

LOW CARBON CITY by AIM

On 9 Dec 2014 at Japan Pavillion COP20 Lima Peru

(Asia Pacific Integrated Model hosted by National Institute Environmental Studies)

Science into Action – Realizing Low carbon society The case of Iskandar Malaysia



Ho Chin Siong (UTM)

Faculty of Built environment/ UTM Low Carbon Asia Centre



Project for Development of Low Carbon Society Scenarios for Asian Regions

Email: ho@utm.my / csho59@yahoo.com

Content- Structure of Presentation

Background

- **Background – Low Carbon city design issues and challenges**
- **Urban problem and low carbon solution policy in Asia**

LCS actions

- **Low Carbon City design for Iskandar Malaysia**
- **Solution- 12 actions**
- **Updates – SE4ALL, RCE status**

Challenges And Solution

- **Key Lessons learned**
- **Key success factors (KSF)**
- **Challenges' and opportunities for Municipalities**

ISSUES AND CHALLENGES



Rapid urbanization and industrialization



**Relatively high carbon intensity
dependence on fossil fuel (fuel subsidy)**



High Private car ownership



**Low density development and urban
sprawl**



**Low efficiency appliances and low usage
of renewable energy.**

Key Success Factors (KSF) of green cities in Malaysia

National Policy and Co benefit

National Policy

- **National Agenda** 40% CO₂ intensity reduction
- Green as **New Consumer Culture, New Market**
New Growth with Green Credentials **Economics**
Environment = Green Economy.
- Climate change and **sustainability policy issues** are **embedded** in all spatial planning policies (NPP/ RS/LP)



Co benefits

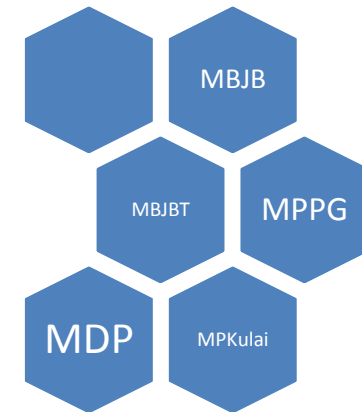
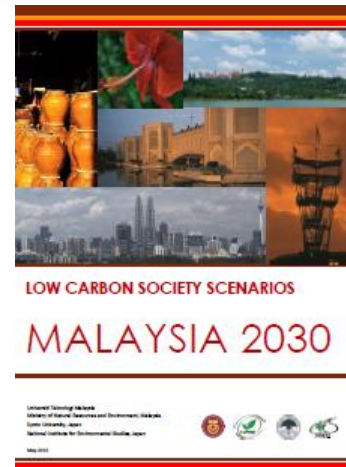
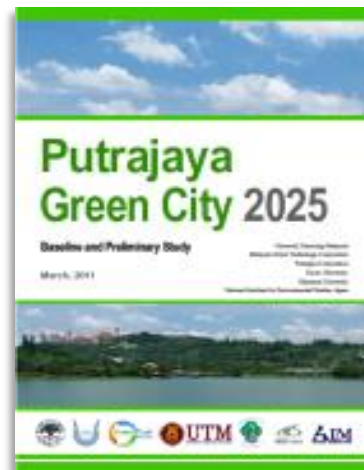
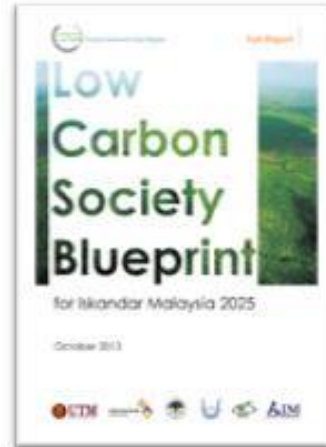
- **Fulfill roles to reduce vulnerability** on disasters (flood) and promote comfort and safety.
- **Money-saving** -Energy conservation and renewable energy
- Improvement **Health and quality of environment**



3 Establishing Low Carbon Society Scenario in Malaysia

- Regional Cooperation with Japan – NIES and IGES

City and Region



(Source: National Institute of Environment Studies, Japan)

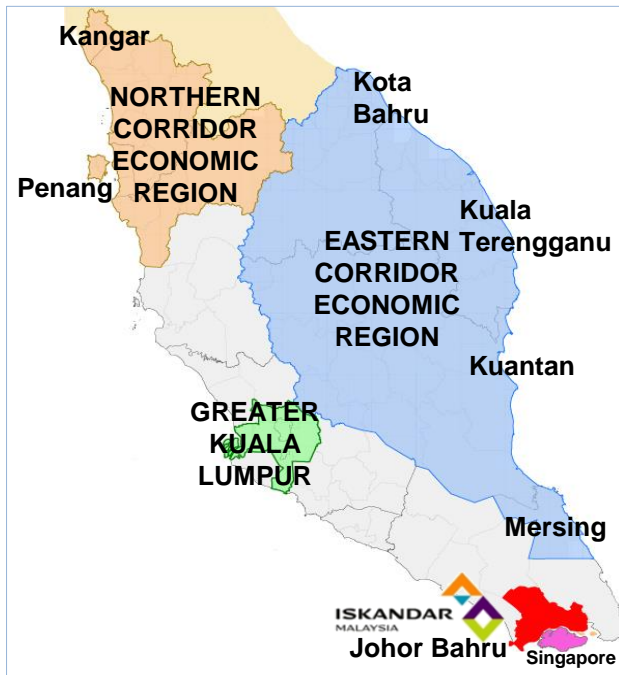
The Case of Iskandar Malaysia

**“Strong and Sustainable Metropolis
of International Standing”**

ISKANDAR MALAYSIA

Iskandar Malaysia is Malaysia's economic growth corridor covering a total area of 2,317 sq km (12% of Johor State)

Iskandar Malaysia in the context of Regional Corridors



Iskandar Malaysia



3 times larger

Iskandar Malaysia



1.3 times larger

Iskandar Malaysia



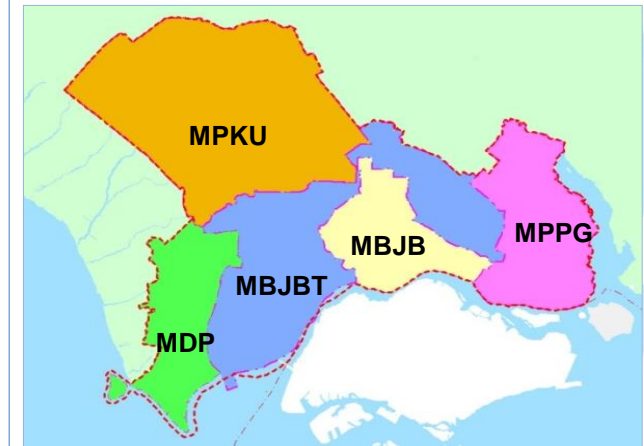
11 times smaller

Iskandar Malaysia



30 times smaller

Iskandar Malaysia covers **FIVE** local planning authorities.



| | 2005 | 2010 | 2025 |
|------------------------|------|------|------|
| Population (million) | 1.35 | 1.61 | 3.00 |
| Labour Force (million) | 0.61 | 0.70 | 1.43 |
| Employment (million) | 0.62 | 0.72 | 1.46 |

Source: CDP 2006 – 2025, Population Census 2010 and consultant estimates

01 Low Carbon Society Scenarios for Iskandar Malaysia

Project Background



FLAGSHIP A

- JOHOR BAHRU CITY CENTRE
- Central Business District (CBD) as heritage and cultural city
- Customs, Immigration and Quarantine Complex (CIQ)
- Johor – Singapore Causeway

FLAGSHIP B

- NUSAJAYA
- Kota Iskandar
- EduCity
- Medical Park
- International Destination Resort
- Southern Industrial & Logistics Clusters (SILC)
- Puteri Harbour

FLAGSHIP C

- WESTERN GATE DEVELOPMENT
- Port of Tanjung Pelepas (PTP)
- Tanjung Bin Power Plant
- 2nd Link Access to Singapore
- RAMSAR World Heritage Park
- Tanjung Piai – Southernmost Tip of Mainland Asia
- Maritime Centre

FLAGSHIP D

- EASTERN GATE DEVELOPMENT
- Tanjung Langsat Industrial Complex
- Johor Port
- Tanjung Langsat Port
- Pasir Gudang Industrial Park

FLAGSHIP E

- SENAI-SKUDAI
- Senai Airport City
- Senai High-Tech Park
- Sedenak Industrial Park
- MSC Cyberport City
- Johor Technology Park
- University Technology Malaysia (UTM)

Site: Iskandar Malaysia

(Iskandar Regional Development Authority)

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)

Iskandar Malaysia at a Glance

A



E



B

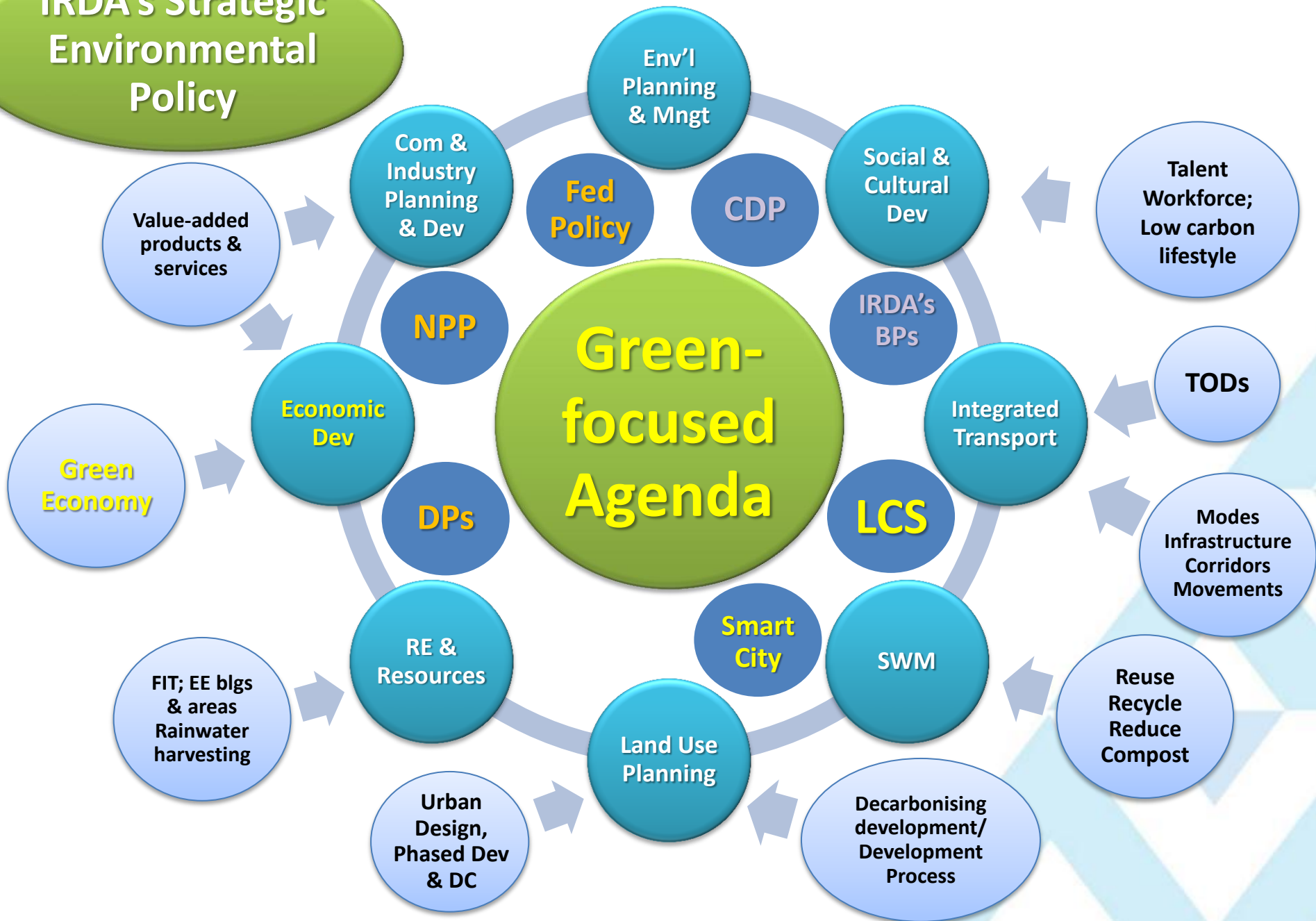


D

C

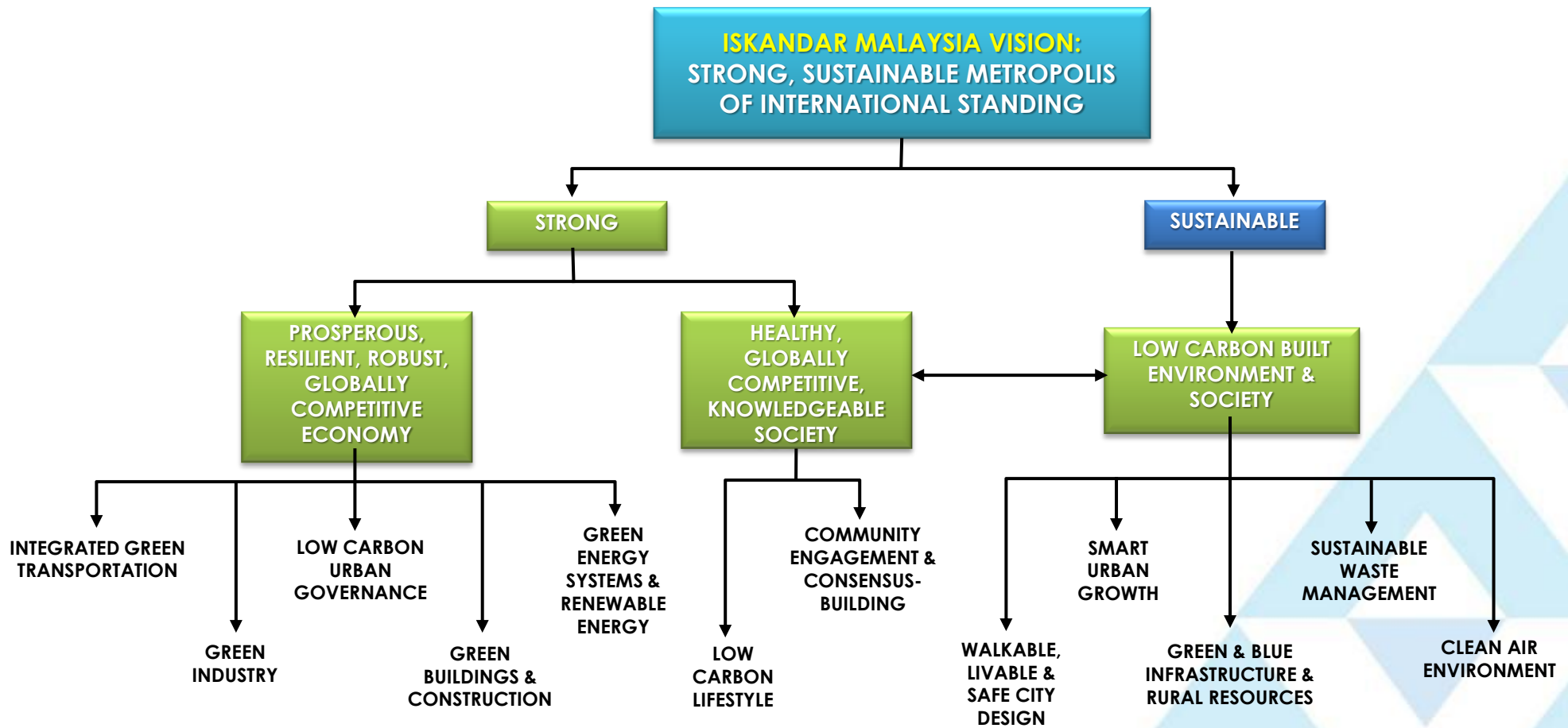


IRDA's Strategic Environmental Policy

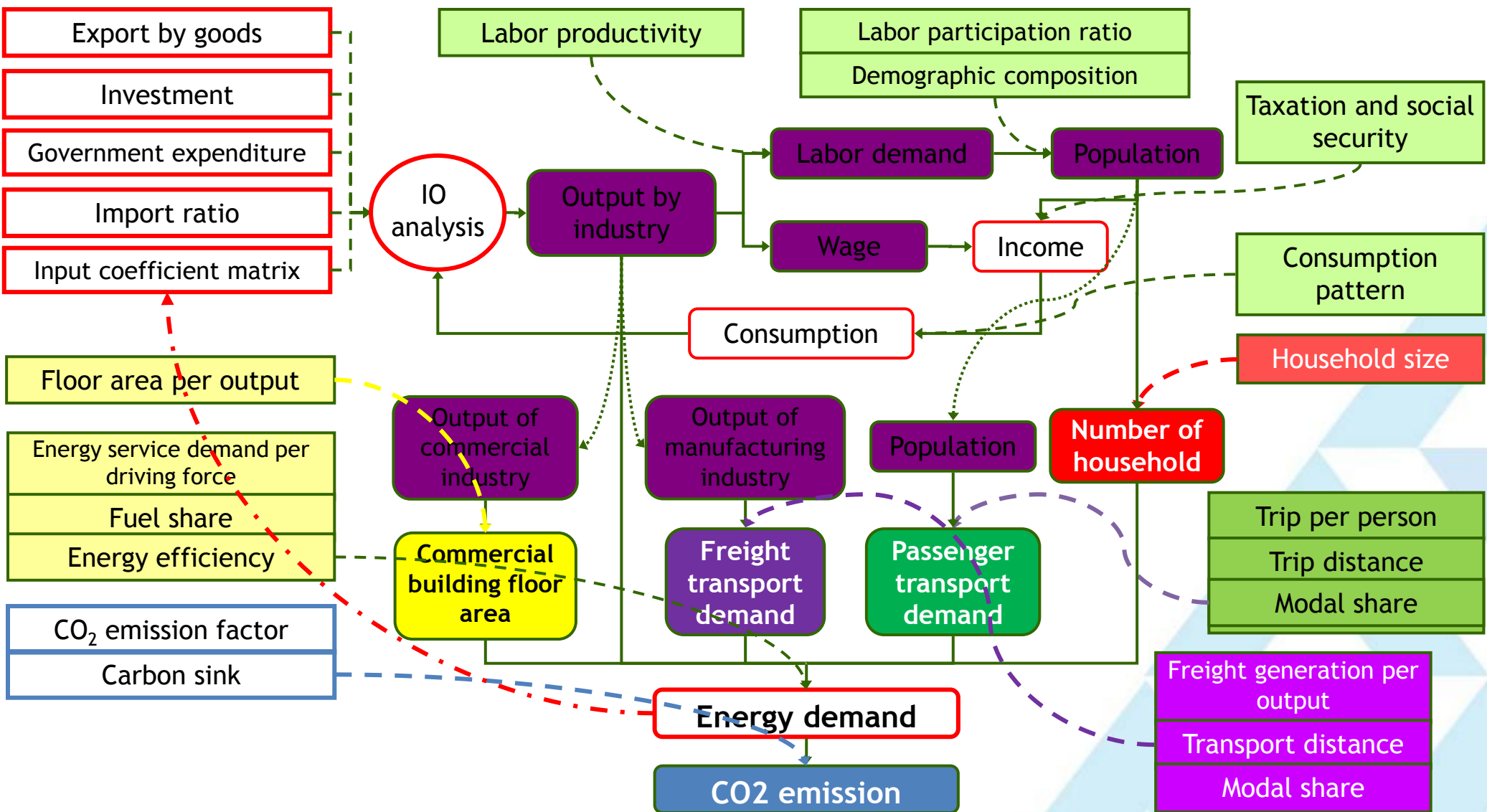


Green-focused Agenda - Rationale

Aligning the Vision with Low Carbon Society Development



LCS scenario study using ExSS



Projected Greenhouse Gas Emission Reduction in Iskandar Malaysia

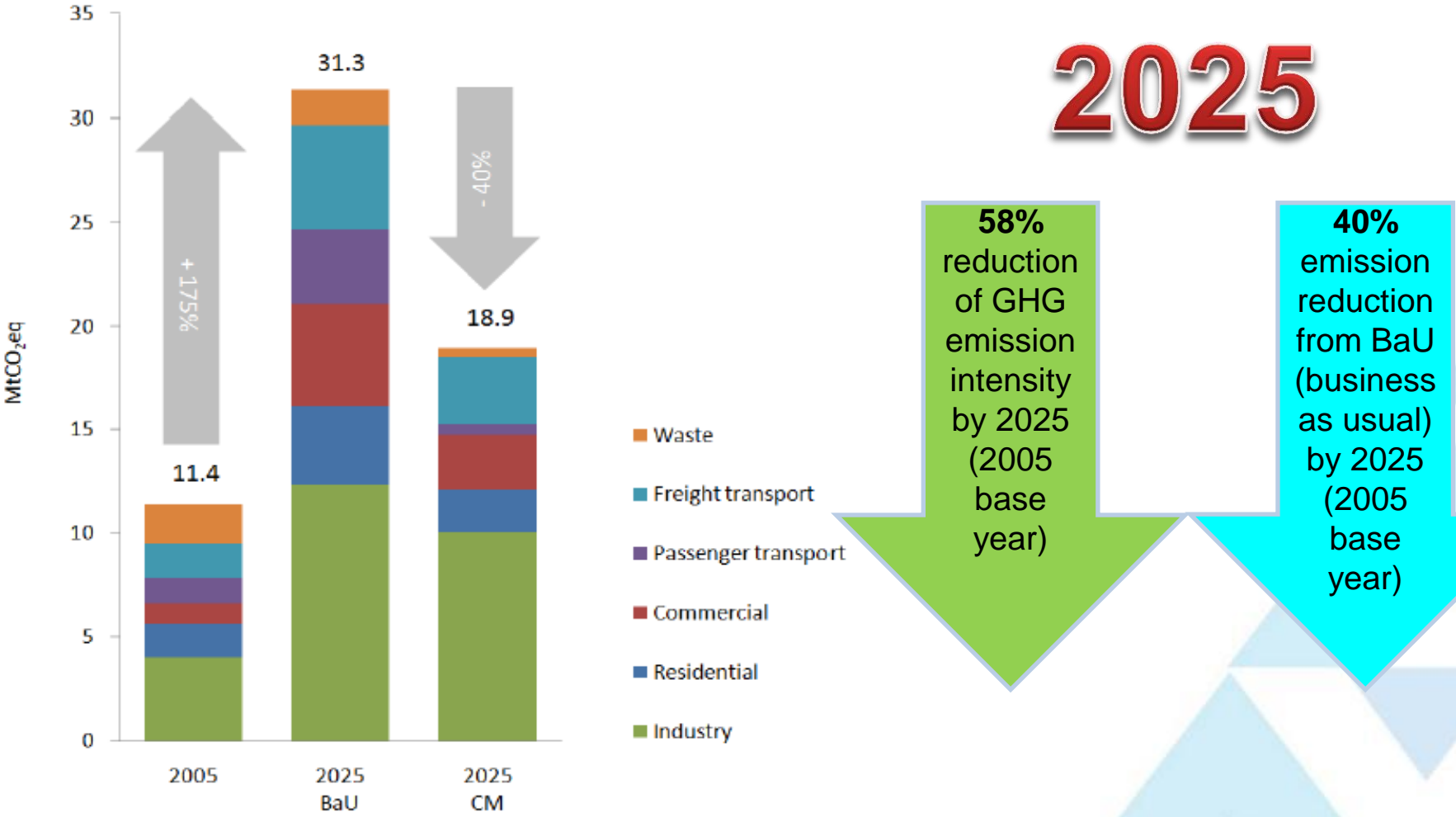


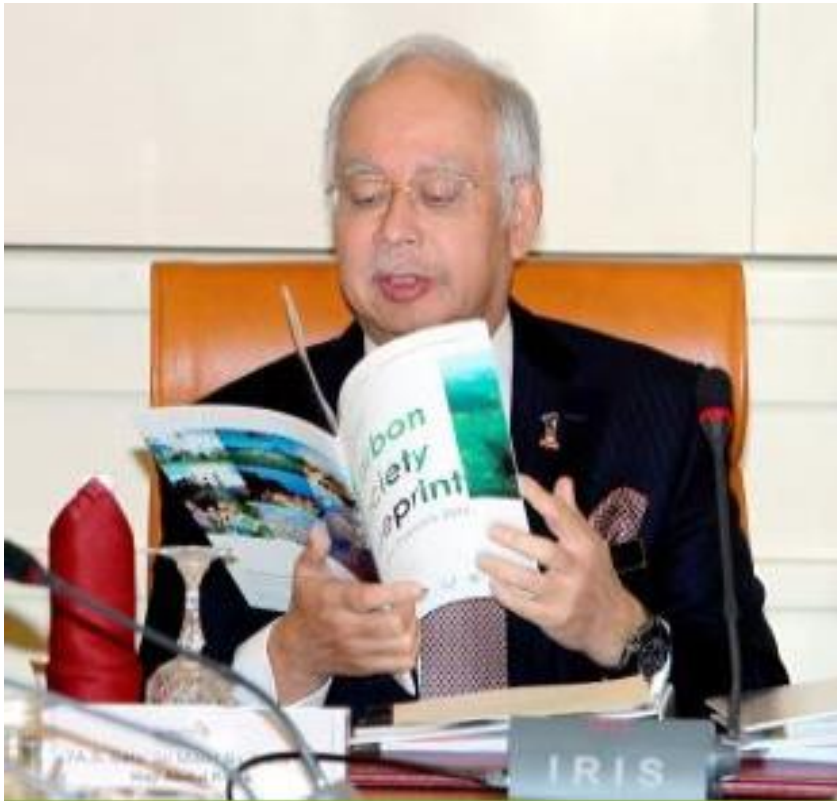
Figure 1: GHG emissions by sectors

Launching of the LCSBPIM - COP18 Doha, 2012

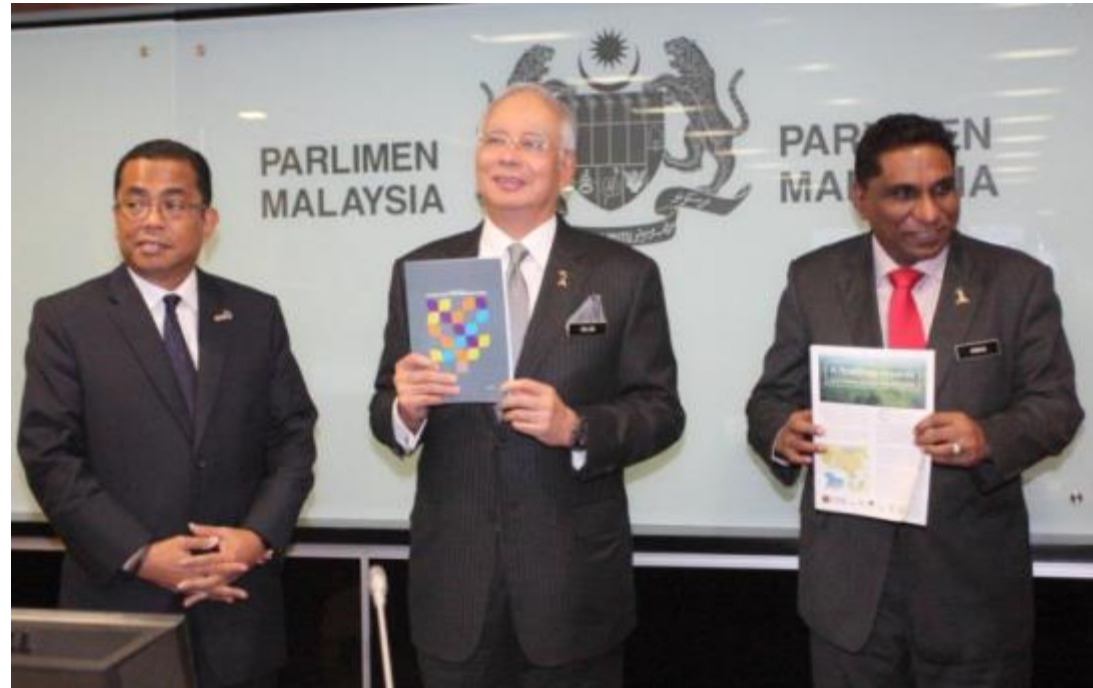
Launching of the LCS Road Map/ Action Plan COP19 Warsaw, 2013



Endorsed by Malaysia Prime Minister - YAB Dato' Sri Mohd Najib bin Tun Abdul Razak

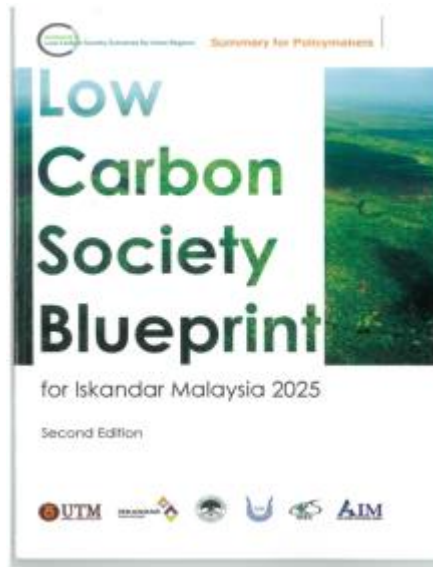


11th December 2012
The PM endorses the launching of
LCSBPIM at COP 18 during MoA



6th November 2013
The PM launched Actions for a
Low Carbon Future during MoA

Low Carbon Society Blueprint for Iskandar Malaysia 2025



- The LCSBPIM– a quick reference for all policy-makers in both public and private sectors as well as IRDA;
- 12 Actions grouped in 3 parts namely: (Green Economy), (Green Community), and Green Environment);281 programmes;
- Each Chapter contains an analysis, list of programmes and the potential GHG emissions reduction;
- IRDA launched its Low Carbon Society Blueprint for Iskandar Malaysia 2025 on 30 November 2012 at the United Nations Climate Change Conference in Doha, Qatar. The ultimate goal is to reduce Iskandar Malaysia’s carbon intensity emissions by 50 per cent by 2025.
- The Blueprint was subsequently endorsed by the Prime Minister of Malaysia in December 2012

| | Action Names | Themes |
|----|---|-------------------|
| 1 | Integrated Green Transportation | GREEN ECONOMY |
| 2 | Green Industry | |
| 3 | Low Carbon Urban Governance | |
| 4 | Green Buildings & Construction | |
| 5 | Green Energy System & Renewable Energy | |
| 6 | Low Carbon Lifestyle | GREEN COMMUNITY |
| 7 | Community Engagement & Consensus Building | |
| 8 | Walkable, Safe, Livable City Design | GREEN ENVIRONMENT |
| 9 | Smart Growth | |
| 10 | Green and Blue Infrastructure & Rural Resources | |
| 11 | Sustainable Waste Management | |
| 12 | Clean Air Environment | |

Iskandar Malaysia: Actions For A Low Carbon Future



- The Booklet 'Actions for a Low Carbon Future' – list of 10 programmes which IRDA has started implementing or have been completed.
- On 6th November 2013, the Iskandar Malaysia: Actions for A Low Carbon Future is the implementation booklet which outlines the 10 programmes, was launched by Malaysia Prime Minister Dato' Sri Mohd Najib Tun Abdul Razak.
- On 15th and 18th November 2013, was the subsequent global launching at COP 19, Warsaw, Poland.

| | Programmes | PIC |
|----|--|--|
| 1 | Integrated Green Transportation – Mobility Management System | Kamisah Mohd Ghazali |
| 2 | Green Economy Guidelines | Ivy Wong Ling Ling |
| 3 | Eco-Life Challenge Project for Schools | Isma Ezwan Safri |
| 4 | Portal on Green Technology | Choo Hui Hong |
| 5 | Trees for Urban Parks/Forests | Boyd Dionysius Joeman |
| 6 | Responsible Tourism and Biodiversity Conservation | Boyd Dionysius Joeman |
| 7 | Bukit Batu Eco-Community | Hamdi Mohd Yusof |
| 8 | GAIA – Green Accord Initiative Award | Ivy Wong Ling Ling |
| 9 | Low Carbon Village FELDA Taib Andak | Dr Ibrahim Ngah (UTM) |
| 10 | Special Feature: Smart City – Nafas Baru Pasir Gudang: CLEAN AND HEALTHY CITY | Sakurah Jamaluddin , Sharifah Shahidah Syed Ahmad, Muhammad Fadly Muhammad Nor, Choo Hui Hong |

03 Low Carbon Society Proposal Plans for 5 Municipalities

Integrating Iskandar Malaysia and 5 Local Municipalities

Top - down

Low Carbon Society Blueprint for Iskandar Malaysia 2025

Bottom - up

Low Carbon Society Action Plan for Johor Bahru 2025

Low Carbon Society Action Plan for Johor Bahru Tengah 2025

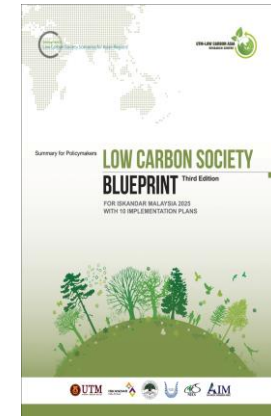
Low Carbon Society Action Plan for Pasir Gudang 2025

Low Carbon Society Action Plan for Kulai Jaya 2025

Low Carbon Society Action Plan for Pontian 2025

Iskandar Malaysia

▪ Di



- Detail Local Action
- Priority and Preference
- Correct Data through Survey
- Chose Implementable measures on the ground
- Pioneering Activities through Pilot Projects

FIVE (5) Local Municipalities



03 Low Carbon Society Proposal Plans for 5 Municipalities

Local Action Plan: Cover and Theme (Example)



JOHOR BAHRU CITY COUNCIL **MBJB**

JOHOR BAHRU TENGAH MUNICIPAL COUNCIL **MPJBT**

PASIR GUDANG MUNICIPAL COUNCIL **MPPG**

KULAI MUNICIPAL COUNCIL **MPKU**

PONTIAN DISTRICT COUNCIL **MDP**

Under SATREPS, the project development of Low Carbon Society, focuses on the Green Building, Green Urban and Green Transport. The project will focus on the development of Green Building, Green Urban and Green Transport. The project will focus on the development of Green Building, Green Urban and Green Transport.

Under SATREPS, the project development of Low Carbon Society, focuses on the Green Building, Green Urban and Green Transport. The project will focus on the development of Green Building, Green Urban and Green Transport. The project will focus on the development of Green Building, Green Urban and Green Transport.

Under SATREPS, the project development of Low Carbon Society, focuses on the Green Building, Green Urban and Green Transport. The project will focus on the development of Green Building, Green Urban and Green Transport. The project will focus on the development of Green Building, Green Urban and Green Transport.

Under SATREPS, the project development of Low Carbon Society, focuses on the Green Building, Green Urban and Green Transport. The project will focus on the development of Green Building, Green Urban and Green Transport. The project will focus on the development of Green Building, Green Urban and Green Transport.

Under SATREPS, the project development of Low Carbon Society, focuses on the Green Building, Green Urban and Green Transport. The project will focus on the development of Green Building, Green Urban and Green Transport. The project will focus on the development of Green Building, Green Urban and Green Transport.



Johor Bahru

Johor Bahru Tengah

Pasir Gudang

Kulai Jaya

Pontian

'The Vibrant Heart of Southern Region'

'Livable Community City'

'Green Manufacturing Hub'

'Smart Logistic Hub'

'Agrobiodiversity Hub'

Media Highlights 2012-2013 (LCS AND IM)

The Daily NTA
 日マ共同研究で施策12件発表
 イスカンダルの低炭素化を支援

イスカンダルの低炭素化（LCS）とマレーシアの持続可能な成長（SDG）を促進する目的で、日マ共同研究（JCM）が、環境省が主催する「LCS」を支援する12件の政策を発表した。発表は、日マ共同研究（JCM）が主催する「LCS」を支援する12件の政策を発表した。発表は、日マ共同研究（JCM）が主催する「LCS」を支援する12件の政策を発表した。

NEW STRAITS TIMES
 NAJIB CONFIDENT OF ISKANDAR M'SIA'S INVESTMENT DRAWING POWER

Najib Razak, Prime Minister of Malaysia, expressed confidence in Iskandar Malaysia's ability to attract investment. He stated that the region's strategic location and infrastructure development would make it a prime investment destination.

the star
 ISMAIL SAYS ISKANDAR CORRIDOR MOVING IN RIGHT DIRECTION BUT MORE WORK NEEDED

Prime Minister Ismail Sabri Pasia stated that the Iskandar Malaysia development corridor is progressing well but requires further attention to infrastructure and services to fully realize its potential.

LEGOLAND
 The excitement of LEGOLAND is back in Singapore. The theme park offers a wide range of rides, shows, and interactive experiences for visitors of all ages.

the star
 PM NAJIB: ISKANDAR MALAYSIA HAS EXCEEDED EXPECTATIONS

Prime Minister Najib Razak announced that Iskandar Malaysia has exceeded expectations in its first year of operation. He highlighted the region's economic growth and infrastructure development.

Metro
 Cycling for charity
Low carbon society
 All parties in Iskandar Malaysia have roles to play in transforming the economic growth corridor as a sustainable living place for the well-being of the society.

This is our place
 Sustainable Malaysia and smart living
 Metro is committed to providing news and information that helps build a better, greener future for Iskandar Malaysia.

NEW STRAITS TIMES
 NAJIB CONFIDENT OF ISKANDAR M'SIA'S INVESTMENT DRAWING POWER

Najib Razak, Prime Minister of Malaysia, expressed confidence in Iskandar Malaysia's ability to attract investment. He stated that the region's strategic location and infrastructure development would make it a prime investment destination.

the star
 ISMAIL SAYS ISKANDAR CORRIDOR MOVING IN RIGHT DIRECTION BUT MORE WORK NEEDED

Prime Minister Ismail Sabri Pasia stated that the Iskandar Malaysia development corridor is progressing well but requires further attention to infrastructure and services to fully realize its potential.

LEGOLAND
 The excitement of LEGOLAND is back in Singapore. The theme park offers a wide range of rides, shows, and interactive experiences for visitors of all ages.

the star
 PM NAJIB: ISKANDAR MALAYSIA HAS EXCEEDED EXPECTATIONS

Prime Minister Najib Razak announced that Iskandar Malaysia has exceeded expectations in its first year of operation. He highlighted the region's economic growth and infrastructure development.

Metro
Balanced approach
 Cooperate to transform Iskandar Malaysia for sustainable living

This is our place
 Sustainable Malaysia and smart living
 Metro is committed to providing news and information that helps build a better, greener future for Iskandar Malaysia.

NEW STRAITS TIMES
 NAJIB CONFIDENT OF ISKANDAR M'SIA'S INVESTMENT DRAWING POWER

Najib Razak, Prime Minister of Malaysia, expressed confidence in Iskandar Malaysia's ability to attract investment. He stated that the region's strategic location and infrastructure development would make it a prime investment destination.

the star
 ISMAIL SAYS ISKANDAR CORRIDOR MOVING IN RIGHT DIRECTION BUT MORE WORK NEEDED

Prime Minister Ismail Sabri Pasia stated that the Iskandar Malaysia development corridor is progressing well but requires further attention to infrastructure and services to fully realize its potential.

LEGOLAND
 The excitement of LEGOLAND is back in Singapore. The theme park offers a wide range of rides, shows, and interactive experiences for visitors of all ages.

the star
 PM NAJIB: ISKANDAR MALAYSIA HAS EXCEEDED EXPECTATIONS

Prime Minister Najib Razak announced that Iskandar Malaysia has exceeded expectations in its first year of operation. He highlighted the region's economic growth and infrastructure development.

Media Highlights 2013-2014 (LCS AND IM)

BORNEO POST online
THE LARGEST ENGLISH NEWS SITE IN BORNEO

Home - Utusan Borneo - Berita Nasional

Najib lancar buku panduan pastikan kualiti hidup lebih baik penduduk Wilayah Iskandar

Posted on November 7, 2013, 10:00am

TRUSMI: Naib (galeri) menjayakan dengan diri sendiri panduan kepada para penduduk Iskandar Malaysia mengenai langkah untuk memastikan kualiti hidup yang lebih baik dengan Program Rancangan Faktor Iskandar Malaysia sebagai pemacu pembangunan Iskandar. Naib Menteri Wilayah Persekutuan, Datuk Seri Najib Razak, hari ini...

BUSINESS TODAY **MD** The Nation's Leader **Need financing for business?**

BE SWIFTS FEATUES MONEY TODAY PROPERTY TODAY GOING 4

Iskandar Malaysia Aiming to be Low Carbon City

Mar 27th, 2014 - by admin

Iskandar Malaysia is aiming to become a low carbon city by 2025, according to a new blueprint released by the Iskandar Regional Development Authority (IRDA). The blueprint, titled 'Low Carbon Society Blueprint for Iskandar Malaysia 2025', outlines a comprehensive plan to reduce carbon emissions and improve the quality of life for residents. The plan includes measures such as promoting green buildings, increasing public transport, and encouraging the use of renewable energy. IRDA CEO, Ir. Haniffa Haniffa, said that the blueprint is a key milestone in Iskandar Malaysia's journey towards becoming a sustainable and low carbon city.

Following the rising trend and increase demand for sustainable living spaces, Iskandar Malaysia is set to implement the Low Carbon Cities Framework and Assessment System (LCCFAS), which was drawn up by the Ministry of Energy, Green Technology and Water (MESTWAM) and Malaysian Green Technology Corporation (MGTCC Malaysia).

THE STAR ONLINE all in or nothing

Home - NEWS - BUSINESS - SPORT - TECH - LIFE STYLE

Local - International - Regional - Travel - Community - Government - Opinion

Community

Chedo Force EXECUTIVE AIDE-DE-CAMP

President: Sunday, March 10, 2014 07:11 (GMT+8)
Created: Sunday, March 10, 2014 07:11 (GMT+8)

Johor to reduce power consumption in support of low carbon society

By: SAKINA HUDA

JOHOR BAHRU: Johor State Government has pledged to reduce power consumption at all state government buildings here at least by 5% to show its support and commitment to the low carbon society.

theSundaily

Local - World - Malaysia - Sports - Lifestyle - Regional - Business - Entertainment

Low Carbon Cities (Part 2) - Iskandar's unique blueprint

Published on 12 Mar 2014 - 10:00am

IRDA CEO, Ir. Haniffa Haniffa, said that the blueprint is a key milestone in Iskandar Malaysia's journey towards becoming a sustainable and low carbon city.

IRDA CEO, Ir. Haniffa Haniffa, said that the blueprint is a key milestone in Iskandar Malaysia's journey towards becoming a sustainable and low carbon city.

京都大学

Home - News - Research - Events - Contact - About - Links

AIC approves "Low Carbon Society Blueprint for Iskandar Malaysia 2025"

Formulated by international research team including Kyoto University (28 March, 2014)

The "Low Carbon Society Blueprint for Iskandar Malaysia 2025," an action plan for the realisation of a low carbon society formulated by an international team of researchers from Kyoto University, Jikei University, and other institutions was formally approved on March 28, 2014. This blueprint was drafted by the Approval and Implementation Committee (AIC). This is the first example of a practical formulation of a low carbon blueprint at the regional level (equivalent to a smart prefecture level) in an ASEAN country, and is expected to become a model for creating low carbon cities in Asian nations.

NEW STRAITS TIMES

Home - Nation - Streets - World - Business Times - Sports

EDITORIAL

Online MBA by UK & US BUSINESS SCHOOL

'Services, logistics investments rising'

BULLISH MOOD: Iskandar has been enjoying 7pc-8pc annual growth, says Irda head

INCREASED AFFORD HANIFFA

Irda CEO, Ir. Haniffa Haniffa, said that the blueprint is a key milestone in Iskandar Malaysia's journey towards becoming a sustainable and low carbon city.

KBU Enrol now for July intake 03-7727 3200

GO GREEN! Residents of Sungai Buloh Recreational Park plant tree saplings to reduce the carbon footprint.

PRINCE QUAH: In an effort to reduce the carbon footprint in Iskandar Malaysia, the residents of Sungai Buloh Recreational Park...

Iskandar Malaysia akan lancar sistem pengurusan mobiliti

KUALA LUMPUR: Pihak Berkuasa Wilayah Persekutuan Iskandar dan pemegang saham telah menandatangani perjanjian kerjasama untuk memperkenalkan sistem pengurusan mobiliti di Iskandar Malaysia pada akhir pembangunan. Pihak Berkuasa Wilayah Persekutuan Iskandar dan pemegang saham telah menandatangani perjanjian kerjasama untuk memperkenalkan sistem pengurusan mobiliti di Iskandar Malaysia pada akhir pembangunan. Pihak Berkuasa Wilayah Persekutuan Iskandar dan pemegang saham telah menandatangani perjanjian kerjasama untuk memperkenalkan sistem pengurusan mobiliti di Iskandar Malaysia pada akhir pembangunan.

新系统优化城市交通 依区明年管制车流量

依区明年管制车流量

依区明年管制车流量

依区明年管制车流量

Practices of Iskandar Economic Zone, Malaysia

Low Carbon Society Blueprint for Iskandar, Malaysia

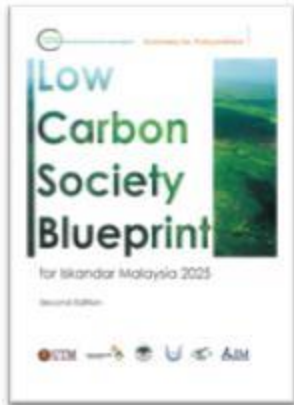
Low Carbon Society Blueprint for Iskandar Malaysia (LCCFAS)

LCCFAS operational with the optimal use of the "3R" concept

Low Carbon Society Blueprint for Iskandar Malaysia (LCCFAS)

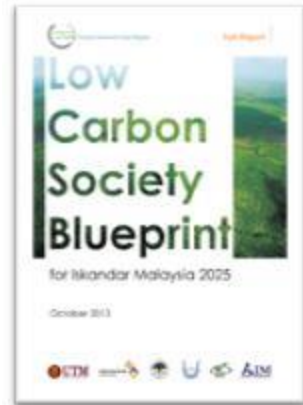
LCCFAS operational with the optimal use of the "3R" concept

Low Carbon Society for Iskandar Malaysia Publications



Low Carbon Society Blueprint for Iskandar Malaysia 2025- Summary for Policymakers

<http://irdep.irda.com.my/cms/download/documentSharing/18230>



Low Carbon Society Blueprint for Iskandar Malaysia 2025- Full Report

<http://irdep.irda.com.my/cms/download/documentSharing/26570>



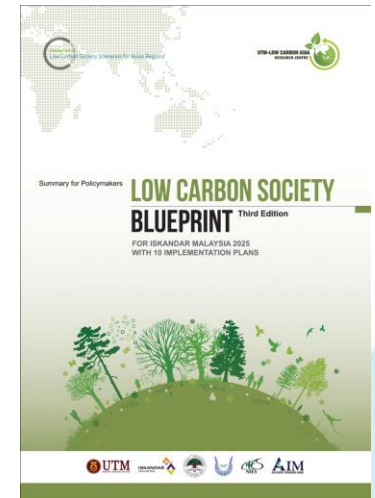
A Roadmap towards Low Carbon Iskandar Malaysia 2025

<http://irdep.irda.com.my/cms/download/documentSharing/26563>



Iskandar Malaysia: Action for a Low Carbon Future

<http://irdep.irda.com.my/cms/download/documentSharing/26571>



Low Carbon Society Blueprint and 10 Implementation Plans

<http://irdep.irda.com.my/cms/download/documentSharing/26564>

Concluding Remarks

KSF

- S2A – Modeling/ Baseline study
- Multidisciplinary work – Planners/ Engineers/ Environmentalist
- FGD – Stakeholders
- Media/ Marketing
- Network - LoCARNet

New updates

- RCE status
- SE4 all
- Detail Plan for 5 Local authorities- Implementation projects

UTM-LOW CARBON ASIA
RESEARCH CENTRE





Thank you for your attention!
ho@utm.my

Thank You Terima Kasih 谢谢 धन्यवाद ありがとう

