Promoting compact urban design for cities in developing countries
- Issues and opportunities for sustainable urban development -

Montreal 2011 – Ecocity World Summit

Kanako Iuchi
Finance, Economics and Urban Department, World Bank
08.23.2011

WB’s Eco² Cities initiative

• An initiative launched in 2009 to aim the sustainable urban development in the developing regions
• It aims to help cities in developing countries achieve greater ecological and economic sustainability in synergy.
• Four principles are underscored:
  1) City Based Approach
  2) Collaborative Design & Decision Making
  3) One System Approach
  4) Investment for Sustainability & Resiliency

Related presentations:
1) Wed 13:15 The International Organizations, Hiro Suzuki
2) Thurs 13:15, Paradigms and metrics for Ecocity Economics, Ryoko Iizuka
Compact city –
one of the most supported urban policy

Compact city policies are popular because it is financially, environmentally and socially more sustainable, in theory.

- Smaller cost of development, e.g. transport, public infrastructure, residential and commercial development
- Smaller energy consumption and CO₂ emission
- Preserve more natural lands
- Nurture collaborative platform and sense of community

Regaining popularity in industrialized regions

- Recently, compact city policies are increasingly appearing in urban strategies in industrialized countries.
  - Austria, Czech republic, France and Japan released national policies including compact city policies in 2010 alone.
  - Aim to use urban resources better through:
    - Urban sprawl management (laws, policies, etc)
    - Intensive use of built-up areas (more density, compact nodes, well-connection)
    - Promoting mixed land use and diversified socio-economic activity
Compact city is also gaining popularities in developing regions

- **City of Amman**, Metropolitan growth, Greater Amman Municipality, 2008
  
  "Encourage compact urban growth in order to make the best use of existing services, promote increased transit use, improve pedestrian accessibility, and improve affordability for both the Greater Amman Municipality (GAM) and its residents."
  
  (Metropolitan growth, Greater Amman Municipality P30. 2008)

- **City of Ahmedabad**, Ahmedabad Municipal Cooperation, 2006
  
  "The goal [of development and growth management] is to achieve a compact city, coherent urban form with well designed public and green open space."
  

- **City of Thimphu**, Department of Urban Development & Engineering Services (DUDES), 2002
  
  "[Thimphu Structure Plan] is presently being enhanced by the preparation of Local Area Plans, which interpret the structure into detailed urban components in the form of compact, walkable urban villages."
  
  (City of Thimphu, Dept of Urban Development & Engineering Services (DUDES))

Is compact city concept universally adaptable?

- Compact city policies are in trend in developing regions, but urbanization processes are distinct:
  - More built-up area density*
    - 4 times denser from the US
    - 2 times denser from Europe and Japan
  - Rapid expansion of built-up areas*
    - Urban land cover will double in 19 years
  - In 30 years (between 2000 – 2030), urban population will double and built-up area will triple.*
    
    *Source: Angel et al. 2011
  
  AND

- Non-stop automobile dependency following western pattern of dev’t


1976: Population 6 million
1989: Population 9 million
2004: Population 13 million

Issues and opportunities in adopting compact city policies

**Issues – intensification will cause...**
- Possible increase of urban complication - Intensification worsens urban environment
- Needing higher investment costs for upgrading unsustainable areas - Basic urban infrastructure is costly due to complex environment

**Opportunities – individual strategies of CC may be useful**

### North Jakarta (1988-2010)
- Promoting integration – by integrating built environment and transport we could minimize sprawl and mobility
- Promoting in-fill development – development often takes place in non-urbanized areas

**But, how can we make it happen??**

---

**Learning from good practice: Ahmedabad, India (1)**

- Promoting integrated development by Bus Rapid Transit System (BRTS: Janmarg) as a spine of the city
- Reasons for promoting integrated dev’t:
  - Rapid population increase (40% per decade)
  - Increasing motorization, need for decongestion
  - Urban spreads
  - Environmental degradation: poor air quality
- Preliminary impact of BRTS
  - TOD development – building constructions in some vacant lands
  - Shift of transportation mode to BRTS
    - 2 wheelers: 18%
    - Automobile: 6%

---

Notes:

- North Jakarta (1988-2010)
- Learning from good practice: Ahmedabad, India (1)
Learning from good practice: Ahmedabad, India (2)

Features possibly influencing successful BRTS in promoting urban integration:

- Long-term vision of mobility plans existed
  - Ahmedabad Plan 2005: Comprehensive urban mobility plan, including BRT implementation
- Key policies supporting shared transportation (BRTS)
  - Parking policy with parking meters in spaces along BRTS corridor
  - Advertisement policy
    ➔ Public interventions working towards integration
- Several project schemes advertize their location in the BRTS corridor: Informed benefits of living closer to the BRTS
  ➔ Market force toward integration
- Urban Transport Fund was set up
- 9 PPP arrangements for BRTS
  ➔ Financing schemes supporting integration

Learning from good practice: Ahmedabad, India (3)

Other key features

- City has been compact: mixed land use and balanced road network (Physical conditions)
- Culture of organized public transport operations
- Strong collaboration between transport and land use authorities
- New institutions established to support BRTS planning and management (Institutional setting)
  - Ahmedabad Janmarg Limited (AJL)
  - Urban Mass transit Authority (UMTA)
  ➔ Inherent characteristics of city supporting integration
Reflection - 1

- Compact city policy will continue to be one of the most supported urban policy for sustainable growth, world wide.
- Adopting compact city policy to cities in developing countries without careful thoughts may aggravate urban problems.
- However, some elements of compact city policy, especially on urban integration, could be the key focal area in developing countries.
- This integration could be done through back-boning urban transport in urban development.

Reflection - 2

- Public interventions, market force, and financing schemes are the key areas that need careful observation for promoting urban integration.
- Inherent characteristics of a city has large impact on successful integration.
- The WB is currently implementing a project on integrated spatial development to:
  - Understand integration dynamics of public transportation and land development.
  - Develop recommendations for policies and implementation.
Thank you!

For information:
www.worldbank.org/eco2
Hiroaki Suzuki,
hsuzuki@worldbank.org
Kanako Iuchi,
kiuchi@worldbank.org