

REFLECTIONS

DAY 1

KEYNOTE: Ecological Cities As Economic Cities

- The World Bank's New Development Initiative – Why important?
- Scarcity of water resources, waste, pollution, coupled with very high urban growth (eg: M'sia already 70% urban); high energy costs;
- Eco2 City – Fusion of ecological and economic sustainability – to benefit the people first;
- Using best practices of cities that have successfully developed with economic and ecological balance –
 - Curitiba-transport and land use;
 - Stockholm – Utility & Resource Management, energy generation;
 - Yokohama – Solid waste: cost saving & revenue from recycling;
 - Singapore-Integrated Water Resource Management in which the city itself is a water catchment;
 - London – Urban Transport Management through area pricing
- City shapes determine energy use & ecological footprint – capital, operational & maintenance costs very high in expanded low density cities

- 4 principles : **City Based** (leadership, action-oriented); **Expanded Platform** (collaboration-PPP, shared planning framework, integrated design); **One System**- (re-use same resources; policy framework); **Investment Framework** – (Life Cycle Costing, risk management; CBA of capital assets)
- Life Cycle Costing – important tool; not just financial, but also environmental; and performance based;
 - Eco2 City Elements –
 - Water management
 - Waste management
 - Land management
 - Transport Planning
- Most important – not just technology, design, but equally as vital – human behaviour & practices;

Paper 1: The National Green Technology Policy and Making Cities Green and Low Carbon Emitting

- Ministry formed in 2009; Green Policy launched in July 2009;
- Objectives – minimize growth energy consumption without compromising on economic, social growth and benefits; - 4 pillars : energy, environment, economic, social and 4 sectors – Transportation, waste treatment; energy;
- Short term, Medium and Long Term Goals – including public awareness; local research institutes expansion & commercialization; etc.
- Structure of the Green Council; restructuring the Malaysia Energy Centre as National Green Energy Centre;- expanding scope to meet new needs;
- Financing schemes – producers & Users;
- Key Goals for 2010 –
 - Green Township Guidelines
 - Green Rating System
 - Save 10% energy and water usage in Government buildings in Putrajaya

Paper 2: Towards an Eco Age – Sustainable Master Planning & Lessons Learnt

- China – 1. billion people in cities by 2030; shares the common urban problems in many cities the world over – high energy consumption with high Co2 emission per capita; but it hopes to level off Co2 emission with increase in GDP
- Better public transport – subways; bicycling, use of gas powered public transport; wind farms; solar powered resources;
- Green Design –
 - Sustainability Framework –Strategies, benefits, links and cycles
 - Integration – everyone speaks to each other – energy, waste, etc. – develop strategies – integrated urbanism
 - Target & performance evaluation;
 - Review on feedbacks
 - Tools – eco-footprint, Integrated Resource Management Model – an ARUP Program; SpeAR –sustainability Project Appraisal Routine)
 - Other measures – sustainable buildings, R& Education; rating tools,

Building Green Cities For Tomorrow

- Sustainable Master Planning at Dongtan, China – using integrated urbanism concept;
- Using renewable energy resources, waste water re-cycling; demand management; waste management systems;
- Low Carbon Community – Changxing – eg: 100% of population within 400m of public transport; use KPIs into the zoning plan itself relating to energy and water; test case for developers and house buyers
- Green Performance Standards built in into the Statutory Plans and Guidelines;
- Encourage that we have to do beyond BAU; work faster;

Building Green Cities For Tomorrow

Paper 3: The Greening of Singapore

- Started out with planting as much trees and plants as possible; progressed to guidelines such as tree protection, neighbourhood parks, green reserves;
- Later – more ecological approach; innovation in integrated use of spaces;
- Lately – catering to lifestyle needs;
- Gazetted natural reserves – protected through the planning process
- Continuous green around the island – heritage roads; streetscape greenery master plan ; identity
- Park connectors – 300km by 2015; fully accessible from all corners of Singapore and for everyone – also serve as wildlife connectors/ bridges – eg: eco link to be built over the Bukit Timah expressways;
- Re-introduction of fauna to increase bio-diversity – eg: Hornbills
- Changing concrete embankments to natural landscaped ones;
- Green cover increased to 50% of Singapore

- Main approach – Integrated partnership with several other corporations, agencies and authorities, the public and private sectors;
- Building a culture of gardening – community programmes – eg: Community in Bloom
- outcomes: shared passion amongst community; tree planting;
- Capacity Building for sustainable programme – skills workshop, conferences, Garden Festivals

Paper 4: Water Recycling – A Must in Today's Cities

- Interaction between water, society, economy
- Impact of cities – disproportionately large
 - Consumption of food, energy, water, land
 - Amount of water needed is usually more than what the water resource can provide
 - Encroachment into the flood plain
 - Erosion/sedimentation = flooding
- Growing demand for water – effect from people, industry, agriculture, food
- Dealing with problems – by making cities greener, create smaller ecological footprint,

- Changing from **supply management** (project driven) to **demand driven** management (control at source) – solution is through managing the demand. Traditional solutions not sustainable. Manage the demand for better supply
- Need to look at a holistic approach – through concept of a river basin. Plan on the basis of a physical boundary and not administrative boundary
- Controlling at source through 3R – reduce, reuse, recycle
 - Recycle – discarded water treated for reuse.
- Stormwater management – MSMA : handle both quality and quantity.

Paper 5: Managing Assets for Resource Management & Sustainability

- Using Strategic Asset Management to ensure long term sustainability of resources, more so in the age of climate change and scarce resources;
- Holistic process of managing assets between them and between assets and community; ensuring asset lifecycle optimization to benefit community and ensuring services and quality of life;
- Meeting up with scarce water resources resulted in boom in desalination plants – high costs involved - - strategically, government's must ensure the best and cheapest service delivery to the community;
- Carbon off set standards – at National Level
- Carbon Accounting & management -3 types of emissions that all have to calculate & report
- Eg: Waste Management & Land Fill - The importance of data collection vital for strategic, operational and carbon accounting and management

- Sustainability is a function of 1) design and technology, 2) use and operation and last 3) maintenance and treatment.
- Introduction to a sophisticated sustainability of modeling analysis of assets;
- Comparative benchmark modeling, scenario modeling;
- Analysis from these can better manage assets over time, present and future;
- Failure to maintain assets can lead to great risks and insurmountable loss to the end users;
- Sharing of information; asset management requires working together with many professions – accountants, engineers, decision makers, businesses, community.

Paper 6: Land Use & Transportation – The Inseparable Twins for City Sustainability

- 59% total daily journeys by public transport with target 70% by 2020
- 4 strategies for sustainability:
 - i. Integrated Planning (L/T land Use & Transport – reviewed periodically)
 - Improve access; seamless transfers between modes; close coordination with various government agencies;
 - ii. Making Public Transport the choice mode – expand rail network; extend bus priority; provide travel information; enhance physical accessibility;
 - iii. Manage road Usage – Ownership Control with Usage Restraint ; ERP, Parking Guidance System,
 - iv. Green Transport Initiatives – National Energy Efficiency targets – fuel economy labeling; green vehicle rebates, diesel hybrid buses, Led Traffic lights; Evs; Greening of Road Infrastructure, cycling & walking.

SUMMATION

- We cannot afford the Business as Usual Approach to City Management ; we need intervention through the various means that you have heard today;
- There are many innovative approaches and programmes which we can adopt and adapt;
- Looking at the best practices and learning from them would be the best approach much like what the World Bank has undertaken in the Eco2 Cities program;
- We have seen the policies, now we need the strategies and the action plan;
- This will involve not just in city spatial design, transportation, increased tree planting, waste recycling, water resource management and renewable energy, financial management nor just new green technologies;
- Involving all stakeholders including engaging the public, doing things holistically, looking at our cities as an integrated system and working as partners, not as competitors, are common factors that have been identified and presented in the papers this morning and afternoon.

MALAYSIAN DELEGATES VISIT TO CURITIBA, BRAZIL

- In conjunction with **WORLD URBAN FORUM 5** in **RIO de JANEIRO** (22nd – 26th March 2010)
- Followed by **2 day visit to Curitiba**
- **March 16th to 1st April 2010**
- Organized by the **Eastern Regional Organization for Planning and Human Settlements (EAROPH)**
- Please email to secretariat@earoph.info for further enquiries.

Thank you and may you reflect back on what you have learnt today to be able to make a small difference in greening our human settlements

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