

# From Low Carbon to Full Decarbonisation? A non-linear Learning Curve for Iskandar Malaysia

JAPAN PAVILION SIDE EVENT

Triggering Non-linear Transformation for Full Decarbonisation

15 November 2016, 1515-1630

Japan Pavilion, COP22/CMP12, Marrakech, Morocco

Loon Wai Chau

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*Department of Urban and Regional Planning*

*Faculty of Built Environment*

*Universiti Teknologi Malaysia*





# Malaysia

*Land Area: 332,000 km<sup>2</sup>*

*Population: 28.28 million (2010)*

*GDP: 247.5 billion USD (2010)*

45%

Reduction in GHG  
Emissions Intensity of  
GDP by 2030

# Iskandar Malaysia LCS 2025 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)

**ISKANDAR MALAYSIA**



# Iskandar Malaysia LCS 2025 Background



<http://iskandarmalaysia.com.my/wp-content/uploads/2015/12/Education-pdf-pg81.jpg>

Table 1: Projected main socio-economic variables

	2005	2025	2025 /2005
<b>Population (1000)</b>	1,353	3,000	2.22
<b>Household (1000)</b>	303	706	2.33
<b>GDP (Bill. RM)</b>	35.7	141.4	3.96
<b>Gross output (Bill. RM)</b>	121.4	438.9	3.61
<b>Primary industry</b>	1.5	2.4	1.59
<b>Secondary industry</b>	86.2	274.0	3.18
<b>Tertiary industry</b>	33.7	162.5	4.82
<b>Passenger transport demand (Mill. passenger-km)</b>	9,565	59,524	6.22
<b>Freight transport demand (Mill. ton-km)</b>	8,269	26,054	3.15



S2A

W e b e l i e v e i n

Science

to Action

i n m a k i n g

Low Carbon Society

a R e a l i t y

The logo consists of a dark green semi-circle on the left side of a white background. Inside the semi-circle, the letters 'S2A' are written in a large, white, sans-serif font.

S2A

## Our Principles

- Society at the core
- Decoupling,  
decarbonising +  
co-benefits
- Holistic: techno-fixes +  
people-centric,  
socially-rooted  
programs +  
environmental  
countermeasures

# Iskandar Malaysia LCS Blueprint 2025



**Research Team:** Universiti Teknologi Malaysia (UTM), Kyoto University (KU), Okayama University (OU), National Institute for Environmental Studies (NIES)

**Joint Coordinating Committee:** Iskandar Regional Development Authority (IRDA), Federal Department of Town and Country Planning (JPBD), Malaysia Green Technology Corporation (MGTC)

**Sponsorship:** Japan International Cooperation Agency (JICA) , Japan Science and Technology (JST)

**Period:** 2011 - 2016

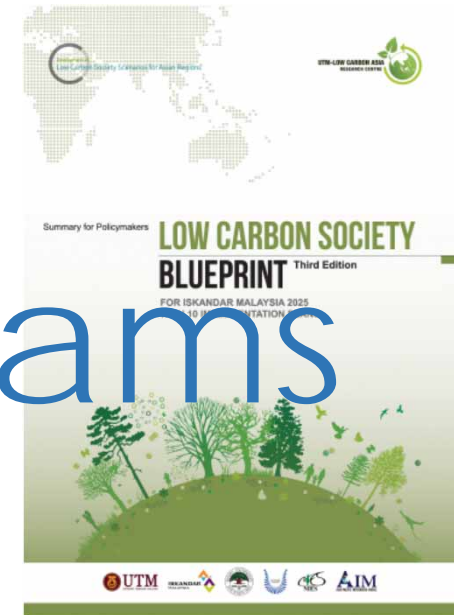
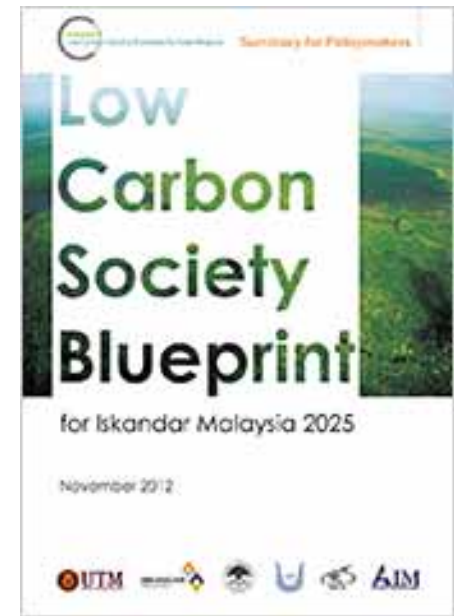
**Research Output:**

- i. **Methodology** to create LCS scenarios which is appropriate for Malaysia is developed.
- ii. **LCS scenarios** are created and utilized **for policy development** in IM.
- iii. **Co-benefit of LCS policies** on air pollution and on recycling-based society is quantified in IM
- iv. **Organizational arrangement of UTM** to conduct trainings on LCS scenarios for Malaysia and Asian countries is consolidated, and a network for LCS in Asia is established

# Iskandar Malaysia LCS Blueprint 2025

12 Actions

281 Programs







# Iskandar Malaysia

2,216 km<sup>2</sup>

1.64 million people (2010)

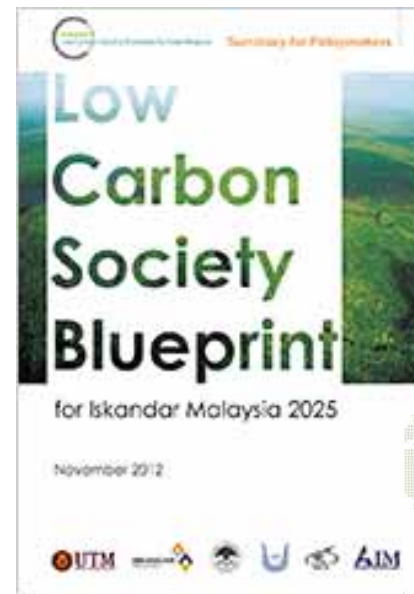
3 million people (2025)

58%

Reduction in GHG  
Emissions Intensity of  
GDP by 2025

## Iskandar Malaysia

main southern development  
corridor in Johor, Malaysia



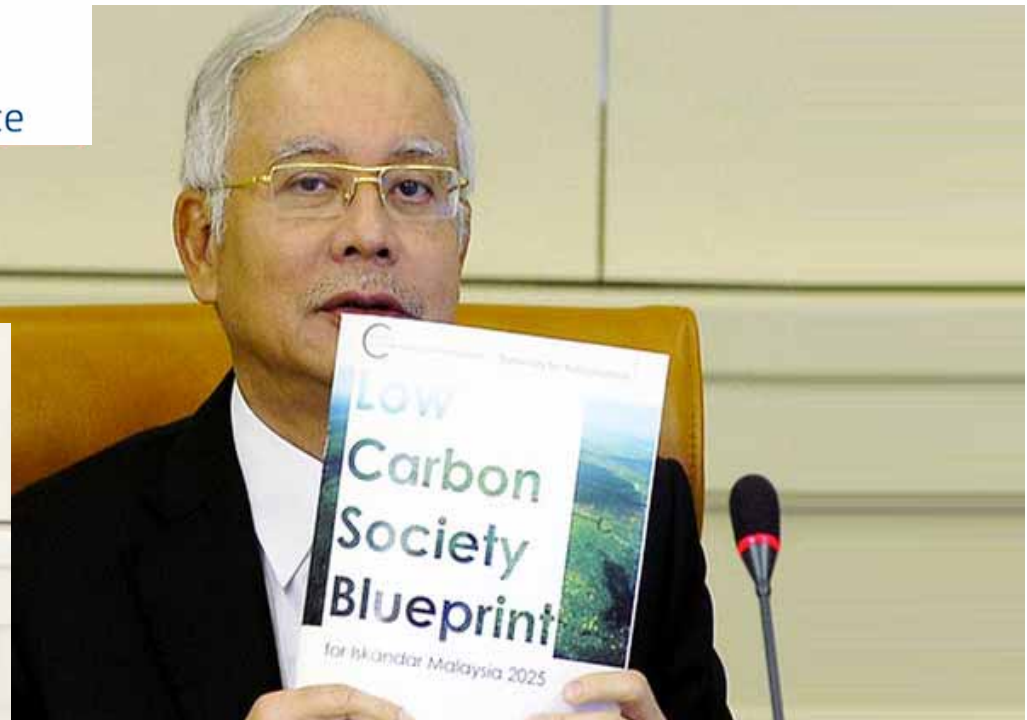
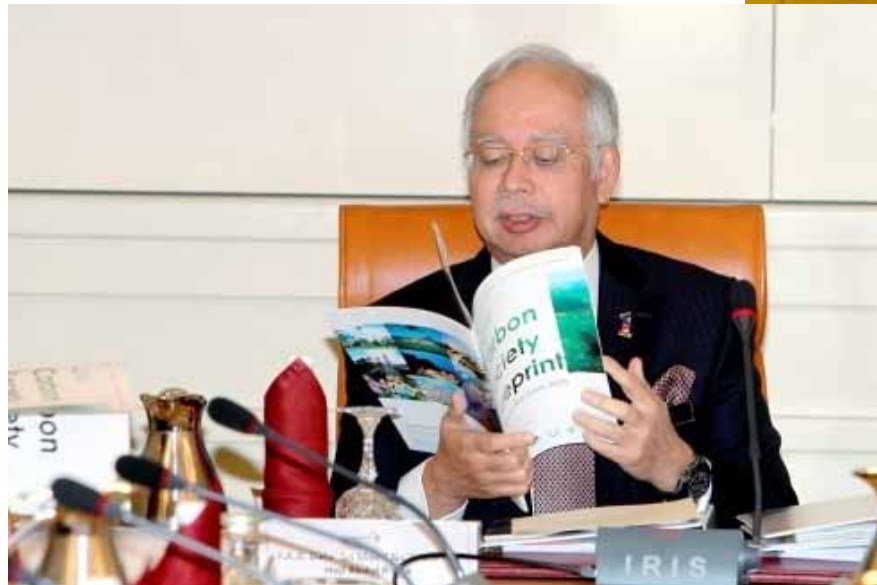
# Iskandar Malaysia LCS Blueprint 2025



**DOHA 2012**  
UN CLIMATE CHANGE CONFERENCE  
COP18|CMP8

Officially launched @ COP 18,  
Doha, Qatar on 30 Nov. 2012

**United Nations** Climate Change Conference



Launching officially endorsed by  
the R.H. Prime Minister of Malaysia  
on 11 Dec. 2012

# Iskandar Malaysia *(5 Local Authorities)*



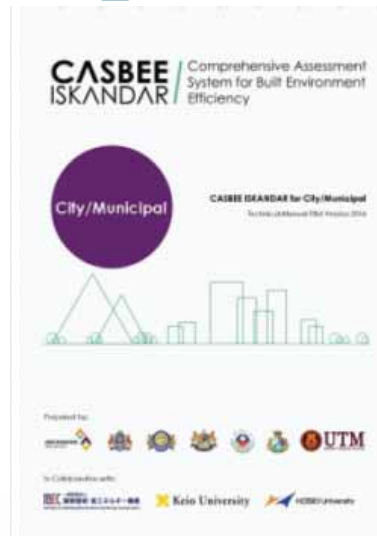
# Iskandar Malaysia

main southern development  
corridor in Johor, Malaysia



# Iskandar Malaysia

main southern development corridor in Johor, Malaysia



Prepared by:



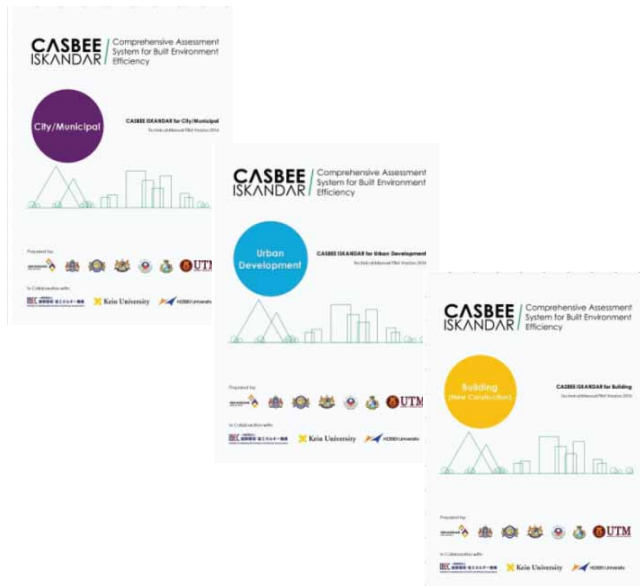
In Collaboration with:





# Iskandar Malaysia

main southern development corridor in Johor, Malaysia



## Supporting Documents

1. Site Plan
2. Floor Plans
3. CD with Photos to Support Application
4. Energy Bill
5. Water Bill
6. Green Building Rating System Results (LEED, GBI, CASBEE etc)

The GAIA application form is available for download at Iskandar Malaysia's official website starting 15 May 2016. All applications must be submitted:

**via e-mail to:**  
shahrinaz@irda.com.my

**or mailed to:**  
IRDA  
G-01, Block B, Danga Bay, Jalan Skudal,  
80200, Johor Bahru, Johor, Malaysia

**Closing date for submissions:**  
All applications must reach IRDA  
by 5 pm, 5th July 2016

**Language:**  
All entries should be in Malay or English.

**Judging:**  
Assessment of eligible submissions will be made by an independent panel of professionals in the green building and construction industry. The Organiser's decision is final and no correspondence or communication will be considered following its final decision. The results and grading details are confidential and will not be shared.

**www.iskandarmalaysia.com.my**

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**Green Accord Initiative Award 2016**

**GAIA**  
GREEN ACCORD INITIATIVE AWARD

**Supporting Documents**

In addition to the required documentation above, applicants must also provide information about building efficiency indicators that cover the following green building criteria:

- Energy Conservation and Efficiency
- Water Conservation and Efficiency
- Materials / Reduce, Reuse, Recycle
- Biodiversity / Land Use
- Indoor Environmental Quality (IEQ)
- Renewable Energy / Green Energy Alternatives
- Liveability and Resilience

# Beyond IM LCS 2025? – Scaling the Non-linear Learning Curve towards Full Decarbonisation

- ❑ Iskandar Malaysia adopts *progressive decarbonisation* of the region's economic growth and development up to 2025
- ❑ Iskandar Malaysia will continue to play a crucial role towards *full decarbonisation beyond 2025*
- ❑ *Adequate technological and financial support with strong high-level and local political will* are indispensable
- ❑ "Science to Action" (S2A) is the way forward (ensuring good, *scientifically grounded and community-rooted LCS policies* are materially acted upon, yielding real cuts in GHG emissions with simultaneous *socioeconomic co-benefits* for the people)
- ❑ *Simultaneous top-down and bottom-up actions* with better integration and coordination are essential
- ❑ A non-linear transformation towards full decarbonisation will be a *non-linear learning curve* (becoming ever steeper) for Iskandar Malaysia
- ❑ UTM-Low Carbon Asia Research Centre is committed to learning, supporting and contributing to national and global LCS initiatives

# Please contact us

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**UTM-LOW CARBON ASIA**  
**RESEARCH CENTRE**

