Case of Malaysia
Iskandar Malaysia and the plan for research approach and network on low carbon cities

SCIENCE INTO POLICY- LOW CARBON GREEN CITY

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Content- Structure of Presentation

Background
- Urban problem and low carbon solution policy in Malaysia

Challenges And Solution
- Research approach network on low carbon cities

LCS Malaysia
- Low Carbon Society Blueprint for Iskandar Malaysia
- Solution- 12 actions
## Issues and Challenges

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Rapid urbanization and industrialization</td>
<td></td>
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<tr>
<td>Relatively high carbon intensity dependence on fossil fuel (fuel subsidy)</td>
<td></td>
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<tr>
<td>High Private car ownership</td>
<td></td>
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<tr>
<td>Low density development and urban sprawl</td>
<td></td>
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<tr>
<td>Low efficiency appliances and low usage of renewable energy.</td>
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</table>

## Urban Problems and Low Carbon Solutions – Physical Planning

- **Material and Energy**
- **Mobility and Green**
URBAN PROBLEMS and Low carbon SOLUTIONS – Socio-economic

Social/ People  
Economy/ Engine of Growth

Low carbon sustainable development approach

Science (R & D) + Policies (LCS) = Actions (LP or SP, NPP)

Key element Sustainable development = PRO GROWTH, PRO JOB, PRO POOR and PRO ENVIRONMENT

Economy (High income nation)  
Social (Inclusiveness)  
Environment (Sustainable)

Climate change Problems  
Co benefits of LCS policies
Low carbon society and sustainability in Malaysia?

**Rationale**
- National Agenda: 40% CO₂ intensity reduction
- Climate change and sustainability policy issues are embedded in all spatial planning policies (NPP/RS/LP)
- Local authorities/Urban planning enhances sustainable urban structure (compact city/TOD/SWM/green and blue infrastructure) and can promote LCS lifestyle
- More Eco-friendly home buyers demand green integrated neighborhood, infrastructure, and buildings
- Fulfill roles to reduce vulnerability on disasters (flood) and promote comfort and safety.

**Why LCS cities?**

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2 Sustainable Development in Malaysia

Moving Towards Sustainable Human Settlement

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Malaysian Low Carbon Cities

DATUM: KL

Kuala Lumpur Architecture Festival 2011
2 Sustainable Development
Low Carbon Frameworks

<table>
<thead>
<tr>
<th>Agencies</th>
<th>Environments</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Nations</td>
<td>Global</td>
</tr>
<tr>
<td>Federal Govt.</td>
<td>Nation</td>
</tr>
<tr>
<td>State Govt.</td>
<td>Region</td>
</tr>
<tr>
<td>Region. Dev. Au.</td>
<td>City</td>
</tr>
<tr>
<td>Local Authority</td>
<td>Neighborhood</td>
</tr>
<tr>
<td></td>
<td>Building</td>
</tr>
</tbody>
</table>

Frameworks
- United Nations Climate Change Conference (COP 15), Malaysia committed to reduce 40% carbon emission intensity
- Malaysia Plan, Economic Transformation Program, National Policy on Climate Change, National Green Technology Policy, National Policy on the Environment, NPP NUP etc
- State Structure Plan, Regional Plan, Economic Region Master Plan
- Local Plan, Low Carbon Cities Framework and Assessment System
- GBI Township Tool
- Green Neighbourhood Planning Guideline

Malaysian Outlook
The CO₂ emission per capita and emission intensity of selected countries in 2010

<table>
<thead>
<tr>
<th>Countries</th>
<th>Emission per capita tones of CO₂ per capita</th>
<th>Emission Intensity tones of CO₂ per US$1000 of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>4.35</td>
<td>0.73</td>
</tr>
<tr>
<td>United States</td>
<td>19.1</td>
<td>0.5</td>
</tr>
<tr>
<td>Singapore</td>
<td>9.8</td>
<td>0.3</td>
</tr>
<tr>
<td>Japan</td>
<td>9.7</td>
<td>0.2</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>8.6</td>
<td>0.3</td>
</tr>
<tr>
<td>Malaysia</td>
<td>6.7</td>
<td>1.3</td>
</tr>
<tr>
<td>China</td>
<td>4.6</td>
<td>2.5</td>
</tr>
<tr>
<td>Thailand</td>
<td>3.5</td>
<td>1.3</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1.7</td>
<td>1.6</td>
</tr>
<tr>
<td>India</td>
<td>1.2</td>
<td>1.7</td>
</tr>
</tbody>
</table>

The 10th Malaysian Plan (2011-2015) has outlined 2 major National Policies on Environmental Protection and conservation:
- National Green Technology Policy
  - Emphasizes on Sustainable development, development of roadmaps to guide the application of green technologies & establishment of Green Tech Financing Scheme.
- National Climate Change Policy
  - Coordinate and streamline policy & legislations, stashed inter-ministerial and cross sectoral committee to facilitate and identify options and strategies to achieve a low carbon economy.
- Green Neighborhood Guidelines – JPBD 2010
  - Smart location, Neighbourhood pattern and design, Green Infrastructure
- Green Township Framework
  - LCCF Guide Towards LC Cities 2012 – Kettha/MIP
Malaysia: Towards developed nation status
New Economic Model for Malaysia

**VISION 2020**

1. To move Malaysia forward so that it becomes an advanced, united, and just society with high standards of living for all.

2. To propel Malaysia towards becoming a high-income developed nation.

Source: PEMANDU

### 1. MALAYSIA CHARTING DEVELOPMENT

**TOWARDS A HIGH INCOME NATION** – National Transformation Policy (2012) and Prospering the Nation and Enhancing well being of rakyat (2013)

- The 2013 budget in line precedent goals on rakyat’s welfare and nation’s well being, aim to position Malaysia as a **developed and high-income economy** with inclusive and sustainable development, will continue to ensure that the **most conducive socio-economic environment** is created through the **Government Transformation Programme (GTP)** to underpin growth focusing on Welfare for rakyat, Well Being of the nations

**The 10th Malaysia Plan**

- Building an environment that enhances Quality of Life
- New urbanism and **compact city**
- Growth concentrated in **urban conurbation**
- Safe city initiatives
- Developing climate resilient **growth** policy
- Adaptation measures
- Mitigation measures
- Incentives for **RE** and **EE**
- Improving **Solid waste management**
- Conserving forest
- Reducing emission to improve air quality
• THE CASE OF ISKANDAR MALAYSIA
01 Low Carbon Society Scenarios for Iskandar Malaysia

Project Background

**Site:** Iskandar Malaysia

**Objective:**

i. To draw up **key policies and strategies** in guiding the development of Iskandar Malaysia in **mitigating carbon emission**. **Transforming Iskandar Malaysia into a sustainable low carbon metropolis by adopting green growth strategies/roadmap.**

ii. To respond to the nation’s aspiration for **ensuring climate-resilient development for sustainability.**

**Target Year:** 2025 (2005 – 2025)
Green-focused Agenda

- Environmental Policy for Green Growth
- Ccm & Industry Planning & Dev
- Integrated Transport
- Land Use Planning
- Value-added products & services
- NPP
- RE & Resources
- Urban Design, Phased Dev & DC
- Economic Dev
- SWM
- Top
- Modes Infrastructure Corridors Movements
- TODs
- Talent Workforce; Low carbon lifestyle
- IRDA’s BPs
- Reuse Reduce Compost
- Decarbonising Environmental Development Projects
- Talent Workforce; Low carbon lifestyle
- Com
- Modes Infrastructure Corridors Movements
- TODs
- IRDA’s BPs
- Reuse Reduce Compost
- Decarbonising Environmental Development Projects

Blueprints directly relevant to the environment

- Low Carbon Society Blueprint
- Integrated Public Transportation
- Shoreline Management
- PDG for Commercial & Industrial Developments
- Green Building Guidelines
- Environmental Planning
- Renewable Energy & Energy Efficiency
- Integrated Land Use
- Area Character Statement
- Integrated Solid Waste Management

IRDA’s roles

Public versions downloadable at www.iskandarmalaysia.com.my
CO₂ Emission Modeling – Development of Low Carbon Society Scenarios for Asian Regions

1. Driving Force Settings
2. Final Energy Demand
3. Primary Energy Demand
4. CO₂ emissions

04 Potential Mitigation Options for Iskandar Malaysia
Green Economy, Green Community and Green Environment
04 Potential Mitigation Options for Iskandar Malaysia
12 Actions Towards Low Carbon Future

<table>
<thead>
<tr>
<th>Mitigation Options</th>
<th>CO2 Reduction</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>Green Economy</td>
<td>7,401</td>
<td>59%</td>
</tr>
<tr>
<td>Action 1 Integrated Green Transportation</td>
<td>1,916</td>
<td>15%</td>
</tr>
<tr>
<td>Action 2 Green Industry</td>
<td>1,085</td>
<td>9%</td>
</tr>
<tr>
<td>Action 3 Low Carbon Urban Governance**</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Action 4 Green Building and Construction</td>
<td>1,338</td>
<td>11%</td>
</tr>
<tr>
<td>Action 5 Green Energy System and Renewable Energy</td>
<td>3,061</td>
<td>24%</td>
</tr>
<tr>
<td>Green Community</td>
<td>2,557</td>
<td>21%</td>
</tr>
<tr>
<td>Action 6 Low Carbon Lifestyle</td>
<td>2,557</td>
<td>21%</td>
</tr>
<tr>
<td>Action 7 Community Engagement and Consensus Building**</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Green Environment</td>
<td>2,510</td>
<td>20%</td>
</tr>
<tr>
<td>Action 8 Walkable, Safe and Livable City Design</td>
<td>264</td>
<td>2%</td>
</tr>
<tr>
<td>Action 9 Smart Urban Growth</td>
<td>1,214</td>
<td>10%</td>
</tr>
<tr>
<td>Action 10 Green and Blue Infrastructure and Rural Resources</td>
<td>620</td>
<td>5%</td>
</tr>
<tr>
<td>Action 11 Sustainable Waste Management</td>
<td>412</td>
<td>3%</td>
</tr>
<tr>
<td>Action 12 Clean Air Environment**</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>12,467**</td>
<td>100%</td>
</tr>
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Launching of the LCSBPIM – COP18 Doha 2012
Implementation of LCSBP Actions – 10 programmes in 2013
Launching of the Iskandar Malaysia: 
Actions for a Low Carbon Future

Malaysia Launching: 06 Nov 2013 at Parliament
Global launching: 15 November 2013,
COP19 Warsaw Poland

LCS: Ongoing projects- on the ground

**GREEN ECONOMY**
- Establish Green Economy & Investment Guidelines for IM
- Promote and Facilitate Green Building, Green Industry, Renewable Energy for new development
- Pasir Gudang – Clean and Healthy City

**GREEN COMMUNITY**
- Public awareness campaigns
- Enhancing school awareness – Eco-Life Challenge
- Promote Energy Efficiency
- Capacity Building - LCS International Symposium, GHG Protocol

**GREEN ENVIRONMENT**
- IM Environment Declaration
- GAIA- Green Accord Initiative Award
- Conservation of Mangrove Forests- Ramsar
- Pilot programme: Designated Bicycle Lane

Environmental report 2013
Report Card on Environment
Upgrading Low carbon Asia centre to ASIANLow Carbon/Urbanisation Centre

5 Low Carbon/ Green Urbanization Centre: Strengthening Science based Policymaking
Renewable energy in Malaysia


Objective to enhance the utilization of indigenous renewable energy (RE) resources to contribute towards national electricity supply security and sustainable socioeconomic development.

Renewable energy Act 2011

Part I: Preliminary
Part II: FIT System
Part III: Connection, Purchase / Distribution RE
Part IV: Feed-in Tariff
Part V: Renewable Energy Fund
Part VI: Information Gathering Powers
Part VII: Enforcement
Part VIII: General
Part IX: Savings and Transitional

Objective to provide establishment and special tariffs system to catalyst the generation of renewable energy.

Iskandar Malaysia: Today and Tomorrow

Today Iskandar Malaysia
High Carbon Society, Lower Sustainability

Present
2010

Tomorrow Iskandar Malaysia
Low Carbon Society, Higher Sustainability, Green Growth/ Economy

Future
2025

Sustainability
Transition LCS – Malaysia approach

Conclusion - Way forward

a) DEVELOPMENT APPROACH
In a rapid urbanization situation, Sustainable economic corridor development/ conurbation planning (consists of several local authorities) is an important component to facilitate green environment, green economy and green community.

b) METHODOLOGY
Good baseline quantitative study, consensus building and low carbon blueprint plan will help to develop an integrated climate resilient, Low carbon framework for a city by providing objective decision.
- Looking beyond policy – SCIENCE-KNOWLEDGE-POLICY-IMPLEMENTATION (completing PDCA cycle)

c) NETWORK
The researchers/scientists have to work with local implementation agencies and international collaboration for capacity building opportunities.
Thank you for your attention!

Thank You Terima Kasih 谢谢 धन्यवाद ありがとう