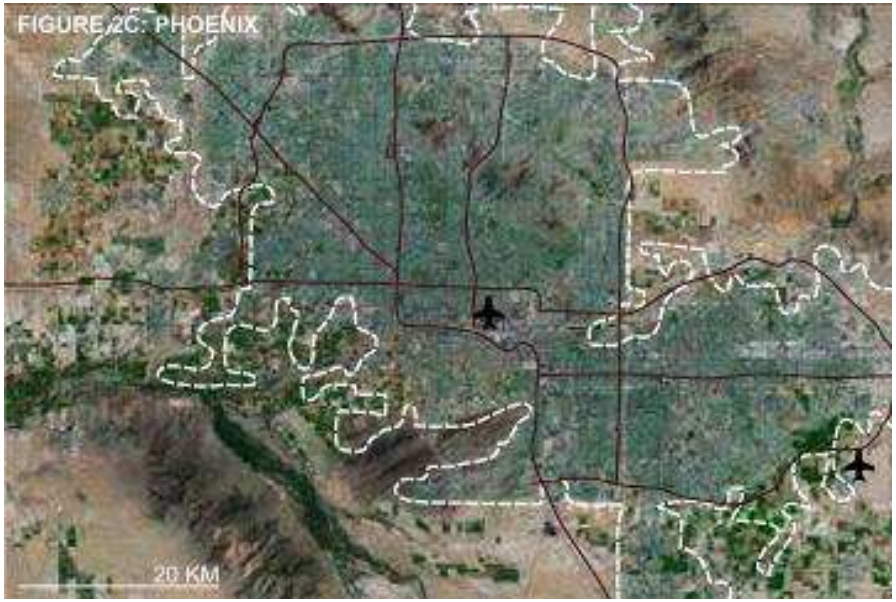


FIGURE 2C: PHOENIX
20 KM

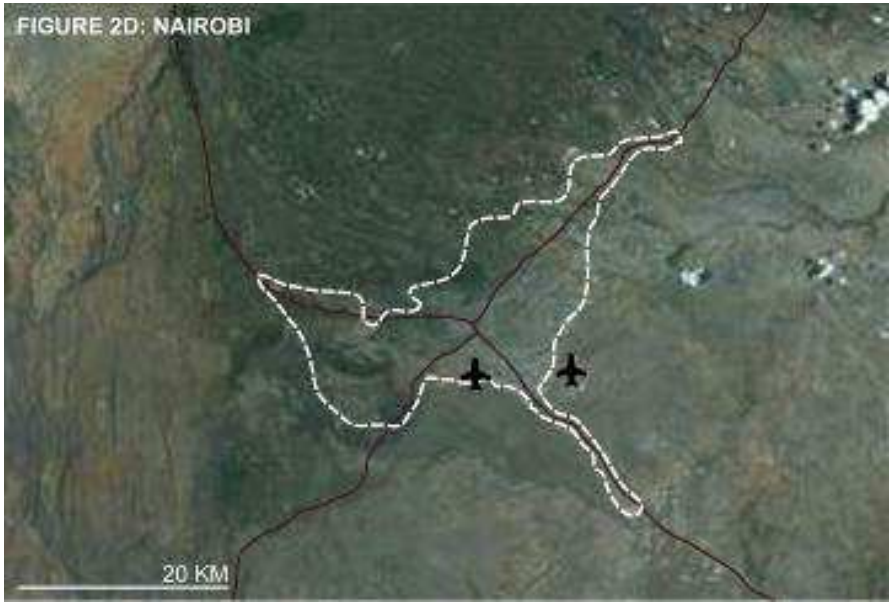


FIGURE 2D: NAIROBI
20 KM

Seven strategies for achieving urban patterns for sustainable development;

together they form an operational framework for cities to plan for a transition towards the green economy

Examples from >25 countries

- Africa: Kenya, Nigeria, Rwanda, Senegal, South Africa, Uganda
- Arab States: Egypt, UAE
- Asia & Pacific: China, India, Japan, Korea, Malaysia, Mongolia, Singapore
- Europe: Germany, Netherlands, Romania, Spain, Sweden, U.K.
- Latin America & Caribbean: Brazil, Colombia, Ecuador
- North & Central America: Canada, Mexico, USA,

1. Embrace land mosaic patterns that provide for large green patches and more sustainable urban development

- Sustainable spatial framework for population growth and economic growth
- ‘Compact polycentric zone’ and ‘satellite cities’ as best solutions
- Preservation of green spaces and natural corridors, preventing flooding or landslides

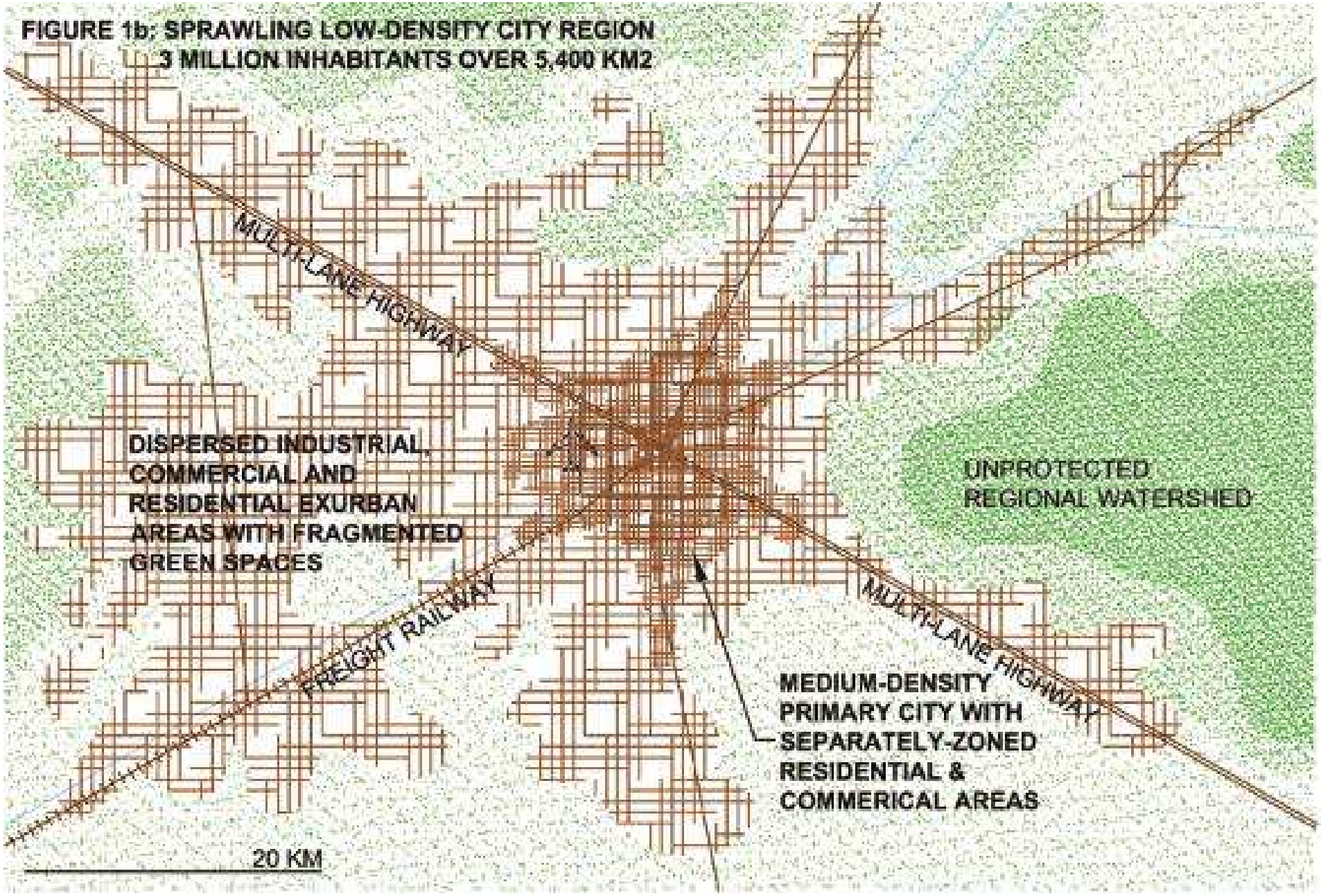


FIGURE 1b: SPRAWLING LOW-DENSITY CITY REGION
3 MILLION INHABITANTS OVER 5,400 KM2
MULTI-LANE HIGHWAY
DISPERSED INDUSTRIAL, COMMERCIAL AND RESIDENTIAL EXURBAN AREAS WITH FRAGMENTED GREEN SPACES
UNPROTECTED REGIONAL WATERSHED
FREIGHT RAILWAY
MULTI-LANE HIGHWAY
MEDIUM-DENSITY PRIMARY CITY WITH SEPARATELY-ZONED RESIDENTIAL & COMMERICAL AREAS
20 KM

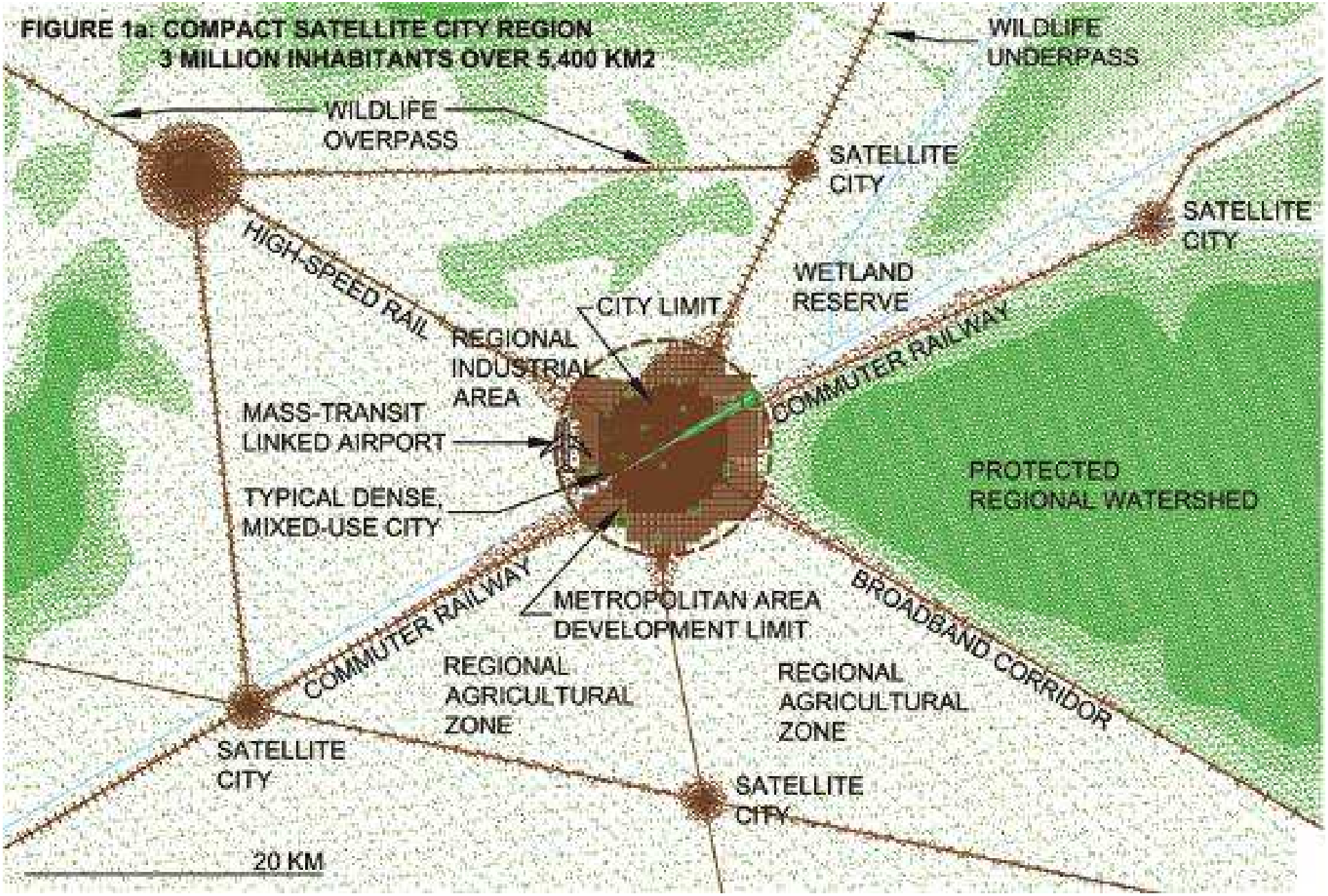


FIGURE 1a: COMPACT SATELLITE CITY REGION
3 MILLION INHABITANTS OVER 5,400 KM2
WILDLIFE UNDERPASS
WILDLIFE OVERPASS
SATELLITE CITY
SATELLITE CITY
HIGH-SPEED RAIL
WETLAND RESERVE
CITY LIMIT
REGIONAL INDUSTRIAL AREA
COMMUTER RAILWAY
MASS-TRANSIT LINKED AIRPORT
PROTECTED REGIONAL WATERSHED
TYPICAL DENSE, MIXED-USE CITY
COMMUTER RAILWAY
METROPOLITAN AREA DEVELOPMENT LIMIT
BROADBAND CORRIDOR
REGIONAL AGRICULTURAL ZONE
REGIONAL AGRICULTURAL ZONE
SATELLITE CITY
SATELLITE CITY
20 KM

2. Promote compact cities and planned extension of urban areas

- Urban densification (inner city brownfields) or planned extension in certain areas (e. g. around public transport stations)
- Allows bigger patches of natural space preservation, while providing for connection between urbanized areas
- Allow for agglomeration economics

-- When needed, allow for compact city enlargements, without compromising the natural mosaic

→ Coordination between land use regulation and infrastructure investment essential for success!

→ Urban density plays a crucial role in the city's transport fuel consumption

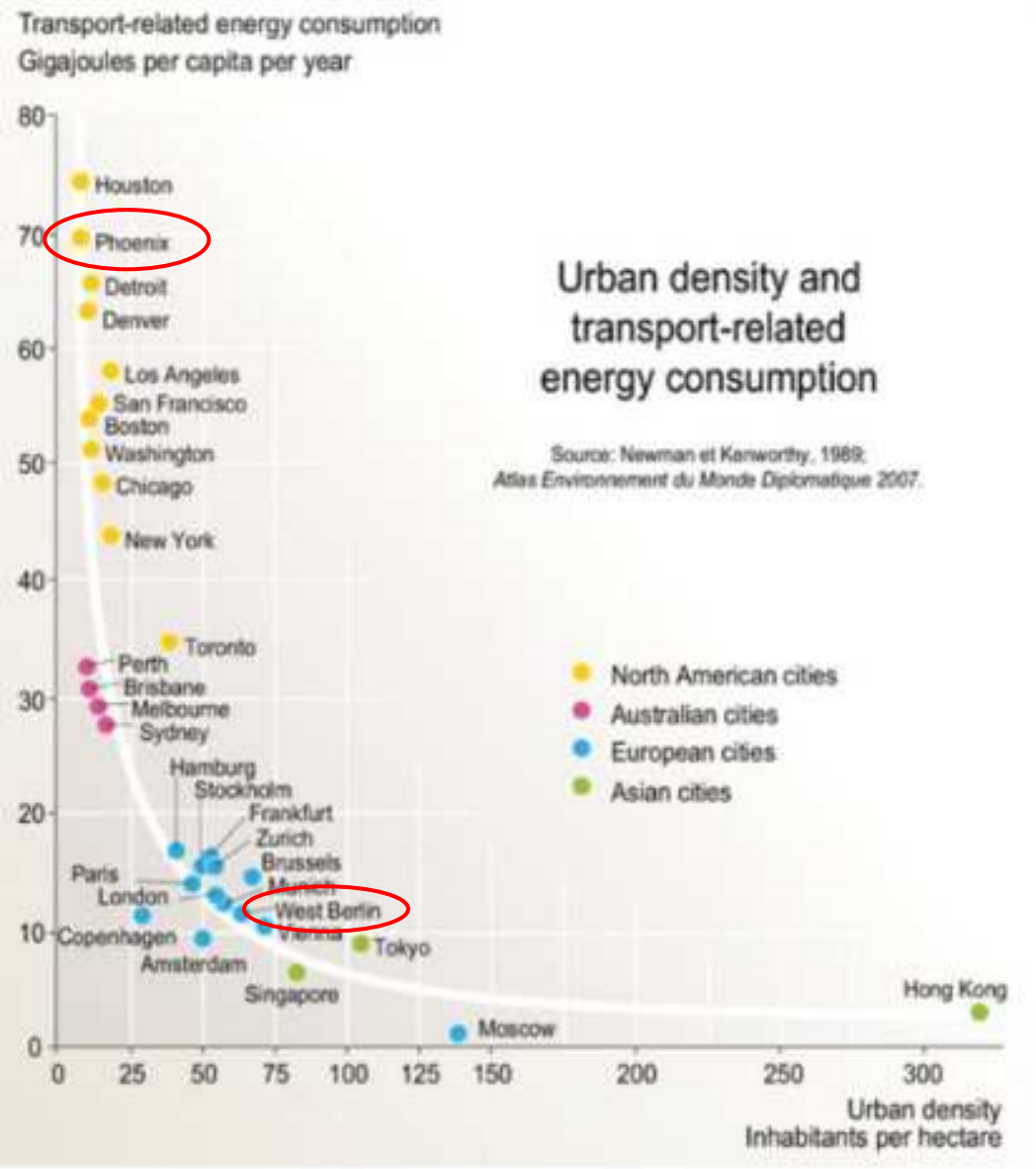


Figure 3.39 Urban Density and Transportation-Related Energy Consumption

Source: Adapted from Kirby (2008).

http://issuu.com/world.bank.publications/docs/9780821380468

3. Balance strategic facilities with diversified local economic opportunities

- Specialization of city comes naturally when city grows → Balance important! Avoid over-specialization and promote diversification.
- A strategic facility like a harbor, airport, university, etc. stimulates development and strengthens competitiveness → supports value chains in area → diversifies economy
- When these opportunities arise, implement in the frame of the urban pattern, reducing demand for mobility → reduces energy use

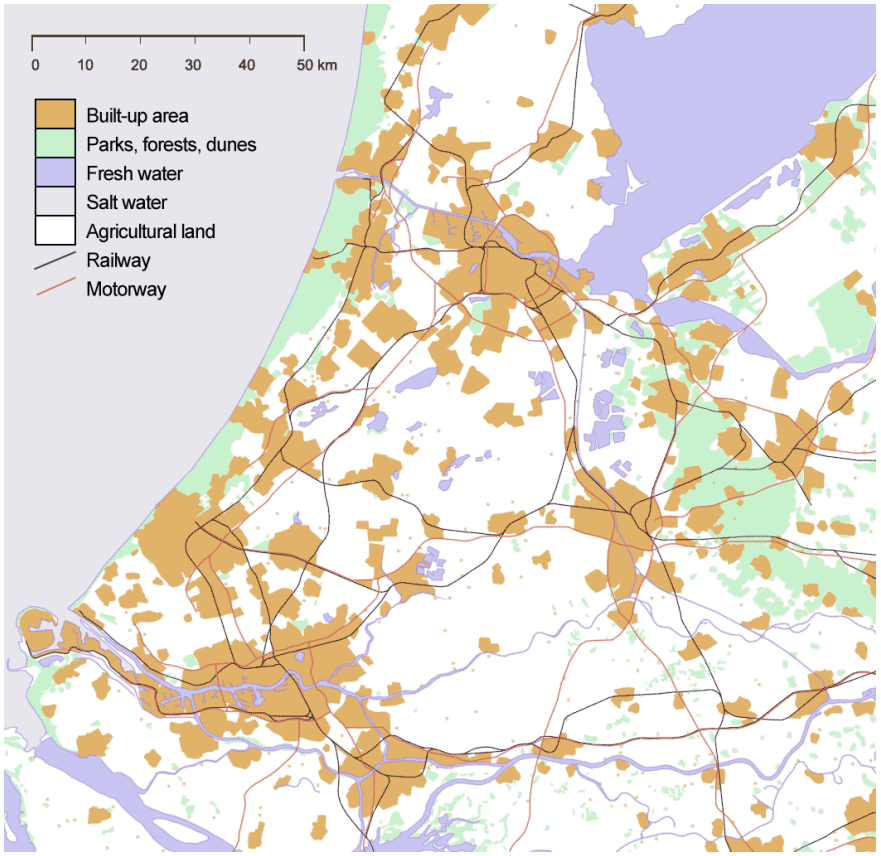
Randstad Region, The Netherlands

Cities somewhat specialized; all still provide basic services

- Amsterdam: finance, tourism
-Rotterdam: freight, manufacturing
-The Hague: administration, law
-Utrecht: education, transport

Total 7.1 million inhabitants

http://www.portofrotterdam.com/en/Port/port-in-picture/photo-gallery/Pages/default.aspx



http://www.en.wikipedia.org/wiki/File:**Randstad**_with_scale.png

4. Expand network infrastructure while getting the most out of existing networks

- Multi-modal transportation systems e. g. well developed commuter rail lines
- Adequate energy facilities (while considering renewable energy)

Bogota –
Bus Rapid Transit

- successfully improved public transportation
- now has inter-modal connectivity
- uses GPS to help manage traffic flow

http://www.streetsblog.org/2006/10/24/dot-announces-five-bus-rapid-transit-corridors/

Kenya –
geothermal energy Naivasha/
wind energy Ngong

- underground hot water sources can be turned into electricity
- alternative energy is becoming more feasible for cities in future

http://www.treehugger.com/files/2008/08/kenya-geothermal.php

5. Construct greener built environments that use water and energy efficiently

- Long-term savings > upfront costs
- Building of greener buildings through regulatory approaches and incentive-based strategies
- Important for developing countries → high construction rate of buildings over next 40 years

Cape Town
- Clean Development Mechanism Project

- solar water heaters in low cost housing

http://www.suntank.com/media/snippets/snippets_september_2004.htm

http://www.capetown.gov.za/EN/ENVIRONMENTALRESOURCEMANAGEMENT/PROJECTS/CLIMATECHANGE/Pages/SolarWaterHeaterAdvancementProgramme.aspx

6. Protect valuable ecosystem services and biodiversity hotspots while increasing resilience to some natural disasters

- Conserving blue-green patches and corridors as they provide humans with valuable services (e. g. climate control, protection of natural disasters, water purification, recreation)

- Preserving ecosystems and corridors for wildlife travels; biodiversity protection for ecological reasons and tourism

Berlin - Tiergarten Park
(inside city boundaries)

- the “green lungs” of the city
- shelters rare meadow plants

http://www.berlin-stadtfuehrung.de/Tiergarten.html

Vietnam – Mangrove Swamps
(outside city boundaries)

- adaptation and mitigation benefits
→ typhoon protection while acting as carbon sinks

http://www.travelthewholeworld.com/brunei.html

7. Promote clusters of green industries and green jobs

Strengthen triangular links between university research, business and local authorities to promote environmentally friendly economic development.

- New industries incubated in cities
- Policies for SME which provide majority of jobs and job growth
- Clusters stimulating for supplier and spinoff industries
- City clusters provide wider variety of employment options

Berkeley, California –

East Bay Green Corridor Partnership

- Partnership of 8 cities and 3 universities
→ region shall be a centre for emerging green technology and innovation

Gauteng, South Africa –

Strategy for a Developmental Green Economy - 2010

- Emphasis on green job creation and equity dimension

http://www.ci.berkeley.ca.us/uploadedFiles/Mayor/Level_3__-General/EBGC.pdf

Urban Patterns Quick Guides

- Urban Ecosystems

  Embrace land mosaic patterns that provide for large green patches while protecting valuable ecosystems and biodiversity hotspots while increasing resilience to natural disasters
- Urban Density
- Urban Infrastructure
- Urban Enterprises

Urban Poverty Reduction

- New jobs in new, possibly more labour-intensive sectors
- Integrating poor into decision making and supporting social entrepreneurship
- For new and developing cities, chance for an earlier and cheaper transition
- For developed cities, retrofitting old inefficient systems

Way Forward

- Systemic urban transitions
- City-region as critical for measurements of metabolism, i.e. production/consumption
- Governance/capacity challenge
- Quantitative data as politically convincing
- ‘Worst offenders’ and advantage of lower levels of development

Biodiversity Engagement

- Quick Guides (‘brilliant examples’)
- Cities in BiodiverCities Hotspots
- Fundraising challenges
- Resolution and MOU
- WUF and COP11

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