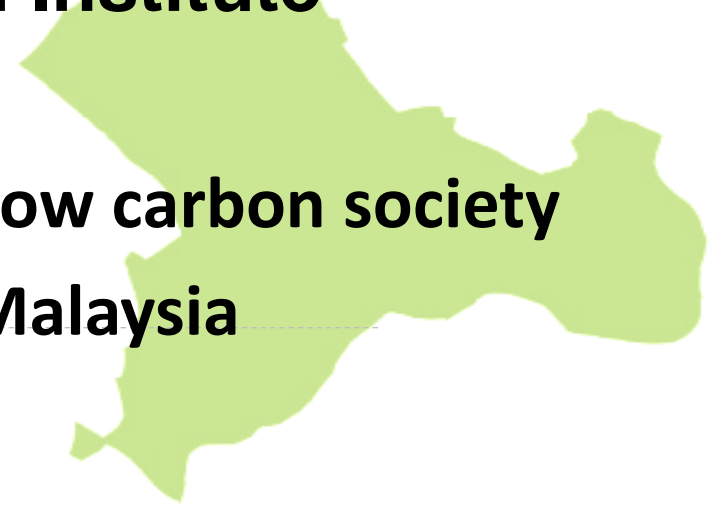


# URBAN , CLIMATE CHANGE and FINANCE hosted by JICA research Institute

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



**SATREPS**

Science and Technology Research Partnership  
for Sustainable Development Program

**Ho Chin Siong (UTM)**

**Faculty of Built environment/ UTM Low Carbon Asia Centre**



**Project for Development of Low Carbon Society Scenarios for Asian Regions**

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# Content- Structure of Presentation

## Background

- **Background – issues and challenges**
- **Urban problem and low carbon solution policy in Asia**

## LCS actions

- **Low Carbon Society Blueprint for Iskandar Malaysia**
- **Solution- 12 actions**
- **Future Actions - FELDA ( Rural) and Local Planning authorities**

## Challenges And Solution

- **Key Lessons learned from planning and development towards Low carbon and resilient city**
- **Future study for better use of climate finance**

# 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**

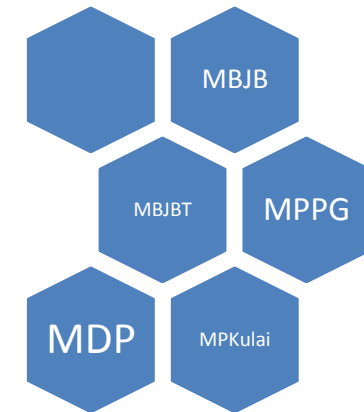
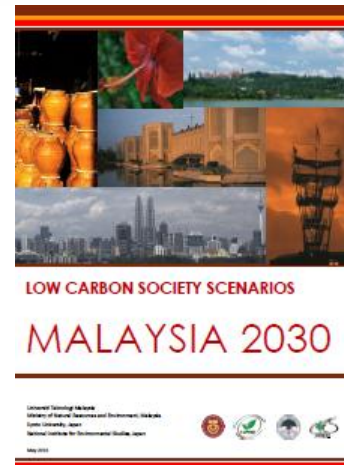
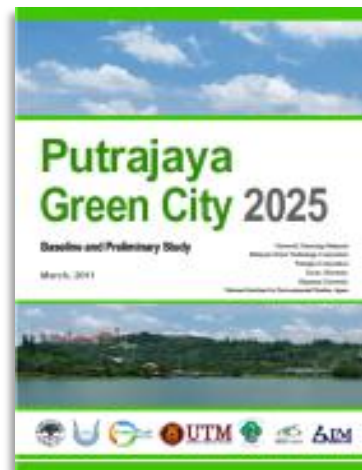
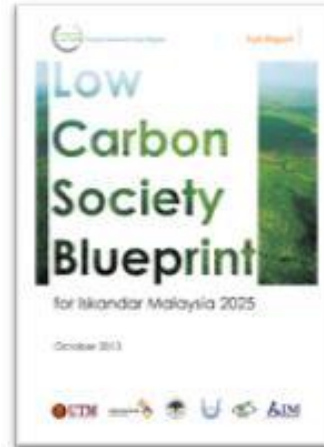


**Low efficiency appliances and low usage  
of renewable energy.**

# 3 Establishing Low Carbon Society Scenario in Malaysia

## - Regional Cooperation with Japan – NIES and IGES

City and Region



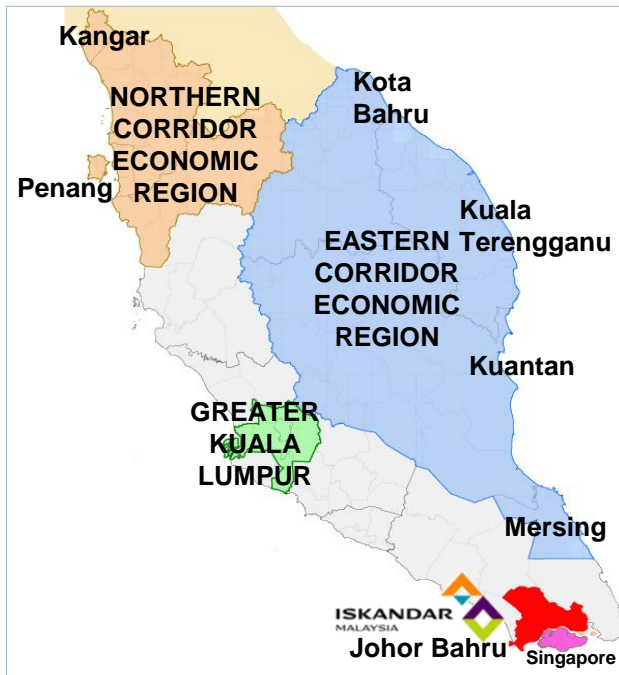
(Source: National Institute of Environment Studies, Japan)

## The Case of Iskandar Malaysia

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

Iskandar Malaysia 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**

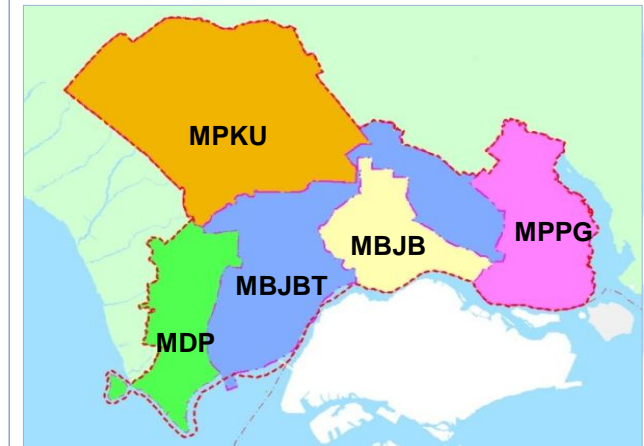
*Iskandar Malaysia*



**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



C



D

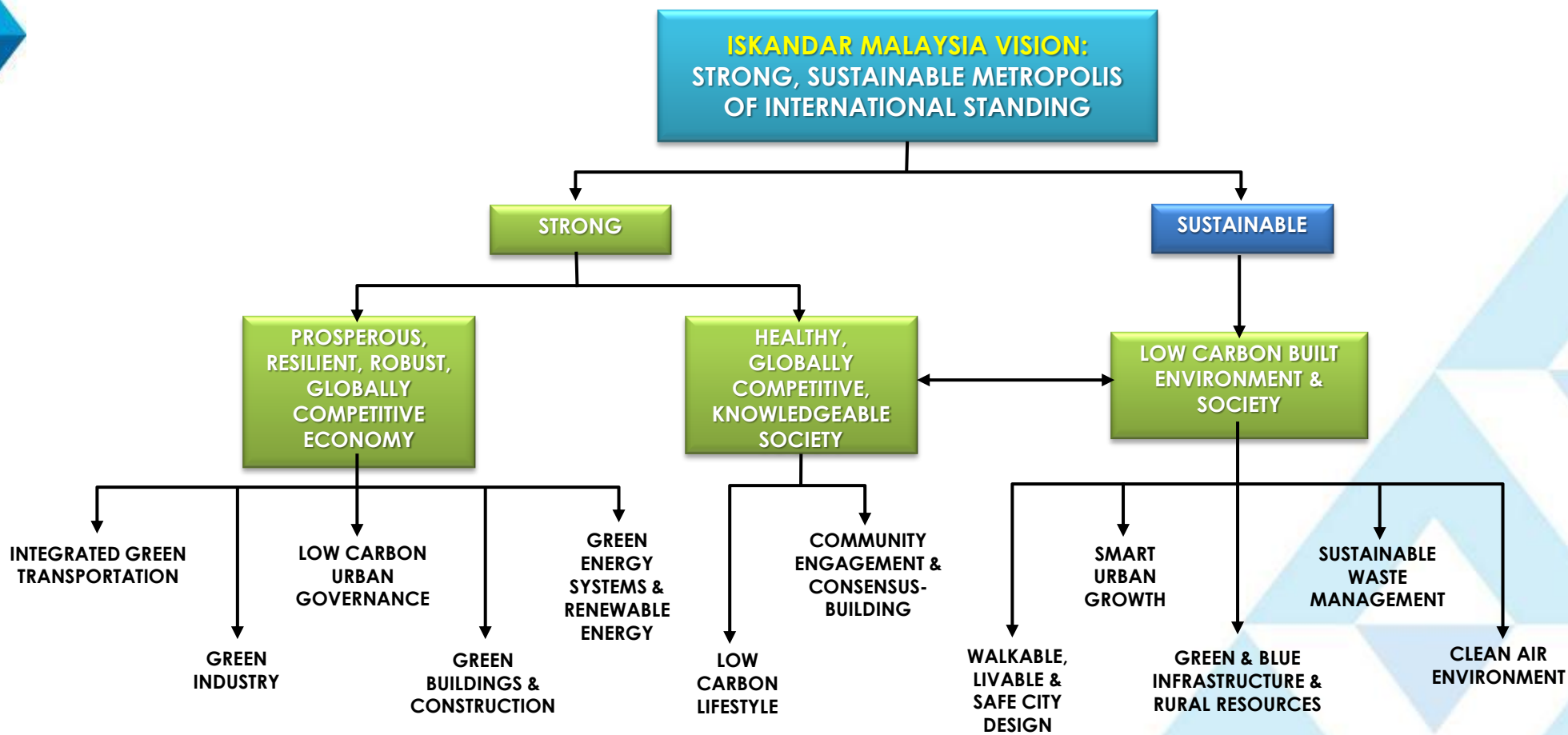




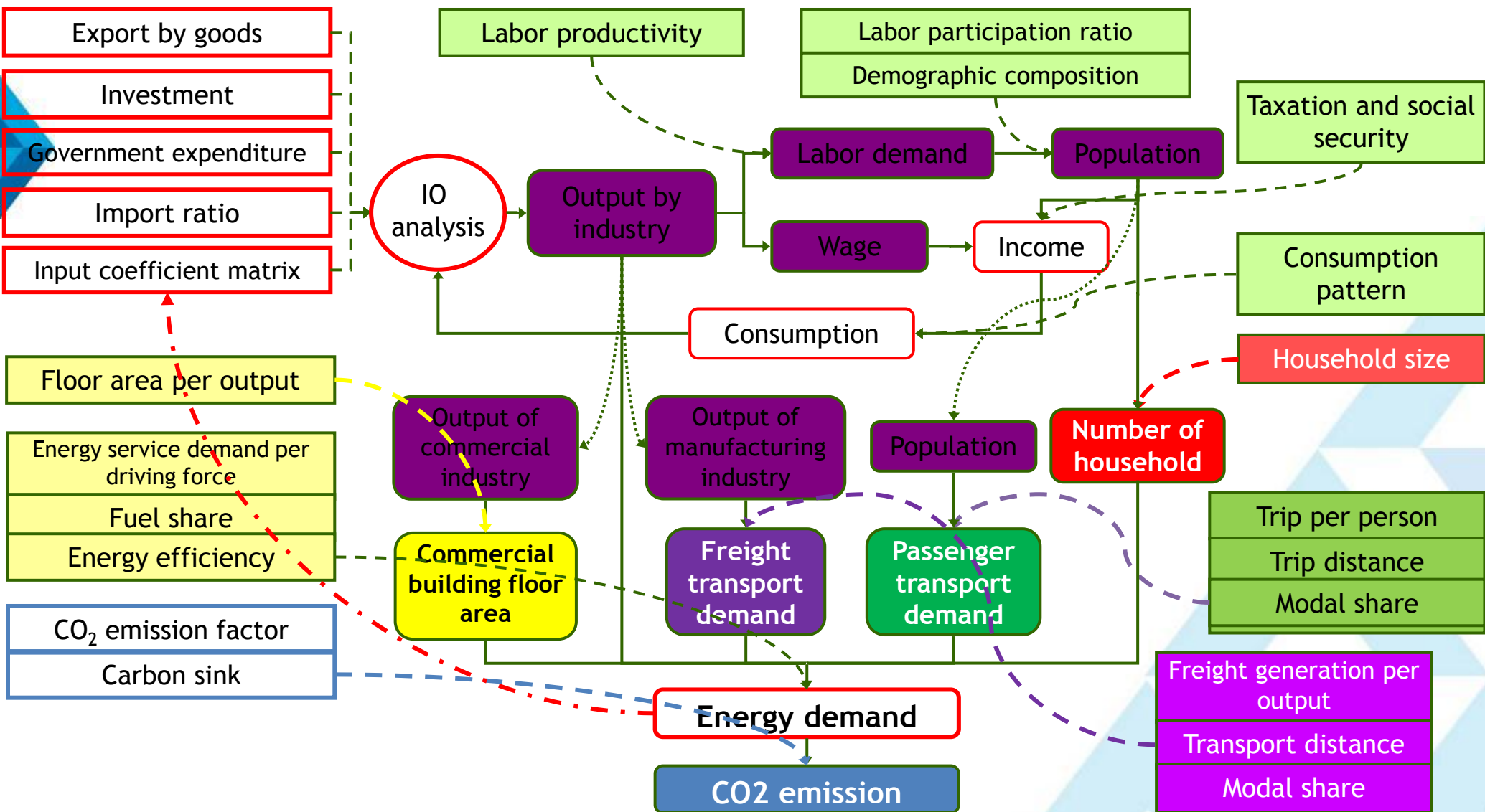


## Green-focused Agenda - Rationale

# Aligning the Vision with Low Carbon Society Development



# LCS scenario study using ExSS



# Projected Greenhouse Gas Emission Reduction in Iskandar Malaysia

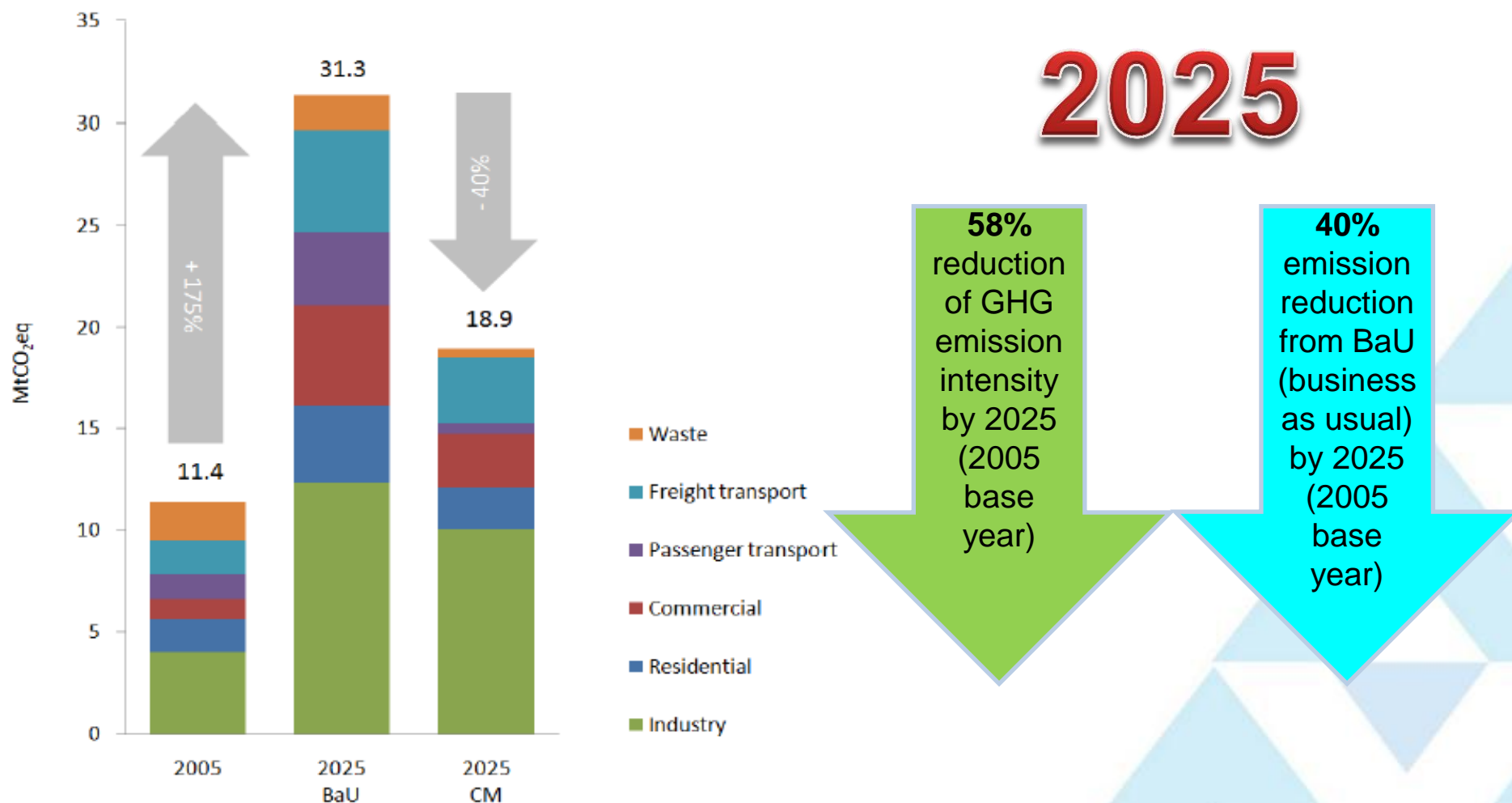
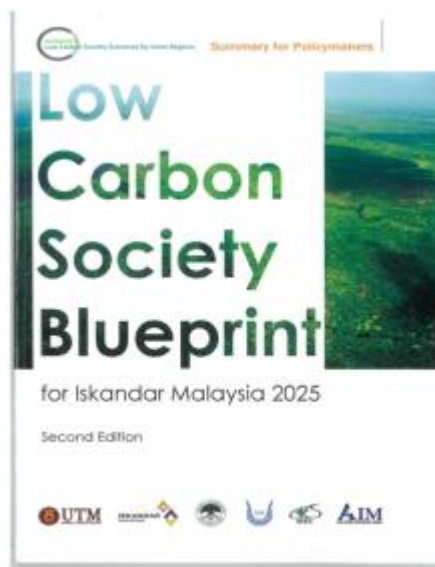


Figure 1: GHG emissions by sectors

# 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

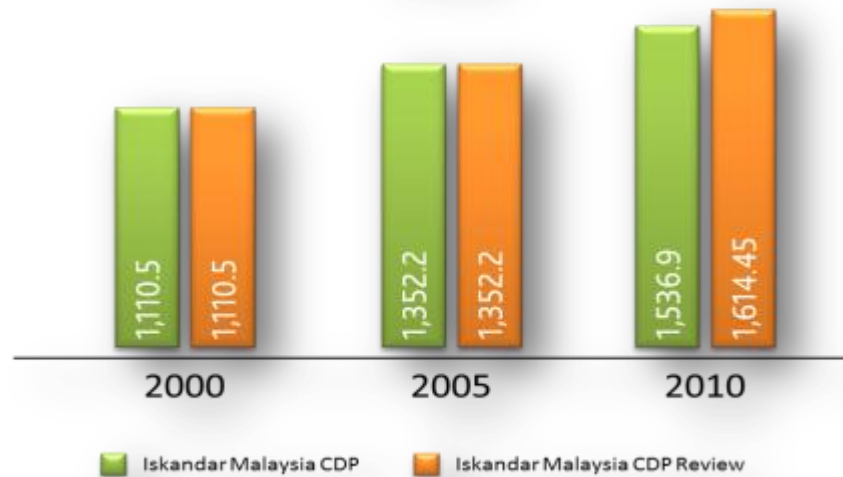


- The Booklet 'Actions for a Low Carbon Future' – list of 10 programmes which IRDA has started implementing or have been completed.
- On 6th November 2013, the Iskandar Malaysia: Actions for A Low Carbon Future is the implementation booklet which outlines the 10 programmes, was launched by Malaysia Prime 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	<b>Integrated Green Transportation – Mobility Management System</b>	<b>Kamisah Mohd Ghazali</b>
2	<b>Green Economy Guidelines</b>	<b>Ivy Wong Ling Ling</b>
3	<b>Eco-Life Challenge Project for Schools</b>	<b>Isma Ezwan Safri</b>
4	<b>Portal on Green Technology</b>	<b>Choo Hui Hong</b>
5	<b>Trees for Urban Parks/Forests</b>	<b>Boyd Dionysius Joeman</b>
6	<b>Responsible Tourism and Biodiversity Conservation</b>	<b>Boyd Dionysius Joeman</b>
7	<b>Bukit Batu Eco-Community</b>	<b>Hamdi Mohd Yusof</b>
8	<b>GAIA – Green Accord Initiative Award</b>	<b>Ivy Wong Ling Ling</b>
9	<b>Low Carbon Village FELDA Taib Andak</b>	<b>Dr Ibrahim Ngah (UTM)</b>
10	<b>Special Feature: Smart City – Nafas Baru Pasir Gudang: CLEAN AND HEALTHY CITY</b>	<b>Sakurah Jamaluddin , Sharifah Shahidah Syed Ahmad, Muhammad Fadly Muhammad Nor, Choo Hui Hong</b>

# Quick update :Eco life Challenge Programmes

Iskandar Malaysia Population Growth 2000-2010  
( '000)



**198** primary schools,  
Phase 1 - **23** schools

**2014**, additional **80** schools  
involved in ELC programme.



The Iskandar Malaysia Eco-Life Challenge Project focuses on energy household accounting. School children track the energy consumption, waste generation and management, travelling choices, frugal consumption and utilizing renewable energy resources (sunlight). The aim is to raise children's awareness level on low carbon aspects.

# Quick update :Eco life Challenge Programmes



Training for 23 schools teachers



The winners of the Eco-Life Challenge Project for Schools in IM 2013: SJK (C) Chee Tong won a trip to visit Kyoto City, Japan.

## Activities in Kyoto City





# Media 2014 (LCS AND IM)

AIC approves "Low Carbon Society Blueprint for Iskandar Malaysia 2025" formulated by international research team including Kyoto University (20 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, Universiti Teknologi Malaysia, and other institutions was formally approved on March 20, 2014. Draft approval was granted 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, apart from federal level) in an ASEAN country, and it is expected to become a model for creating low carbon cities in Asian nations.

## BORNEO POST online

THE LARGEST ENGLISH NEWS SITE IN BORNEO

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



ISKANDAR: Naib (gambar) menyerahkan kepada ahli agensi pembangunan tempatan pada peringkat ke Iskandar Wilayah melalui seroni pada malam pelancaran aplikasi itu serta pelaksanaan Program Rancangan Sektor Iskandar Malaysia sebagai manifestasi komitmen Kerajaan Persekutuan untuk membangunkan Wilayah Iskandar sebagai kawasan pembangunan moden yang mampan dan berkeadilan.

### Iskandar Malaysia Aiming to be 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 (M3/TERA) and Malaysian Green Technology Corporation (M3/TECH). The LCCFAS will be used to assess and guide the development of Iskandar Malaysia towards a low carbon society.

## THE STAR ONLINE

all in or nothing

### Community

Executive Aide-De-Camp

### Johor to reduce power consumption in support of low carbon society



NUSAJARA: Johor is making a pledge 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

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

ISKANDAR: 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, Universiti Teknologi Malaysia, and other institutions was formally approved on March 20, 2014. Draft approval was granted 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, apart from federal level) in an ASEAN country, and it is expected to become a model for creating low carbon cities in Asian nations.

## NEW STRAITS TIMES

### 'Services, logistics investments rising'

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

Investments in Iskandar Malaysia from January to June this year.

Muzamil, ISMMAS is a system that uses technology to provide a sustainable transportation system and manages the demand of car use by changing the traveller's attitude and behaviour towards public transportation.

It aims to coordinate infrastructure, services and activities to optimize the effectiveness of urban transportation.

"The system can show real-time traffic conditions and then stage and give recommendations to help commuters make an informed decision on which mode of travelling would be most efficient," Irda said.

ISMMAS is part of 10 priority programmes identified in the low carbon blueprint for a greener Iskandar Malaysia.

Irda is also in the midst of introducing a green economy guideline, which will look into procurement, operations and supply chain management to reduce carbon footprint.

### 1,000 trees planted in Iskandar

GO GREEN: Residents of Sungai Buloh Recreational Park plant tree saplings 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 akan memperkenalkan sistem pengurusan mobiliti di Iskandar Malaysia pada tahun 2015, pada tahun bersejarah tersebut. Pihak Berkuasa Wilayah Persekutuan Iskandar akan memperkenalkan sistem pengurusan mobiliti di Iskandar Malaysia pada tahun 2015, pada tahun bersejarah tersebut. Pihak Berkuasa Wilayah Persekutuan Iskandar akan memperkenalkan sistem pengurusan mobiliti di Iskandar Malaysia pada tahun 2015, pada tahun bersejarah tersebut.



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### Practices of Iskandar Economic Zone, Malaysia

Low Carbon Society Blueprint for Iskandar Malaysia (LCSBM)

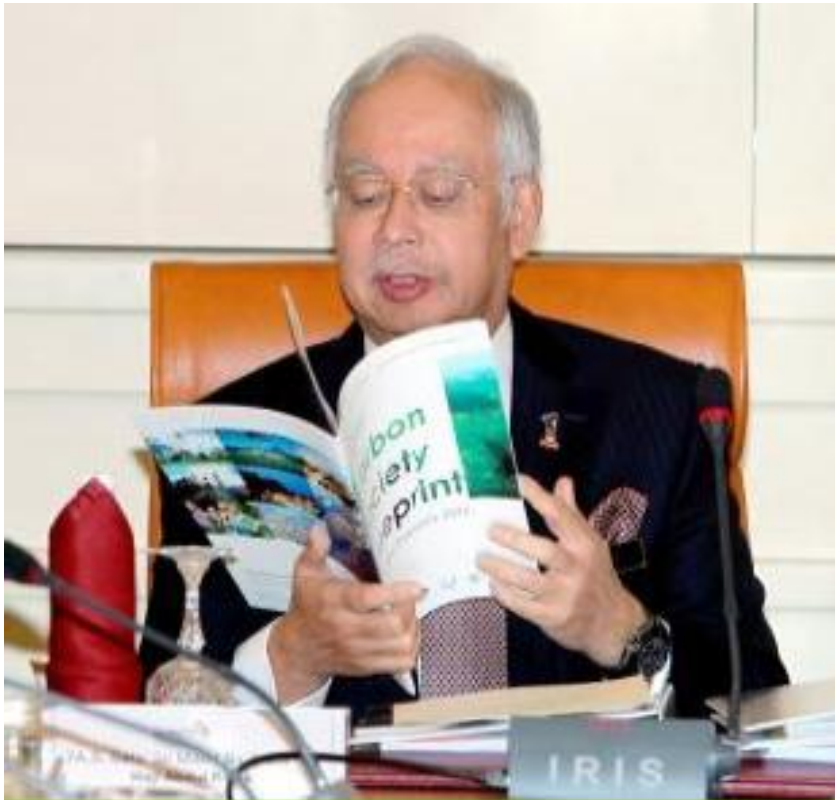
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# Launching of the LCSBPIM - COP18 Doha, 2012

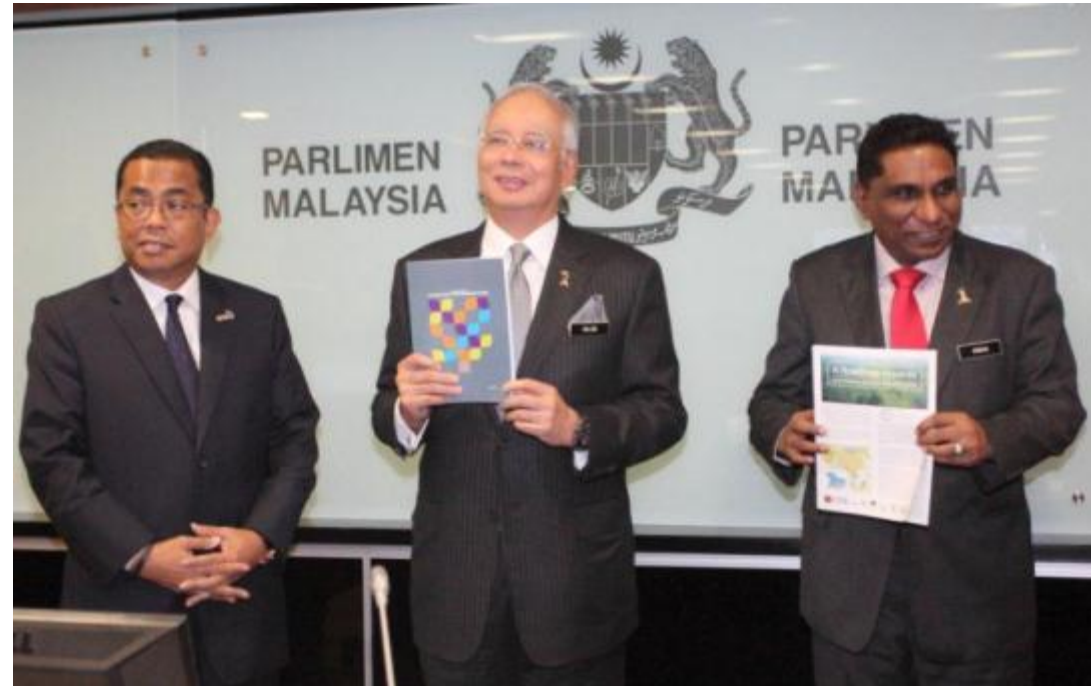
## Launching of the LCS Road Map/ Action Plan COP19 Warsaw, 2013



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



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



6<sup>th</sup> November 2013  
The PM launched Actions for a  
Low Carbon Future during MoA

# Key Success Factors (KSF) of green cities in Malaysia

## National Policy and Co benefit

### National Policy

- **National Agenda** 40% CO<sub>2</sub> 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**

## a) DEVELOPMENT APPROACH

In a rapid urbanization of developing countries, **Sustainable economic corridor development/ conurbation planning** ( consists of several local authorities) is a important component to facilitate green environment, green economy and green community. **CONURBATION SCALE + MULTI DISCIPLINARY**

## b) METHODOLOGY

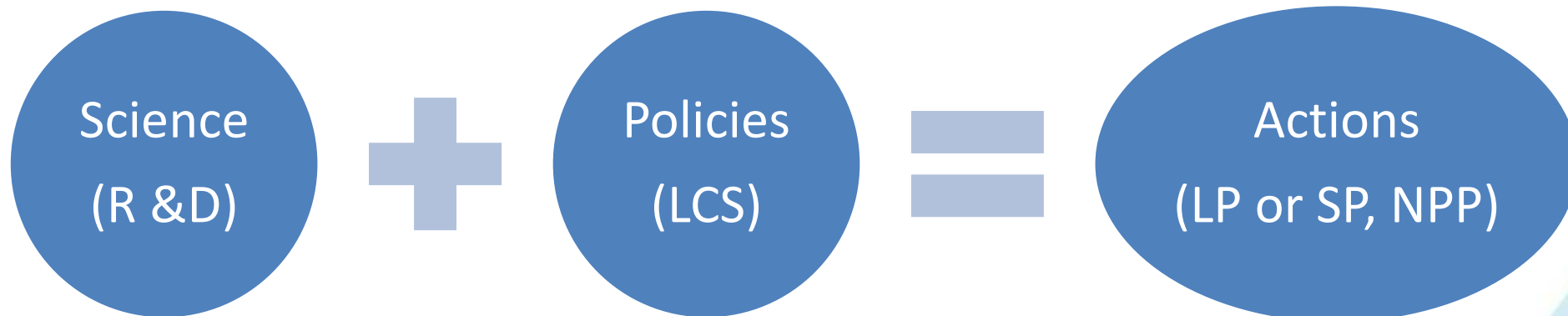
Good **baseline quantitative study, consensus building and low carbon blueprint plan** will help to develop an **integrated climate resilient , Low carbon framework** for a city by providing **objective** decision.

-Looking beyond policy – **SCIENCE-KNOWLEDGE-POLICY- IMPLEMENTATION (completing PDCA cycle) \*\* 5 LPA and School eco life project**

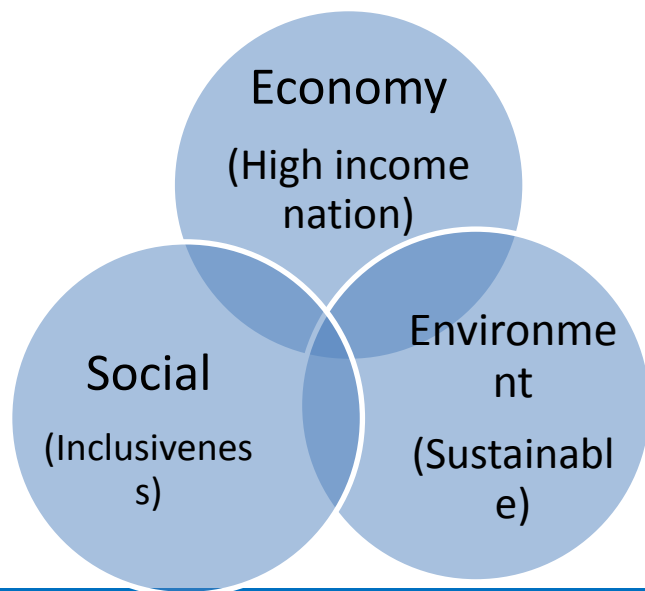
## c) DISEMMINATION and NETWORK

The **researchers/scientists** have to work with **local implementation agencies** and **international collaboration** for **capacity building opportunities**.  
**( KNOWLEDGE SHARING and COE development)**

# KSF- Low carbon sustainable development approach



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



# Challenges and Opportunities for municipalities and financial institution

- Government- Green Technology fund / loan
- Joint Credit Mechanism (JCM)
- Public Private partnership PPP
- Municipal bonds



*Thank you for your attention!*  
ho@utm.my

Thank You Terima Kasih 谢谢 धन्यवाद ありがとう

