Eco- and Future cities for Sustainable Development

By

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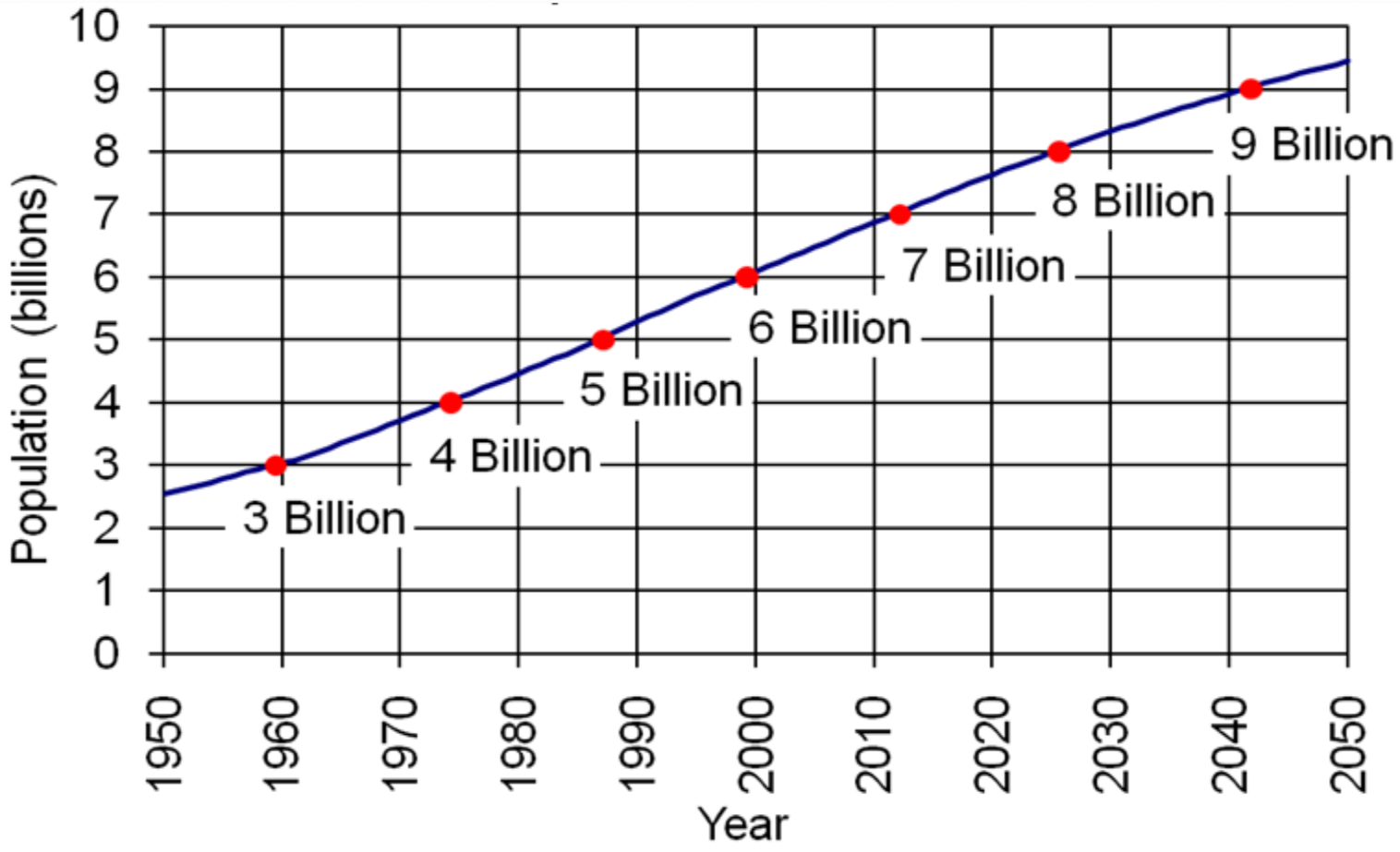
Structure of Presentation:

- The Big Picture
- Key Challenges
- Existing Programs and Action
- Looking Forward
- Conclusions and Recommendations

The Biggest Challenges That Humanity Face are:

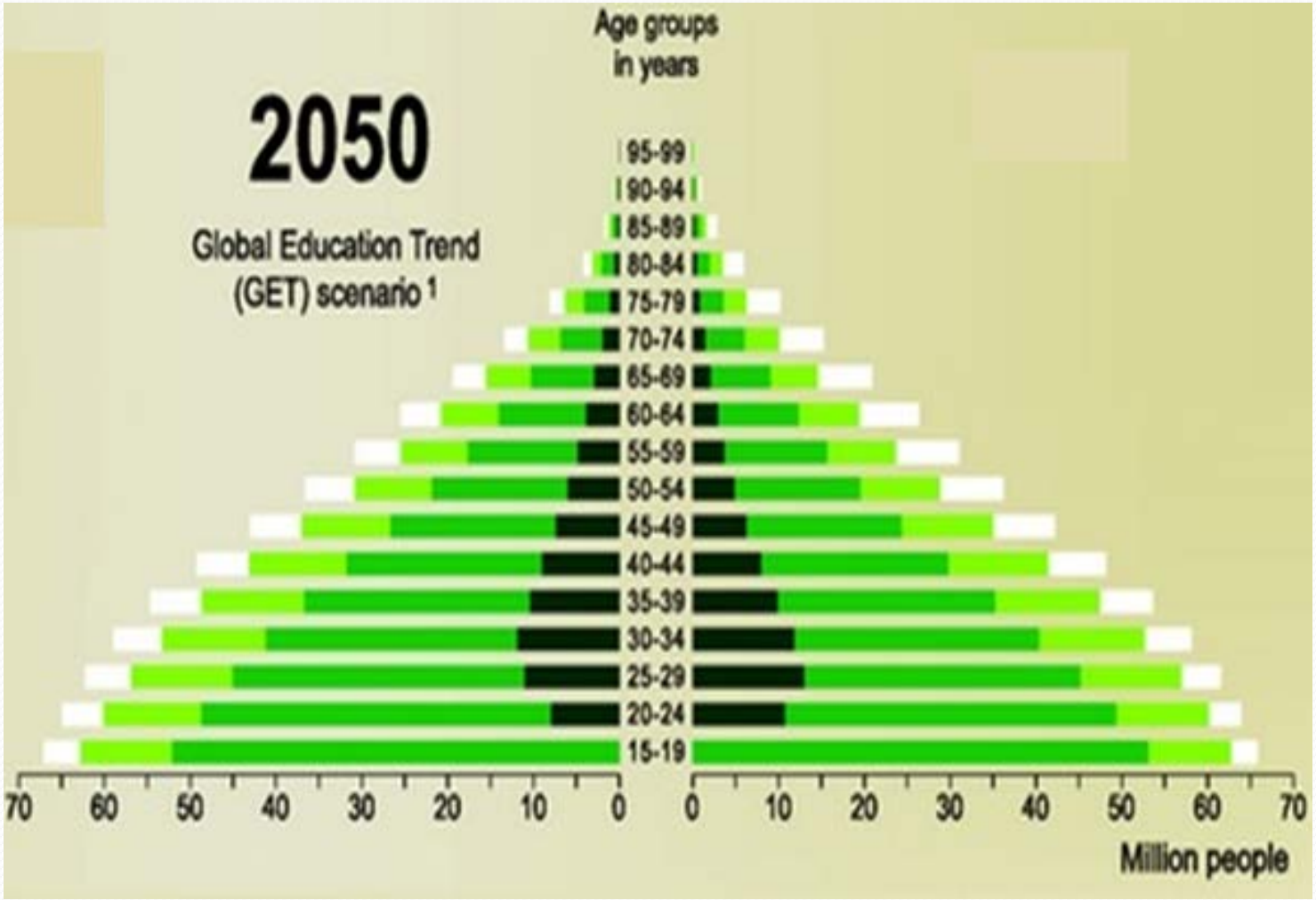
- Population growth
- Natural resource depletion
- Energy price and energy security
- Climate change

World Population:1950-2050



Source: U.S. Census Bureau, International Data Base, June 2011 Update.

Bottom (BOP) of Pyramid

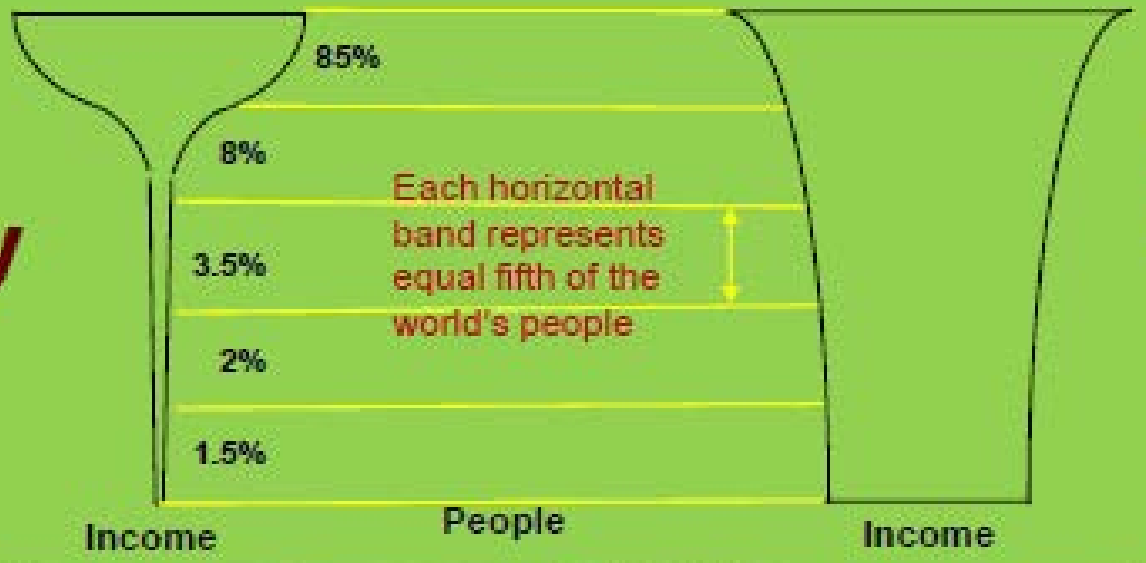


Economic growth

Urbanisation

- Urbanisation is part of development process and associated with higher income and productivity level
- No single definition of urban area exists
- In 2014 the Asia-Pacific region has over 2 billion urban citizens
- Urbanization in Asia-Pacific is driven by a mix of migration, population growth & reclassification
- Economic transformation is correlated with urbanization: they are two sides of the same coin
- Urban share of GDP is higher than population share – typically 70%+, and growing

Equity



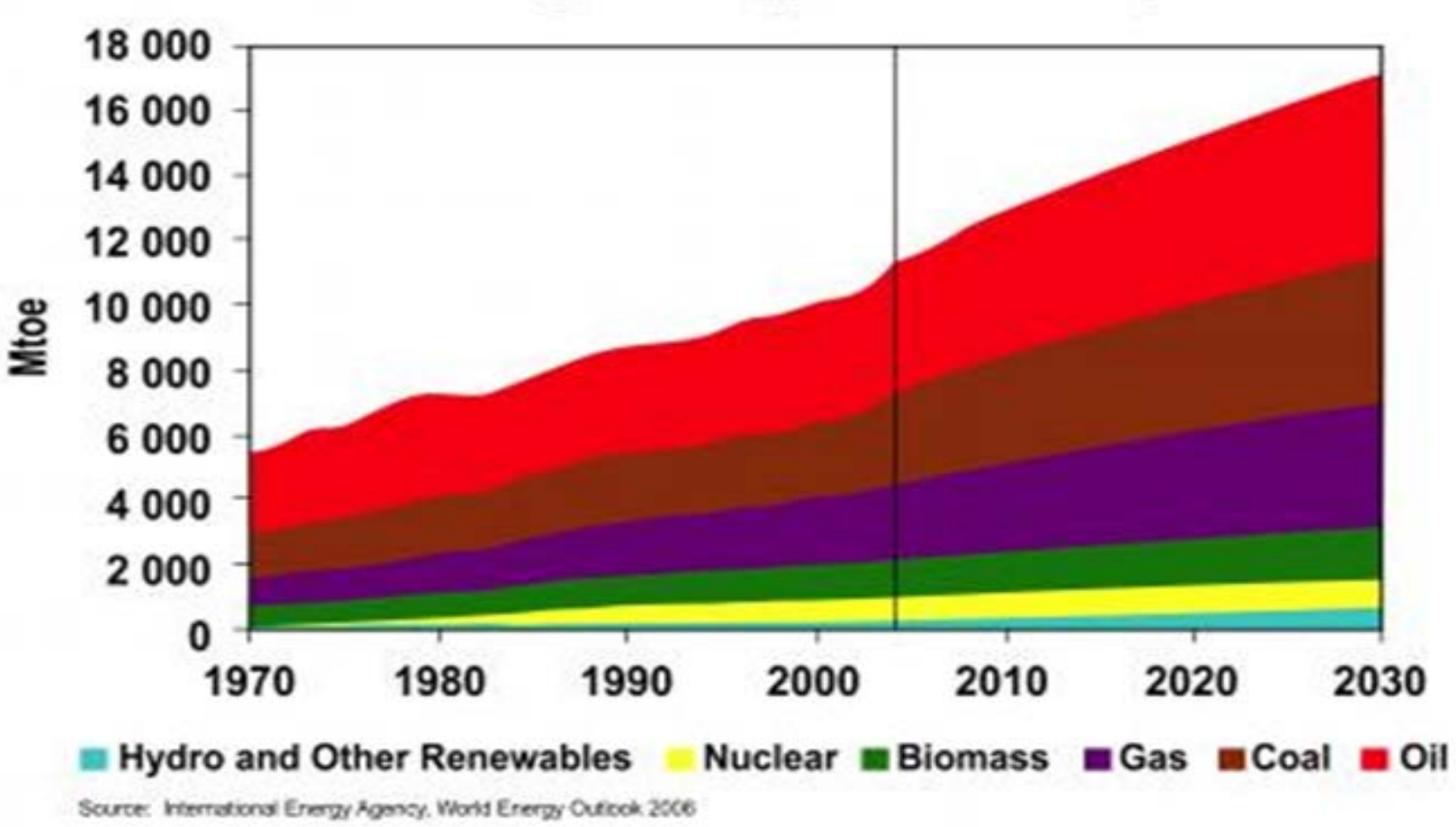
Extremes of Poverty and Wealth

… … availability and equal access

Natural Resource Depletion

- Nearly 1 billion people are hungry today
- Over 2 billion people get by on less than USD 2 per day
- 1.5 billion people in developing countries lack access to electricity
- 40% shortfall between water demand and available fresh water supply by 2030
- 1.1 billion people lack access to safe drinking water

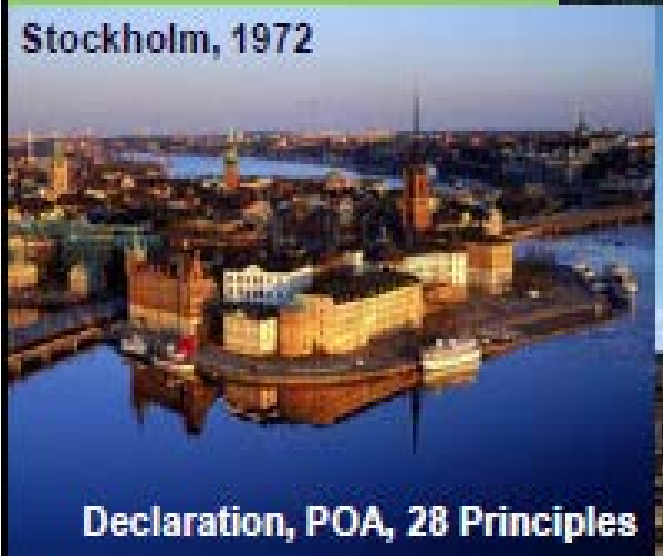
World Primary Energy Demand by Fuel (IEA Reference Scenario)

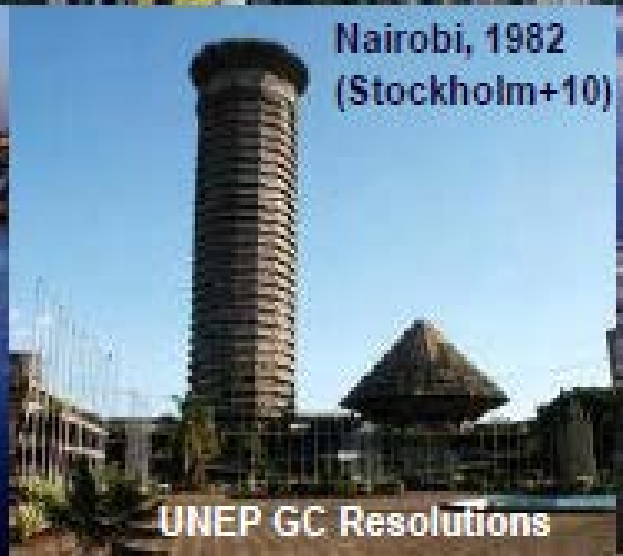


Impact of Human Activities – Climate Change

Global Responses

... Summits





Cities as part of SDG

- **Goal 1. End poverty in all its forms everywhere**
- **Goal 2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture**
- **Goal 3. Ensure healthy lives and promote well-being for all at all ages**
- **Goal 4. Ensure inclusive and equitable quality education and promote life-long learning opportunities for all**
- **Goal 5. Achieve gender equality and empower all women and girls**
- **Goal 6. Ensure availability and sustainable management of water and sanitation for all**
- **Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all**
- **Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all**
- **Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation**
- **Goal 10. Reduce inequality within and among countries**
- **Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable**
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- **Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development**

Cities

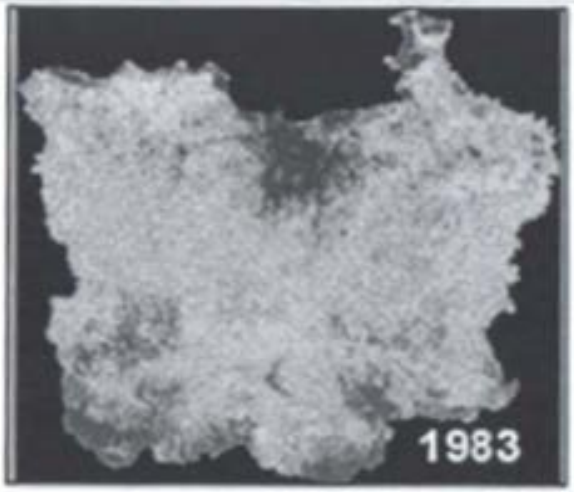
Cities are unique spaces that connect a wide range of:

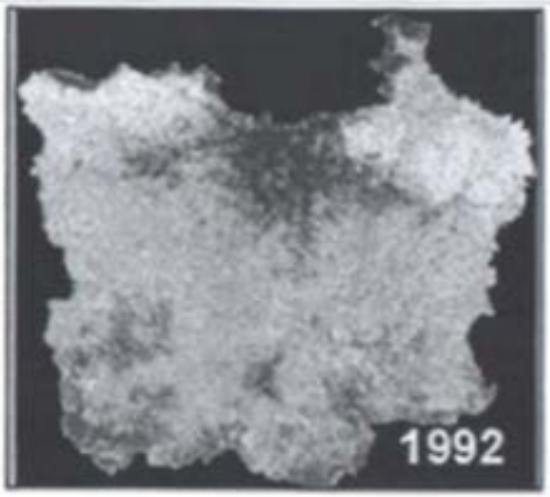
- Actors
- Networks
- Infrastructures
- Resource flows
- Culture
- Social processes
- Historis within specific biophysical and ecological contexts
- Etc

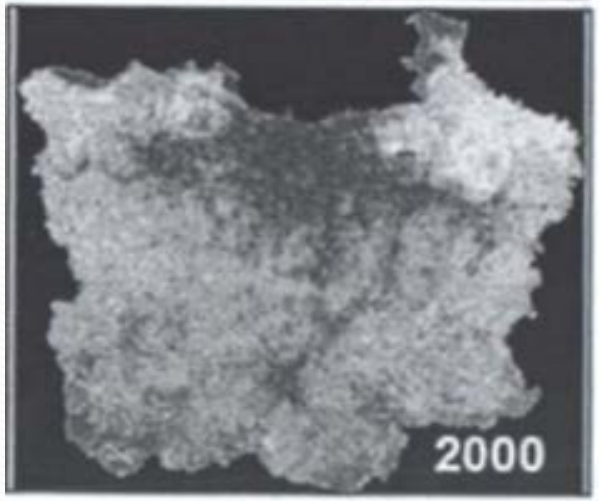
Total Number of Cities in the World

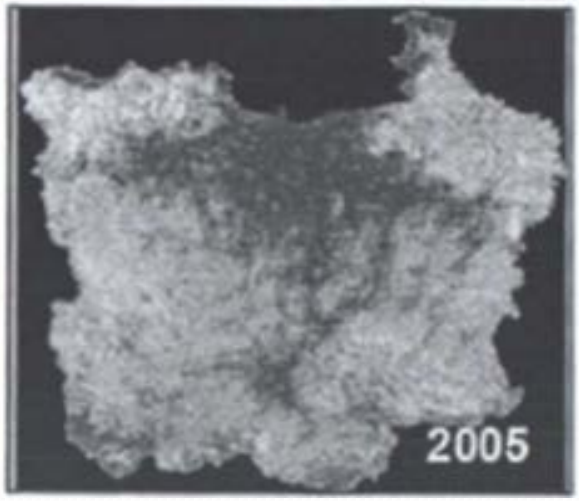
No.	Population	Cities	Number of Cities 2014
1	Cities with Population ≥ 10 million +	Mega cities	24
2	Cities with Population 1 million +	Large cities	457
3	Cities with Population 500,000 +	Medium cities	1,063
4	Cities with Population 100,000 +	Small cities	2,896

Rapid City Development





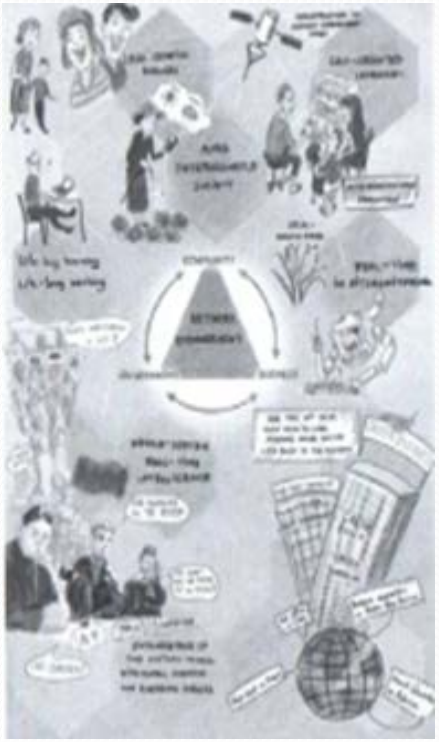




Most of development were centered near the coast and high ground water extraction ~ accelerate land subsidence (20-25 cm per year)~ Many of coastal areas would be inundated (source: Djakapermana, 2008)

Growing cities, growing waste....
....diminishing natural resources

What Does City Look Like in 20 Years From Now



Challenges are So Big That We Can't Afford Expensive Solutions

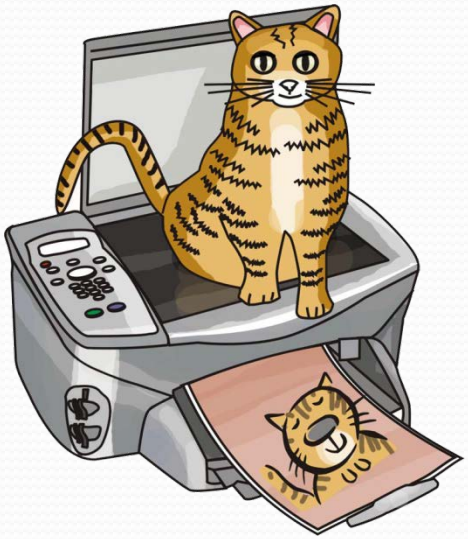
Key Challenges

- The lack of confidence from stakeholder in sustainable cities/low carbon development, while other equally important policy goals need to be tackled
- The lack of data and information (science base) on low carbon and climate resilent development strategies.
- Establishment of Centre of Excellent (CoE)

Key Challenges (Cont'd)

- Coordination between multistakeholder
- Adaptive management approach where the actions can be modified if needed
- Capacity building and project management efforts
- Knowledge of funding sources and facility to raise capital
- Tools and database to monitor plan implementation

Cities need to realise a "leapfrog" instead of a growth first, clean up later approach to sustainable development



Copy Cat

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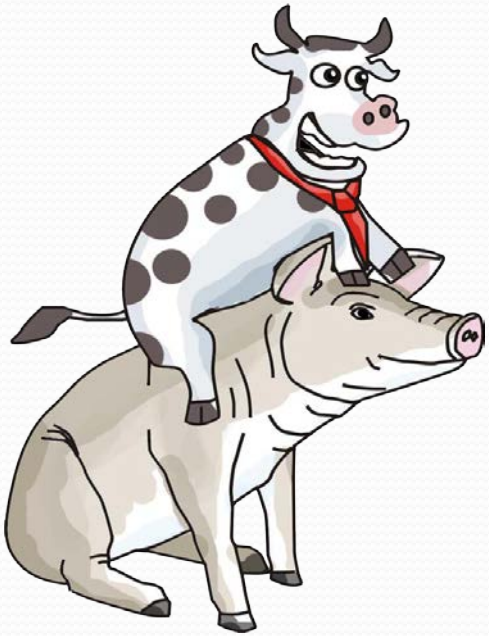
BAU



Piggy Back

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Fine Tuning

Leap Frog

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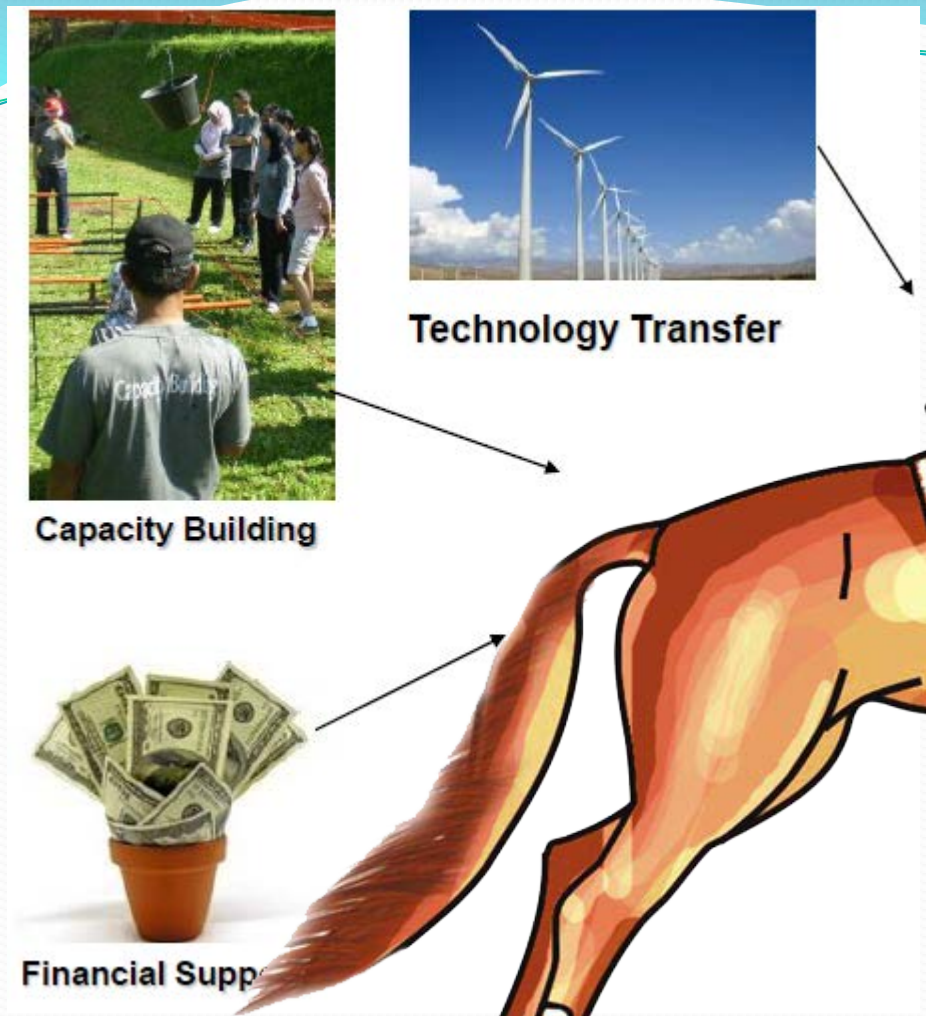
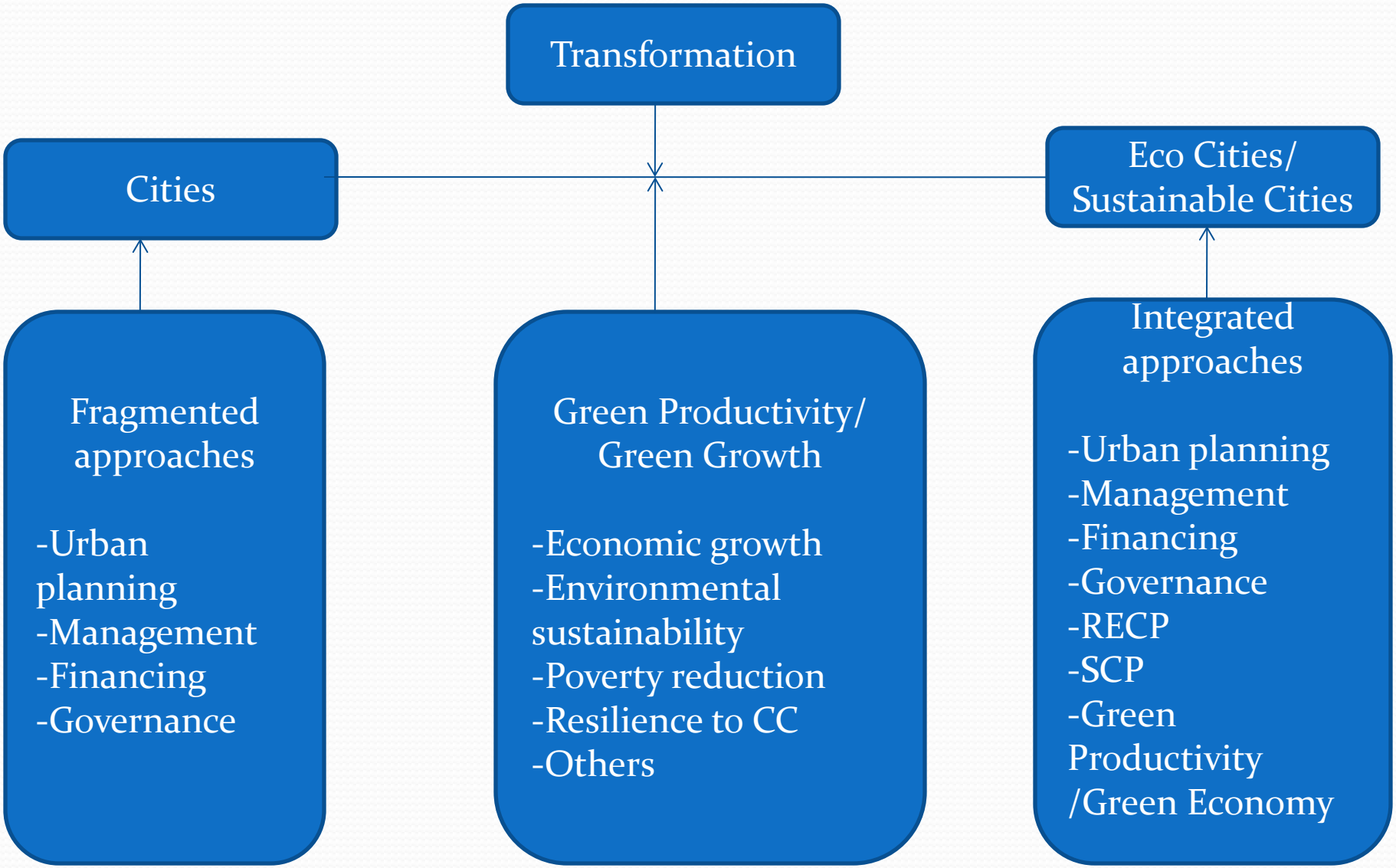
Transforming



Horse Jump


Transformation
Cities
Eco Cities/
Sustainable Cities
Fragmented
approaches
-Urban
planning
-Management
-Financing
-Governance
Green Productivity/
Green Growth
-Economic growth
-Environmental
sustainability
-Poverty reduction
-Resilience to CC
-Others
Integrated
approaches
-Urban planning
-Management
-Financing
-Governance
-RECP
-SCP
-Green
Productivity
/Green Economy

Transformations Required

- Change the way we design cities: shift to eco-city development
- Change the way people move: from private cars to public transport, from road to rail
- Change the way we design and operate buildings: from energy wasting to energy saving
- Change the way we produce, transport and consume energy: improve the efficiency of the energy system and diversify to renewable energy sources
- Change the way water resources are managed: develop an integrated, decentralized and water cycling system
- Change the way solid waste is managed: turn waste from a cost into a resource

Sustainable Tourism

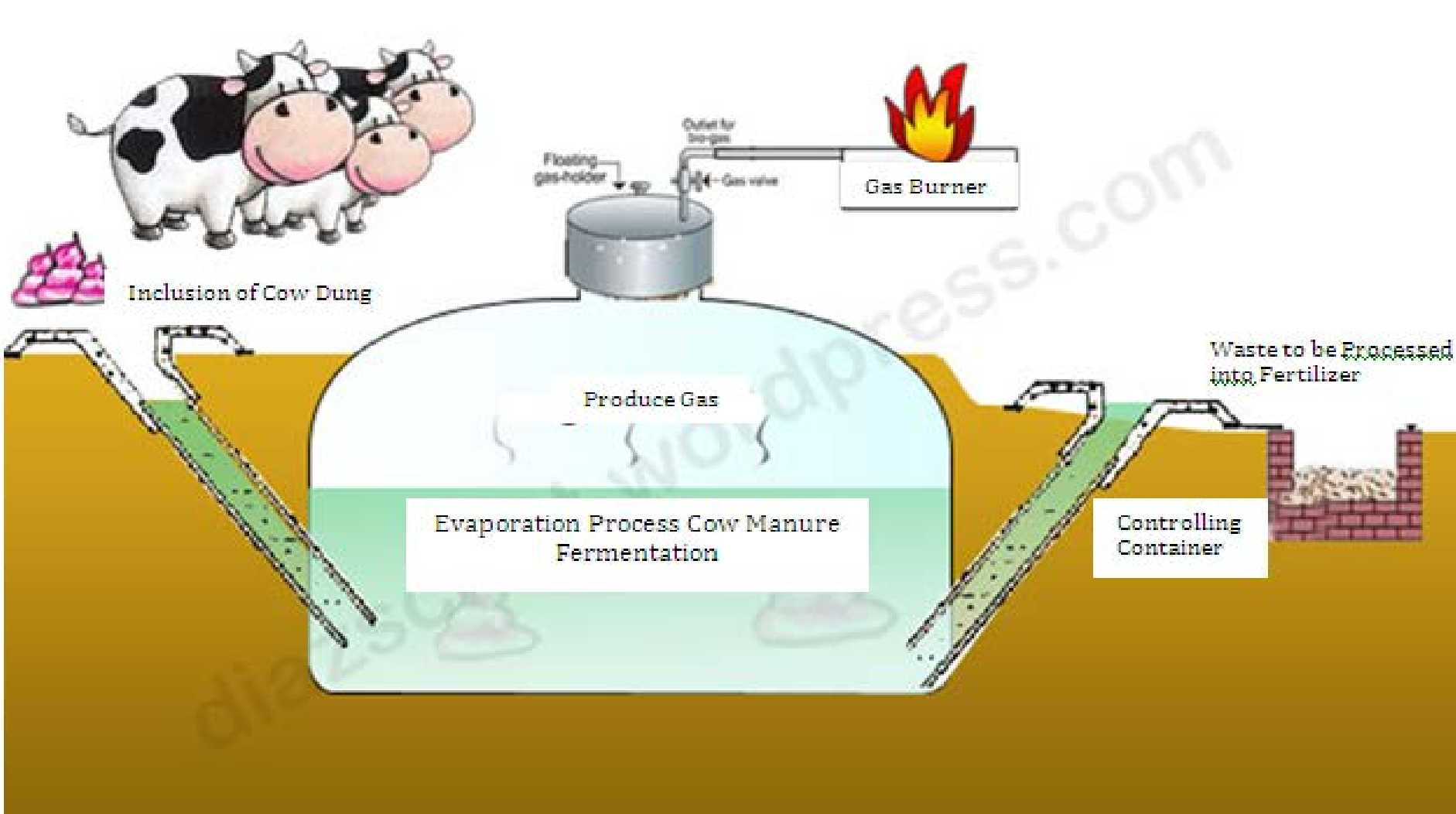
Sustainable Building

Sustainable Trasportation

Traffic Jam

Sustainable Transportation

Waste to Energy



The Role of Cities as Implementers of Sustainable Development:

- City governments make decisions that result in visible action on the ground
- Cities find solutions to climate change, they are also creating sustainable jobs
- Cities can fill the void created by lack of an international climate agreement
- Cities can promote green growth/green productivity through many levels, such as procurement, screening of investment in infrastructure, tax and incentives, partnership, consumer awareness, etc.
- Cities can also be catalysts for environmental policy solutions
- Cities play as centers of innovation in clean energy systems, sustainable building, sustainable transportation and waste to energy

Existing Programs and Initiatives

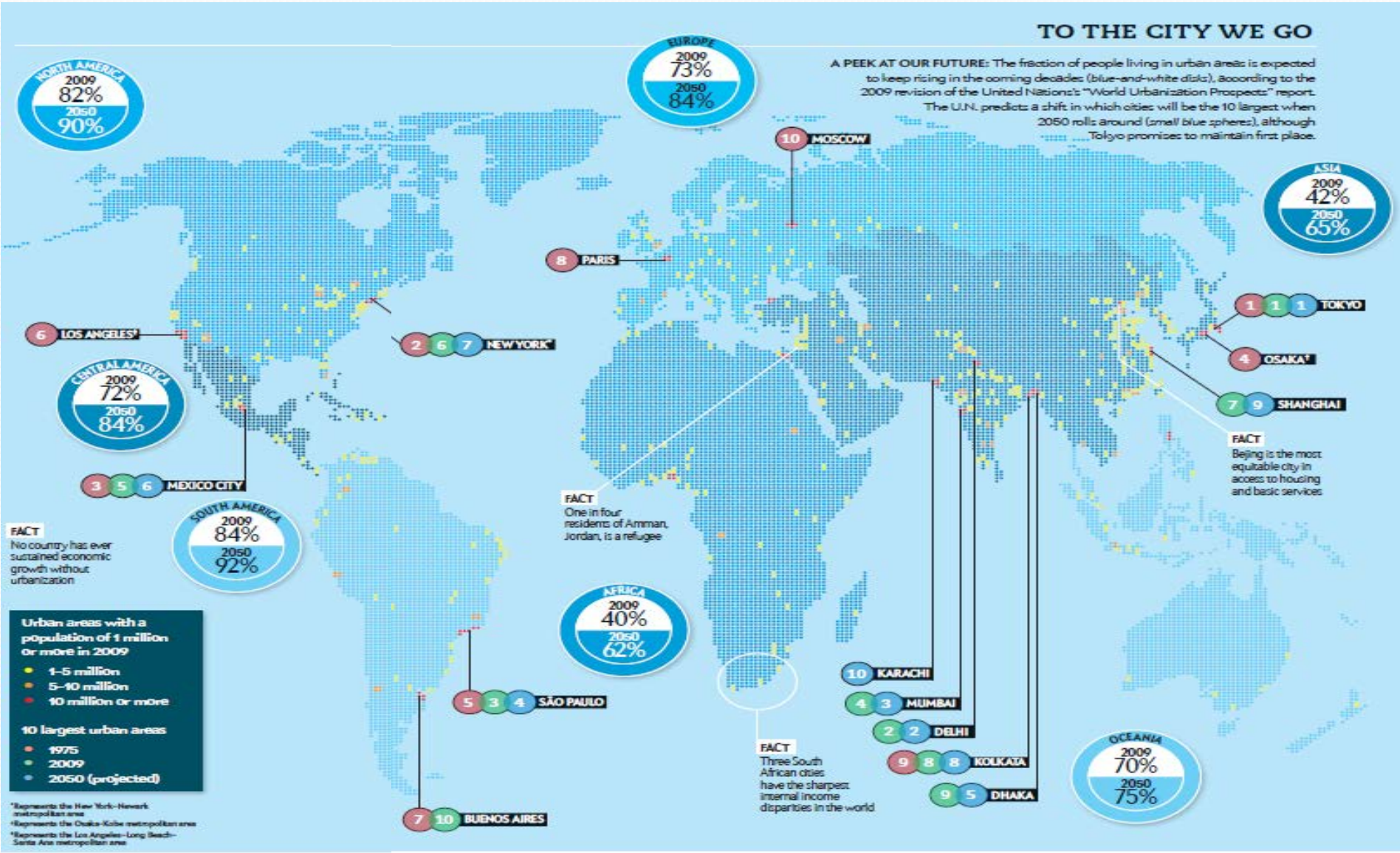
In ASEAN, we created an ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)

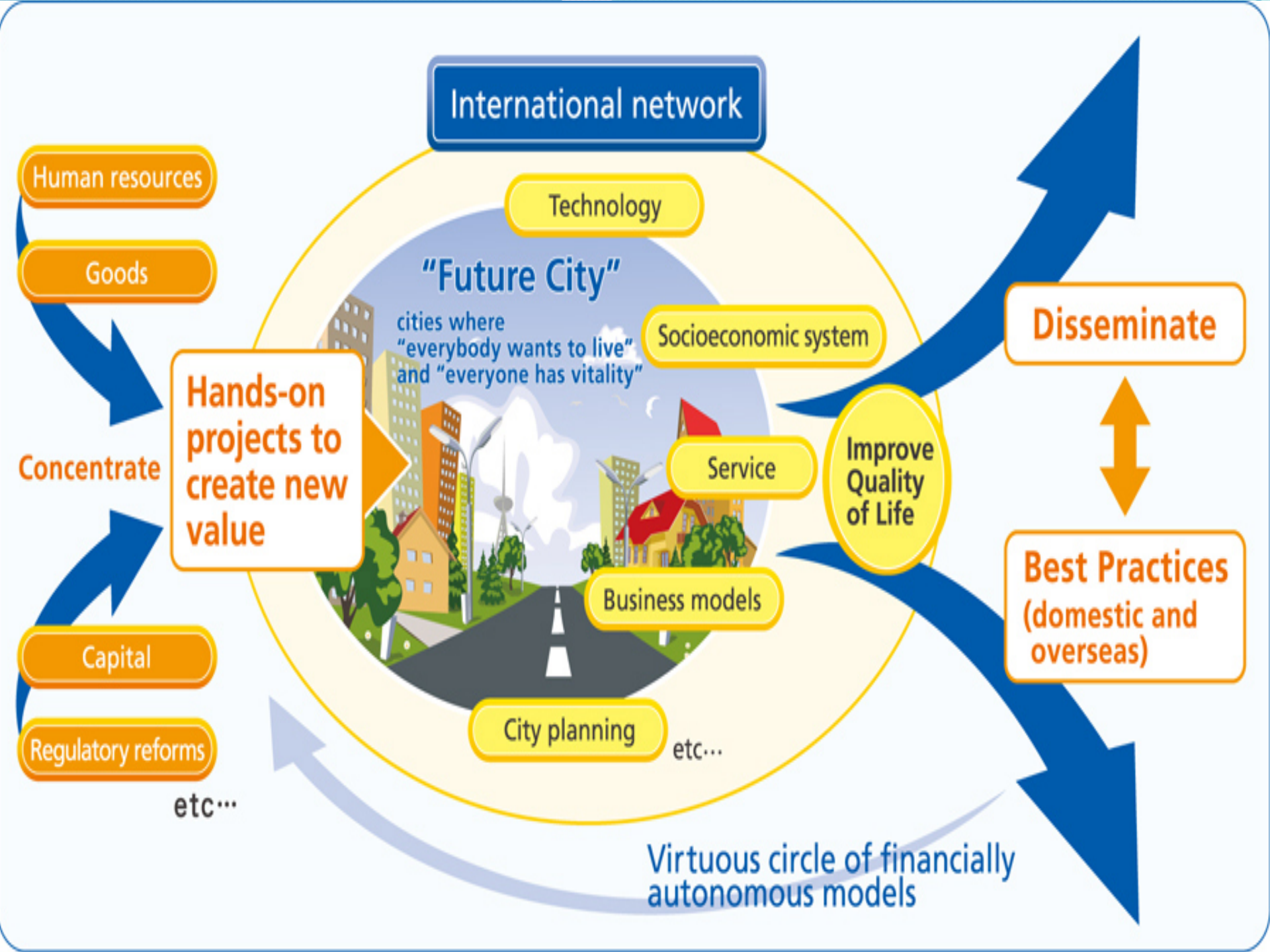
- ESC Key Indicators for clean air, clean land, and clean water + Singapore index on cities biodiversity
- ESC Award, already 3 times
- Promotion of Environmentally Sustainable Cities (ESC) in ASEAN and East Asian Countries (ASEAN-Japan)
- Climate Leadership Academy (CLA) on Urban Climate Adaptation for Cities in Southeast Asia (ASEAN-USA), Phnom Penh (Cambodia), Palembang and Jakarta (Indonesia), Paksan (Laos), Kuantan (Malaysia), Legazpi (Philipine), Chiang Rai (Thailand) and Ho Chi Minh (Vietnam), Mandalay (Myanmar)
- Project on "Clean Air for Smaller Cities" (ASEAN-GIZ)
- Climate Resilient Cities (ASEAN-USTATF)
- 4th HLS in Environmentally Sustainable Cities
- C40 (Clinton Climate Initiative)
- Hyogo Framework for Action 2005-2015
- City Net

Existing Programs and Initiatives (Cont'd)

- World Bank-Eco 2 Cities
- ADB, GIZ, IGES, JICA, GEF
- ICLEI-Local Government for Sustainability
- USAID TAFT-Climate Resilience Best Practice Exchange
- UNEP-IRP, GI-REC, UNESCAP, UN Habitat, UN FCCC, UN CRD
- Rockefeller Foundations: ACCRN Project
- Country Initiative:
    - Adipura (Clean City Program) Indonesia
    - Climate Village
    - Green New Deal (Japan)
    - Eco City (Korea)
    - Ho Chi Minh and Osaka
    - Sino Singapore Tianjin Eco-City
    - Kitakyunshu and Surabaya
    - Cool ASEAN, Green Capitals (Thailand)
    - Eco-city, Johannesburg

Future Cities in 2030




International network
Human resources
Goods
Capital
Regulatory reforms
etc…
Concentrate
Hands-on projects to create new value
Technology
"Future City"
cities where "everybody wants to live" and "everyone has vitality"
Socioeconomic system
Service
Business models
City planning
etc…
Improve Quality of Life
Disseminate
Best Practices (domestic and overseas)
Virtuous circle of financially autonomous models

Green Cities

bridging urban planning and environment management

Environment
green

Equity
inclusive

Economics
competitive

Conclusion

- In a rapid urbanization situation, Sustainable cities/Eco cities are an important component to facilitate green productivity/green economy, green environment and green community
- Important to have APO Member Countries and International platform for R&D collaboration and capacity building opportunities
- Looking beyond policy – SCIENCE-KNOWLEDGE-POLICY-IMPLEMENTATION
- Sustainable cities or Local carbon cities need to have a LOW CARBON SOCIETIES

Conclusion – Way Forward

- City governments need to cooperate with national level and also other cities in the region to highlight the role of cities to deliver cost-effective policy responses to climate change
- It is crucial to incorporate cities into national policy for climate change
- Efforts need to be focused on planning, land use, low carbon urban governance
- Disaster risk management studies can complement adaptation strategy for East Asian Cities

Recommendation

- Sustainability need to be effectively mainstreamed in urban development policy
- Transition to sustainable urban infrastructure supported should be
- Specific targets to use resources more efficiently and plans to achieve them should be set in cities
- Enhancement of cooperation among APO Member Countries
- Working together to compile lessons learned
- Sharing information and best practices
- Technology transfer & capacity building among APO Member Countries
- Sharing resources (finance) among cities in APO Member Countries

Thank You