SYNERGIES FOR SUSTAINABLE DEVELOPMENT
The Swedish experience
Anna Hessle
Hammarby Sjöstad – 
"One of the World’s highest profile examples of Sustainable City Development" - The Economist

From Olympic bid to one of Stockholms most ambitious city developments
International Interest

Approx. 4000 international delegation visitors per year

Visitors from China, Africa, India and Latin America. Etc.
International benchmark for sustainable development

12 GREEN GUIDELINES

CDBC'S GREEN AND SMART URBAN DEVELOPMENT GUIDELINES

OCTOBER 2015 DRAFT FOR COMMENT

1. VITALITY AND DIVERSITY

- Develop urban development projects that are diverse, vibrant, and inclusive.
- Promote mixed-use developments to encourage social interaction.

2. TRANSIT-ORIENTED DEVELOPMENT

- Plans should be built around public transit nodes to optimize accessibility.
- Encourage pedestrian-friendly streetscapes.

3. SMALL BLOCKS

- Blocks should be smaller than 0.7 hectares and 70% of the blocks should comply with this standard.
- This is essential for urban areas.

4. GREEN SPACE

- Green spaces should be increased, with 30% of the community area covered by greenery.
- Ensure green spaces are accessible to all.

5. NON-MOTORIZED TRANSIT

- Encourage walking and cycling by designing safe and comfortable routes.
- Promote active transportation to reduce carbon emissions.

6. WASTE MANAGEMENT

- Implement efficient waste management systems to reduce landfill.
- Promote recycling and composting.

7. WATER EFFICIENCY

- Implement water-saving technologies and practices.
- Increase water re-use and conservation.

8. CAR CONTROL

- Implement strategies to reduce car usage and encourage cycling and walking.
- Develop car-sharing programs.

9. RENEWABLE AND DISTRICT ENERGY

- Promote the use of renewable energy sources.
- Implement district heating systems.

10. PUBLIC TRANSPORT

- Ensure public transport is readily accessible.
- Improve the efficiency of public transportation systems.

11. INSTITUTIONAL MANAGEMENT

- Implement sustainable procurement practices.
- Encourage partnerships with local businesses.

HAMMARBY SJÖSTAD

AN URBAN DEVELOPMENT CASE STUDY OF HAMMARBY SJÖSTAD IN SWEDEN, STOCKHOLM
Decoupling emissions from economic growth

Embedded carbon dioxide emissions in imported goods and material is not included.
Nothing goes to waste in Sweden!
'Sweden will be one of the world’s first fossil-free welfare nations, and in the long term our energy system will be based on 100 per cent renewable energy.'

/Announced November 2015 by Sweden’s Prime Minister Mr. Stefan Löfven and Mrs. Åsa Romson Minister for Climate and the Environment
STOCKHOLM The first European Green Capital
All new urban developments take part on brownfield land.
1990 - An old industrial and harbour area with extremely bad external and internal environment
2019 - Hammarby Sjöstad – one of Stockholm’s most ambitious city development
Environmental Goals

- land use
- soil pollution
- energy
- water and sewage
- waste
- building material
- transportation
- noise

The overall Objective was to half the overall environmental impact.

Evaluation of two completed areas > 40% reduction of environmental load – eutrophication, acidification, ozone depletion etc
Key to success

1. Policy/leadership – political commitment to "twice as good"

2. Planning – "Eco governance"

3. Management "The Hammarby Model"
Synergies in landscape and Ecosystems services

Public green area: 19%

Stormwater is stored and purified in the central parks
Connecting ecological corridor/pedestrian/landscape
Mixed-use residential developments

10,800 apartments,
290,000 sqm of office,
Light Industry
Retail Use
Plot ratio: 2.2-3.0,
Building Height: 4-7 floors
Sustainable Transportation

- Transit-oriented development (TOD) as main strategy
- Light-rail and biogas buses as well as a biogas fueled ferry
- Car pool with 45 environmental cars (350 households are associated)
- 79 % walk, cycle or use the local transportation system for personal transportation to work.
- 14% decreased usage of the car for travel to work
High Energy Efficiency

District heating (1)
Combustible waste is incinerated

The residents themselves produce 50% of the fuel required for the energy they need

District heating/cooling (2)
Heat from the purified waste water

- District heating
- Hot tap water
- Electricity
- District cooling
Vacuum Waste

Vacuum transportation of solid waste – a Swedish success story within the field of environmental technology
The Hammarby Eco-Cycle Model for integrated energy, waste and water planning and management
Colombo Port City, Sri Lanka
Shanghai Office Park

14 公顷
hectare

2.5 容积率
FAR

300,000 平方米
GFA - square metres
Hammarby in Yantai China
Hammarby 2.0 – Urban Living Lab

Electrification, digitalisation, Smart City, Citizen driven initiative with business and research organisations Testbeds, urban living lab, export platform

Private energy consumption must be reduced from 7 tons to 1.5 tons of CO₂ per person/per year if climate targets are to be met.
Thank you!