

Pre-discussion Brief

Joint Opening Plenary: Sustainable Cities: Leadership and Governance

- *Sustainable Urban Leadership & Governance*
 - *Business and Innovation for Sustainable Growth*
 - *Sustainable Infrastructure and Financial Strategies*
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Sustainable Urban Leadership & Governance: Key Challenges Facing Leaders and Policy Makers in Achieving Sustainable Development

1. One of the major challenges facing policy makers today is to reconcile the economic, environmental and social needs of the population in ways which are *sustainable*.

(i) Growing urbanisation

- a. Cities arose from the desire of humans to meet exchange and interact. They bring people with different interests, experiences and knowledge close together. This provides opportunities for social diversity and development, and contributes to greater human well-being.
- b. Cities are homes to more than half of the world's 6.7 billion population.
- c. Cities are centres of economic development and innovation, the major source of movements for democratic and social change and a stimulus to culture.
- d. However, cities and urbanisation very often have negative impact on environments all around the world. The impact of urbanisation activities and global warming ranges from rising sea levels to dwindling natural habitats. Animal and plant species have been disappearing at 50 – 100 times the natural rate. About 45% of the Earth's original forests are gone. Up to 10% of coral reefs have been destroyed¹.

(ii) Cities of the future – the quest for sustainability

- a. Cities constantly grapple with the challenge of trying to harmonize economic attractiveness, clean environment and quality of life for their inhabitants.
- b. We live in an interconnected world where actions reverberate over time and across the globe. Sustainability is based on a long-term view that the needs of humanity and the environment are interconnected.
- c. Cities around the world are constantly faced with the pressing need to provide adequate physical and social infrastructure to reduce poverty, attract investments, and ensure a healthy environment for their growing population. At the same time, there is a call towards development in a responsible and sustainable manner.

¹ <http://cbd.int/convention/guide>, Sustaining Life on Earth

(iii) Leadership and governance to bring about solutions for sustainable cities

- a. To bring about sustainable solutions for cities, decision-makers need strong governance instincts and frameworks in order to develop policies that balance short-term economic benefits with medium- and long-term objectives for economic and social development, and environmental protection.
- b. Sound leadership and governance are vital in the integration of sustainability issues in policy decisions at multiple levels: local, national, regional, and global. For example, the establishment of an integrated European Union (EU) Sustainable Development Strategy in June 2006 introduced a single, coherent strategy on how the EU will more effectively live up to its long-standing commitment to meet the challenges of sustainable development.
- c. Good governance – in the form of transparency, accountability, rule of law and sound values and principles – is important to bring about the three pillars of sustainable cities: *sustainable resource management, sustainable green technology for growth, and sustainable infrastructure and financial strategies.*

Sustainable Resource Management

2. As our economies grow, so does the consumption of materials and resources. In an increasingly globalised economy, the challenge for policy-makers is to take action to ensure more sustainable management of resources, both renewable and non-renewable.

(i) Holistic approach to resource management

- a. A holistic approach to resource management is needed to study and identify inter-linkages, and address the gaps in a systemic way.
- b. Increasing emphasis has been placed by governments on the establishment of Eco-Cities and Eco-Towns with the aim of developing integrated, sustainable resource management to improve production efficiency to meet economic and social needs and to deal with the challenges of high-density urban living. These Eco-Cities and Eco-towns will pave the way for harmonious living and at the same time sustained growth and development.

(ii) Good governance in resource management

- a. Through a combination of good policy design and pragmatism, a sustainable city deploys its resources to meet current needs while ensuring that adequate resources are available for future generations.
- b. With sound and well-implemented policies, a sustainable city is able to improve public health and create better quality of life for all its residents by limiting waste, preventing pollution, maximizing conservation and promoting efficiency, and developing local resources to revitalize the local economy.

Business and Innovation for Sustainable Growth

3. The increasing emphasis on creativity and innovation in "green technology" (also known as "clean technology") aims to bring about a healthier planet, as well as businesses that can sustain its health.

(i) Realities of globalization

- a. An increasingly integrated world has led to greater market competition. Countries and cities need to produce/achieve more with the same amount of resources or even less, a challenge exacerbated by the recent global financial crisis.
- b. Consumers, at the same time, are increasingly empowered and interconnected. Increasingly, they are prepared to switch to new products which better meet their emerging societal and environmental consciousness at comparable cost.
- c. Fledgling programmes and incentives, coupled with the apparently erratic weather phenomena, have increased people's environmental consciousness and awareness.

(ii) The need to become greener and more efficient

- a. IT energy expense is expected to increase 35% in the next five years.²
- b. Buildings account for 40% of worldwide energy consumption and present the biggest opportunity for future abatement.³
- c. Annual fossil CO₂ emissions increased from an average of 6.4 gigatons of carbon (GtC) per year in the 1990s, to 7.2 GtC per year in 2000-2005.⁴
- d. Higher temperatures ranging approximately 3.42 to 8.28°C warmer than pre-industrial period could lead to eventual melt of the Greenland ice sheet, and raise sea levels by 23 feet.⁵

(iii) Benefits from adoption of green technology

- a. There is a huge challenge amidst the economic downturn to invest in green technology. Unemployment is expected to reach 9% in 2010 in the OECD countries, as many companies have stopped investing in new capacity, and business investment in R&D has also been down by 60% in 2009⁶.
- b. With the ongoing economic uncertainty, many businesses have been holding back new investments and are cutting back on "non-essential" costs. Many companies are also hesitant in investing in Greenfield projects. The far-sighted organisations, however, will

² IBM, July 2009

³ IBM Project Big Green Update, 2009.

⁴ <http://www.un.org/wcm/content/site/climatechange/cache/offonce/pages/gateway/the-science/statistics>, Useful Climate Change Statistics, UN

⁵ <http://www.un.org/wcm/content/site/climatechange/cache/offonce/pages/gateway/the-science/statistics>, Useful Climate Change Statistics, UN

⁶ Policy Responses to the Economic Crisis: Investing in Innovation for Long-Term Growth, OECD, June 09

leverage on opportunities that avail during these time to grow. Focussing on efficiencies and the use of technology to gain a competitive edge will put an organisation in good stead for the economic upturn and “green growth”, towards more sustainable economies.

(iv) Governments can play a role

- a. Investment in a low-carbon, green growth policy can yield a “double dividend” effect. That is, it can contribute to economic recovery in the short-term, and help build an environmentally friendly, low-carbon economy in the long-term.
- b. Rather than leaving green technology innovation and adoption solely to the private sector, governments can take a proactive role to encourage the early adoption of green investment and R&D, by boosting the long-term tangible and intangible value that green technology can contribute to sustainable development. This can be done through “low-carbon, green growth” policies, such as providing financial grants to spur green technology investment or incentives to offset the cost of adoption.

Sustainable Infrastructure and Financing Strategies

4. Infrastructure, which traditionally described large physical structures of concrete and steel, such as power plants, roads, water supply systems, and more recently information and communications systems, is the foundation of a city’s environment and underpins its economic potential. Globalisation and urbanization have brought about an unprecedented infrastructure growth in cities, which can only be perpetuated with sustainable funding and resource-utilisation strategies in place.

(i) Growing need for infrastructure

- a. The need for new infrastructure is growing rapidly, especially in developing countries.
- b. In Asia and the Pacific, investments in both urban and rural areas must reach an estimated \$4.7 trillion over the next 10 years to sustain growth in the region, with two-thirds of that amount required for new infrastructure.

(ii) Ageing infrastructure and need for refurbishment

- a. With escalating urbanization and population growth, existing infrastructures are becoming dated and inadequate. For example, the International Energy Agency’s last comprehensive study of world energy (“World Energy Outlook,” 2004) estimated that almost \$4 trillion in power-sector infrastructure improvements will be needed in the OECD countries over the next 30 years: half for power generation and half for transmission and distribution. For example, in some of the largest U.S. cities, water mains and feeder pipes date back to the 1860s; it is not unusual for a metropolitan area to have as many as 1,000 water main breaks a year.⁷

⁷ Lights! Water! Motion! from strategy & business issue 46, for Booz Allen Hamilton Inc, Spring 2007

(iii) Impact of infrastructure growth

- a. It is increasingly understood, and a matter of significant concern, that negative environmental and social impacts of poorly conceived infrastructure investments will place additional burdens on current and future generations.
- b. Business-as-usual infrastructure development constitutes poor governance, leading to resource degradation, pollution and waste, and could also contribute towards corruption in public spending and private contracts as well as uneven distribution of benefits to the disadvantage of needy residents.
- c. Climate change impacts, such as increased intensity of storms and longer droughts, are threatening existing infrastructure and rolling back hard-earned development gains.
- d. Concerted efforts are needed to protect communities, ecosystems, and industries from unavoidable impacts, as well as to help countries' in their climate change mitigation efforts.

(iv) Resource-efficient and green infrastructure

- a. ADB estimates that \$60 billion per year is needed to expand urban infrastructure services between 2006 and 2010 for water supply, sanitation, solid waste management, slum upgrading, urban roads, and mass transit systems.
- b. Infrastructure investments often establish a country's pattern of energy use for subsequent decades. If traditional low efficiency infrastructure is introduced, the economies and the sustainability of resource use would suffer in the long term.
- c. There is great potential for leapfrogging over older generation technologies to more advanced solutions with greater long-term resource efficiency, savings in costs, and environmental benefits. Society and the environment are beneficiaries of this investment, especially when older and more resource-intensive and polluting infrastructure is phased out in the process. System designs can integrate advanced technologies and practices to optimize resource use and reduce the volume of waste generated.

(v) Sustainable financing for infrastructure development and refurbishment

- a. Infrastructure financing often accounts for a lion's share of governments' budget.
- b. The private sector could play a major role in city infrastructures like energy, transportation, water, etc
- c. There is no "magic bullet" to solve the financing challenge faced by cities. What is clear is that good governance must remain an integral component of any solution, as evidenced by the excesses of the most recent global financial crisis, the effects of which are still being felt.