Low Carbon Urban Development

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Can urban development ever be low carbon/sustainable?

Urbanisation challenges & opportunities
- Why is urban areas important?
  - Urban population more than 50%
Suburban development

- Green-field development
  - Developed in the outskirts of cities in the form of
    - New suburb development
      - D-17, D-18
    - New town development
      - New cities at Motorway / Zulfiqar Abad
    - Gated communities (enclave housing)
      - Closing off streets by building gates, fences, walls or other natural barriers
      - DHA/Bahria Town
      - Why?

Low carbon development

- Low carbon development
  - Development in existing suburbs
  - Mostly around town centres
  - On public transport routes
  - Usually contains medium to higher density residential units or townhouses or flats
  - Designed with low carbon urban design principles
    - Commitment on urban sustainability
    - Changing lifestyles
    - Response to housing affordability

Scales of LCD

- Scales of the Low Carbon Development
  - Buildings
  - Lots
  - Blocks
  - Neighbourhoods (an area approx. 5-10 min walk from centre to edge)
  - Districts / Suburb
  - Corridors
  - Entire city
  - Region
Urban development in Rawalpindi

Urban development in Lahore

Islamabad, a town planning example for a sustainable city.

L.H. Frenzvillek
University of Melbourne

D.K.H. Development and Urban Consultant, U.K., Athens, Greece

Galan Development Planning P., Vol. 14. 79
How far can I travel on 1 ton of CO₂?

Walking and LC design

[Images of walking paths and LC design examples]
Cycling

I CPH
Official City Poster
September 2007

Copenhagen
The No 1 Bicycle City in the World

Goals for 2015:
* 50% of all commuting on bicycles
Density & public transport use

The higher the density, the higher ............the percentage of Public Transport

Source: UITP Millennium Database
BRT/OT Corridor Redevelopment Plan

The land use policy and regulations in Lalmoni should support BRT-based high-density TOD for growth around major stations and corridors, as happened in Curitiba, Brazil.
"Congestion is not the fundamental problem of transportation. Congestion is a consequence of inappropriate policies, inadequate planning and mismatch investment" (Vukan 2000, p. 27)

Goal 11: Make cities inclusive, safe, resilient and sustainable

- By 2030, ensure access for all of adequate, safe and affordable housing and basic services and upgrade slums
- By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport and special attention to the needs of those in vulnerable situations, women, children, people with disabilities and older persons
- By 2030, further efforts to improve access to safe, affordable drinking water and sanitation
- By 2030, ensure safe, inclusive and accessible green and public spaces, in particular for women and girls, older persons
- By 2030, increase access to information and communications technology in public spaces
City as an ecosystem

– Patrick Geddes
– An early 20th Century Scottish thinking in urban planning and ecology.
– Believed in an organic approach to city planning and a more harmonious relationship between city and environment/ecology.
– Believed that social processes and spatial form are related.

Can urban development ever be low carbon/sustainable?

- Under an engineering based urban development approach – probably NO
- Under an ecosystem urban development approach – probably YES