

**LOW CARBON SOCIETY RESEARCH  
NETWORK 4<sup>TH</sup> MEETING  
17-18 September 2012  
Venue: St. Anne's College, Oxford, UK**

# Regional co-operation to realise Low carbon development in Malaysia

17-18 Sept 2012

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# Structure of Discussion

- 1 Introduction
- 2 Sustainable Development in Malaysia
- 3 Regional cooperation in LC development
- 4 Case Study: Sustainable Iskandar Malaysia 2025
- 5 Conclusion

# Malaysia

Key economic data: selected developing economies in Asia (2011)

Country	Real GDP (% growth)	GDP per capita (USD)	Growth in consumer prices	Current account balance (USD billion)
China	9.5	5,184	5.5	360.5
Hong Kong SAR	6.0	34,393	5.5	13.4
India	7.8	1,527	10.6	-40.3
Rep. of Korea	3.9	23,749	4.5	17.0
Taiwan	5.2	21,592	1.8	55.4
Singapore	5 – 6.0	50,714	3.7	52,786 (USDmil)
Malaysia	5 – 5.5	9,892	3 – 3.5	29,762 (USDmil)

Source: Treasury Malaysia



# MALAYSIA

330,803 km<sup>2</sup>

Pop.28.3m (2010)

1.3% p.a

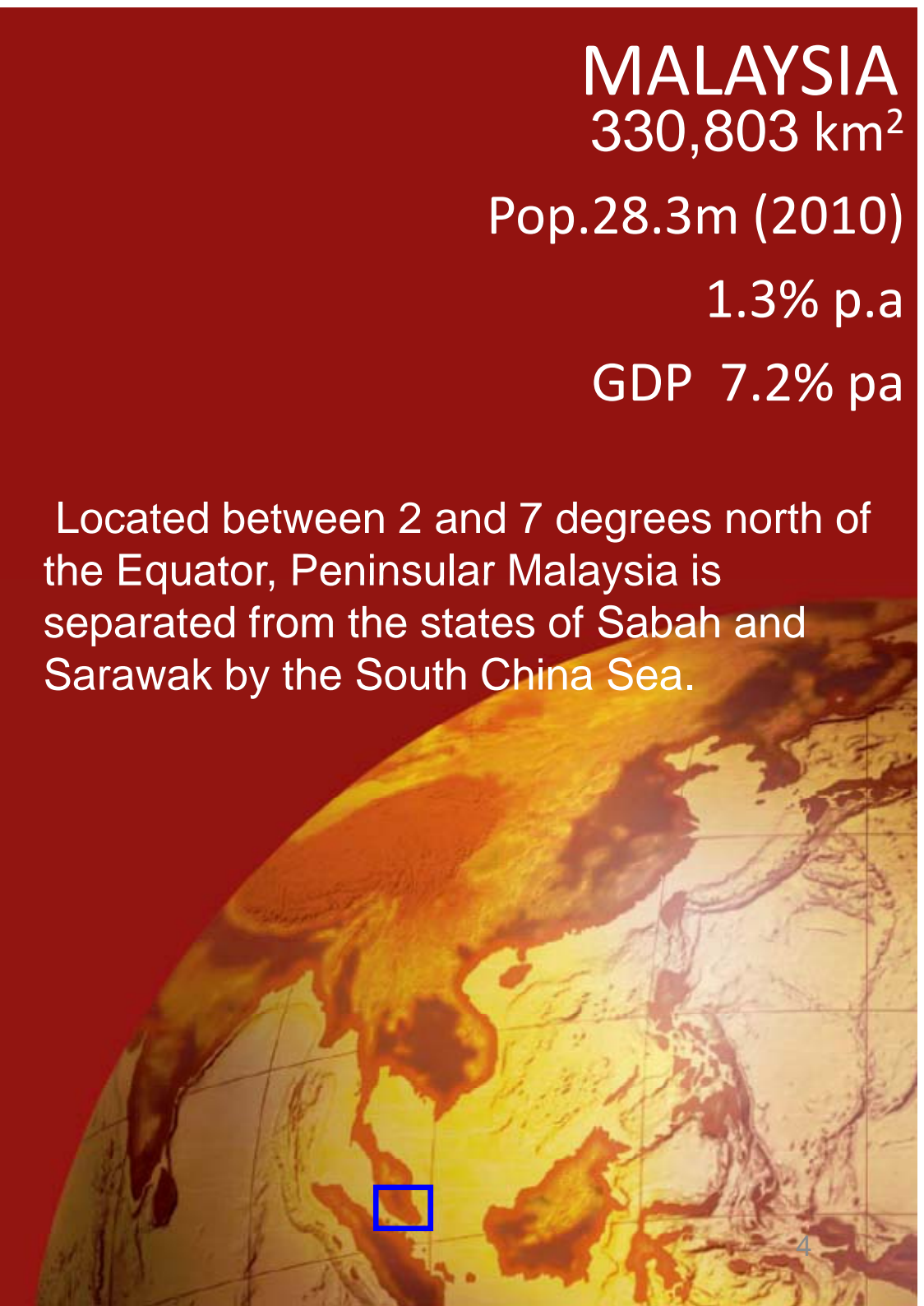
GDP 7.2% pa

Located between 2 and 7 degrees north of the Equator, Peninsular Malaysia is separated from the states of Sabah and Sarawak by the South China Sea.

## Iskandar Malaysia, Johor

2,217 km<sup>2</sup>

Pop.1.3m (2010)



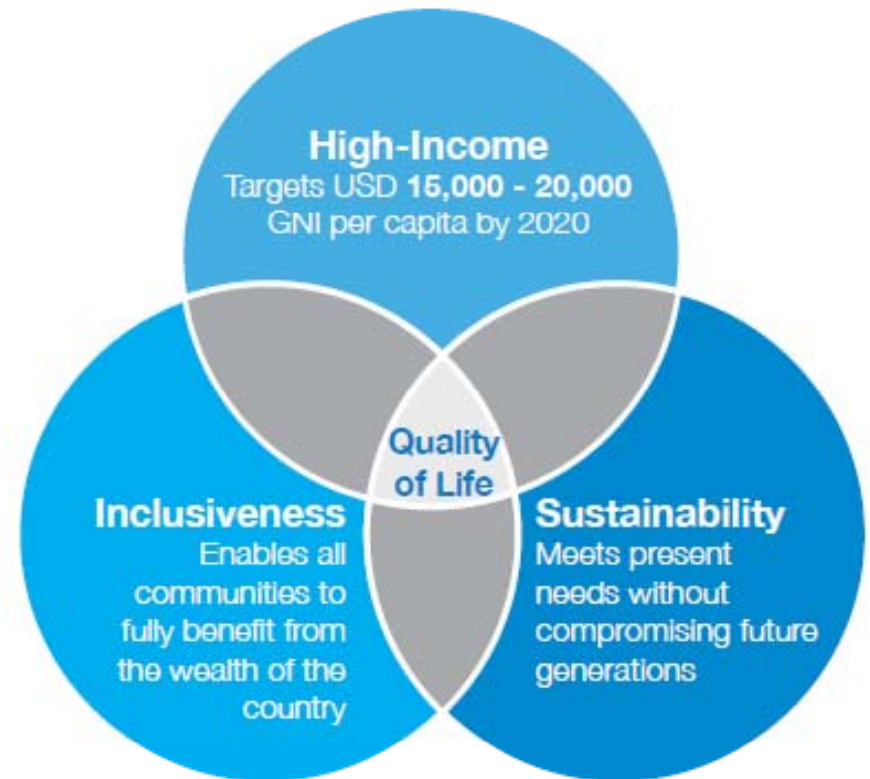
# Malaysia: Towards developed nation status

## 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.

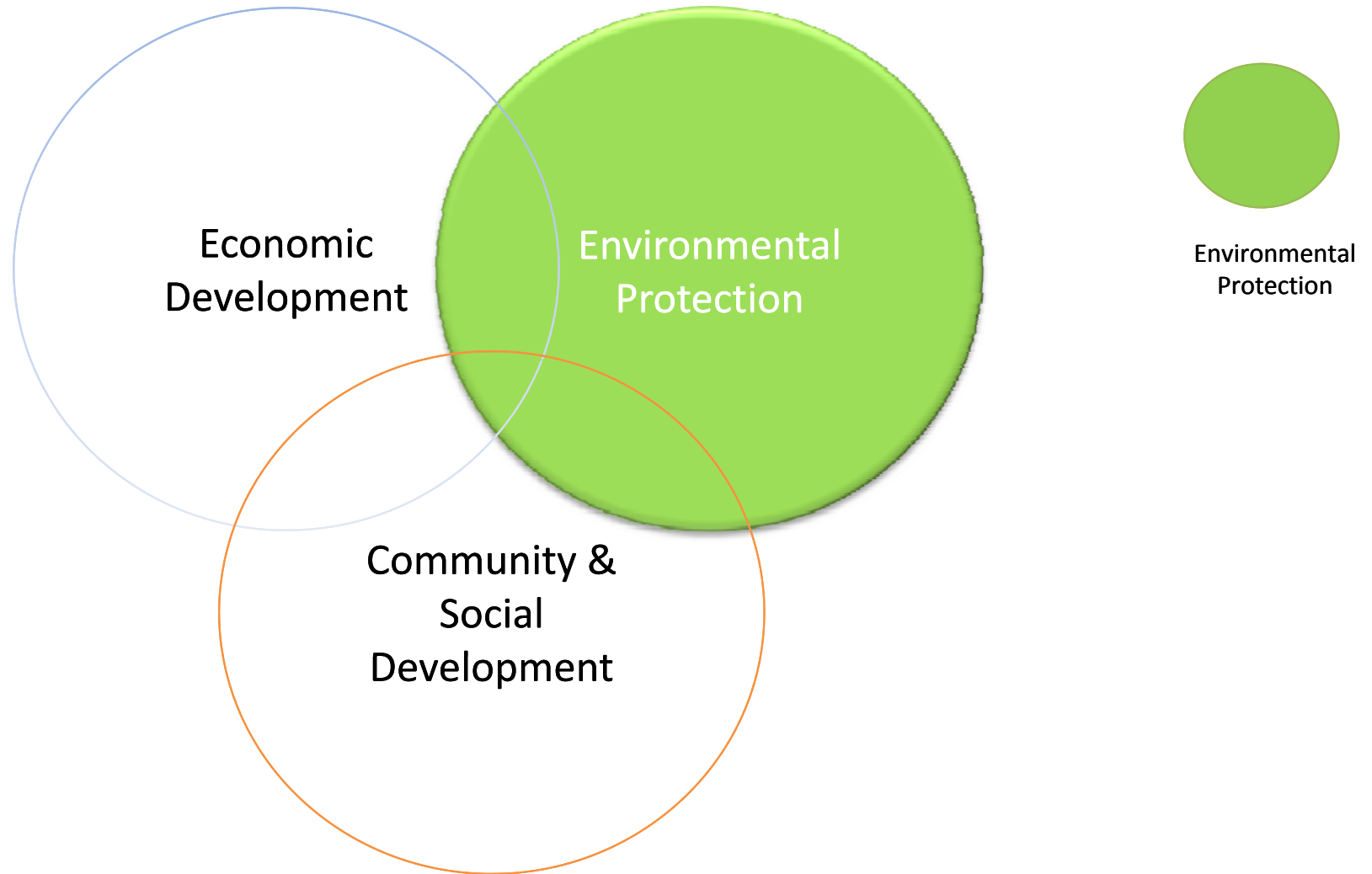
**2.** To propel Malaysia towards becoming a high-income developed nation.



# National Key Economic Areas (NKEAs)



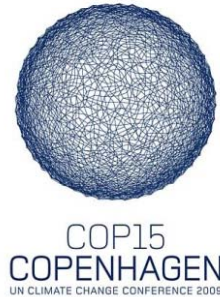
# Sustainable Development -Integrating 3 main elements



**SUSTAINABLE DEVELOPMENT & CONSENSUS BUILDING ARE KEY APPROACHES IN LOW CARBON SOCIETY BLUEPRINT**

# 1 Introduction

## Importance of Low Carbon Society scenario



### Malaysia Commitment

Speech by YAB Datuk Seri Najib Tun Razak, Prime Minister  
“... Malaysia is proposed a voluntary reduction up to 40% in terms of emission intensity of GDP by the year 2020 compared to 2005 levels.”  
17<sup>th</sup> December 2009



### Global Citizens + Responsibilities

For the Earth, for our future generation



### Green as New Consumer Culture, New Market, New Growth



### Money Saving

Energy conservation and renewable energy



## 2. Malaysian Outlook

The CO<sub>2</sub> emission per capita and emission intensity of selected countries in 2007

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

The 10<sup>th</sup> 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.

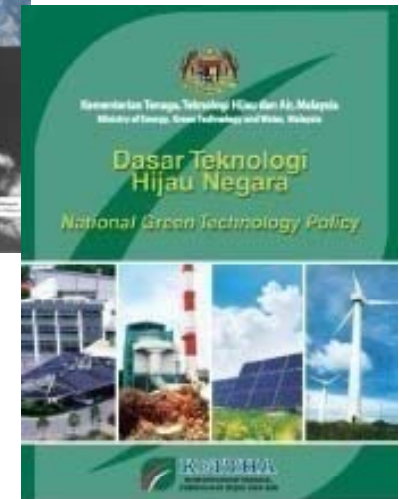
### **National Climate Change Policy**

- Coordinate and streamline policy & legislations, stashed inter-ministrial and cross sectoral committee to facilitate implement and also identify options and strategies to achieve a low carbon economy.

## 2. Malaysian Outlook

In COP15 (2009), Malaysian Prime Minister ; YAB Dato' Seri Mohd Najib Tun Abdul Razak, has pledged a voluntary 40% reduction of CO<sub>2</sub> emission intensity by 2020.

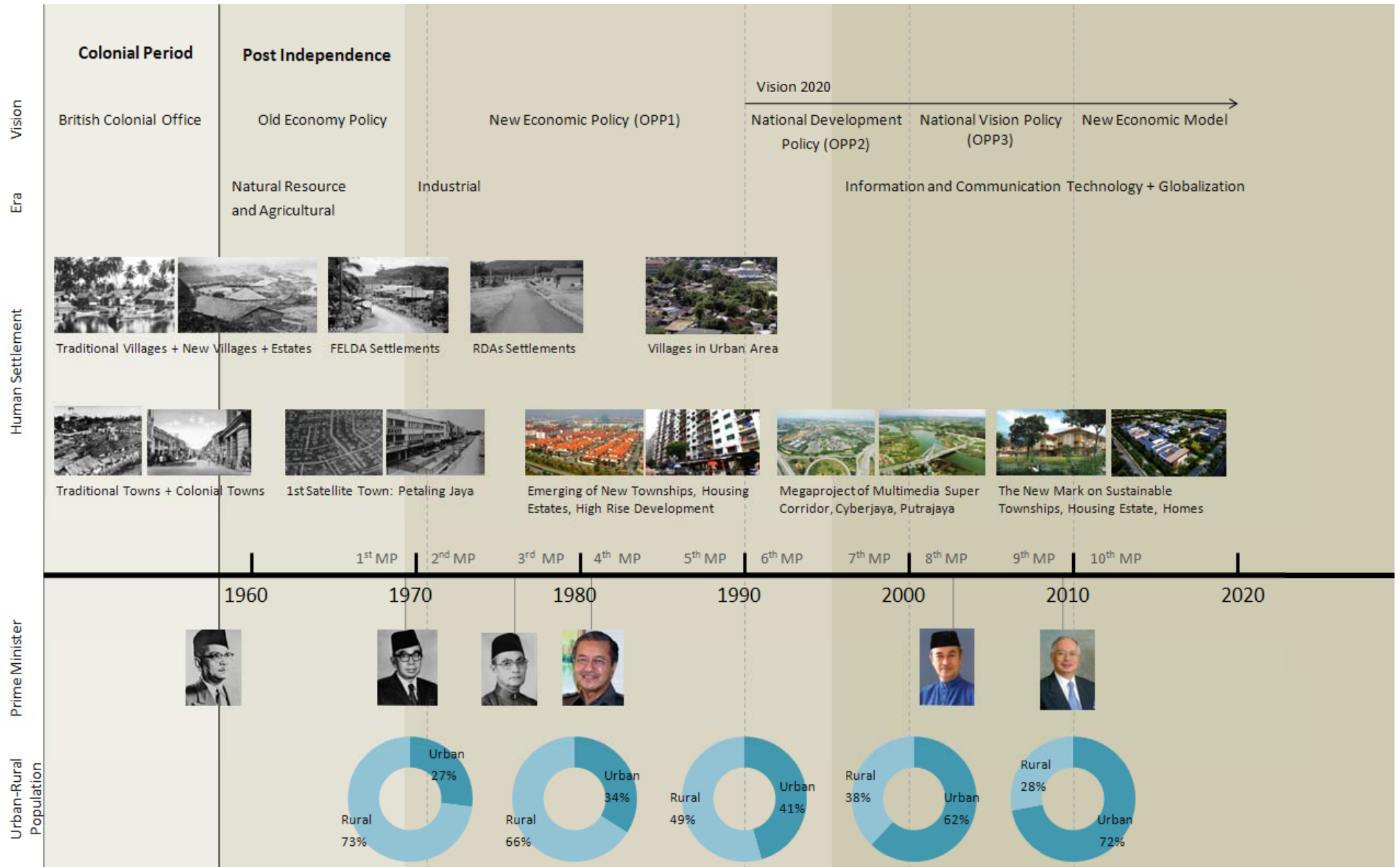
Under the Tenth Malaysia Plan (2011-2015); The Government has intensified effort to reduce emission by climate adaptation and mitigation measures.



- ➊ With this in Focus, We look towards lowering the CO<sub>2</sub> emission intensity in Iskandar Malaysia by 50% by 2025.
- ➋ **The Tools**; (ExSS & Backcasting Model) play an important role in getting the numbers (Facts and Figures) to **support in the decision making process** when the Local Authorities and Iskandar Regional Development Authority design the Policies & Guidelines towards a Low Carbon Scenario.

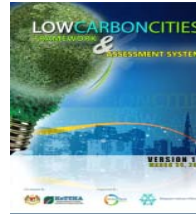
# 2 Sustainable Development

## Moving Towards Sustainable Human Settlement

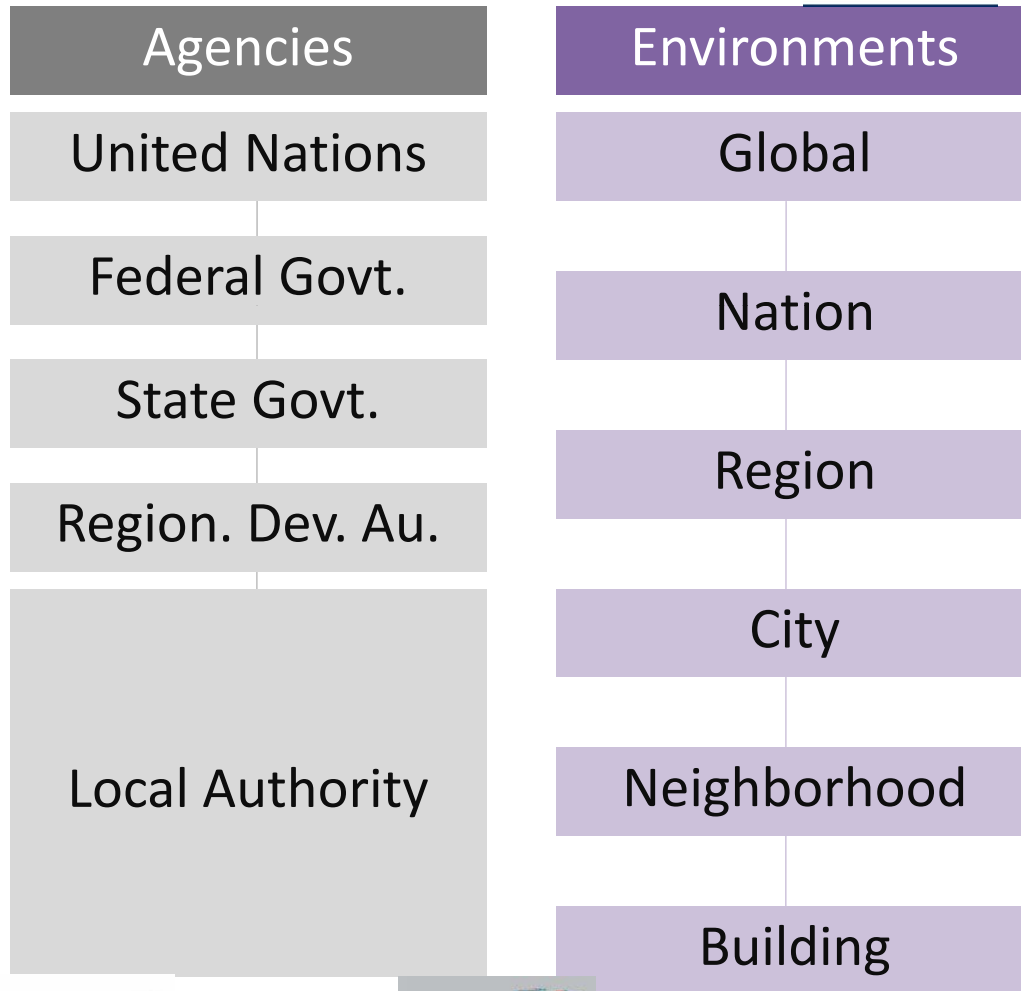


# 2 Sustainable Development

## Low Carbon Frameworks



### 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

Green Building Index, Energy Efficiency in Building Guidelines, Design Strategies for Energy Efficiency in New Buildings (Non-Domestic), Malaysia Industrial Energy Audit Guidelines, Energy Efficiency and Conservation Guidelines for Malaysian Industries



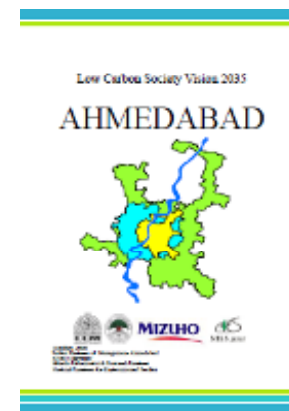
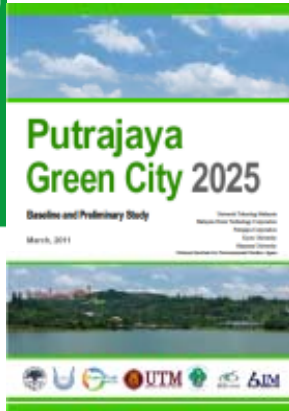
(Source: Carbon Dioxide Information A

# 3 Establishing Low Carbon Society Scenario

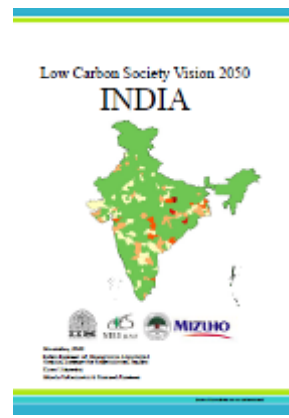
## - Regional Cooperation with Japan – NIES and IGES



City and Region



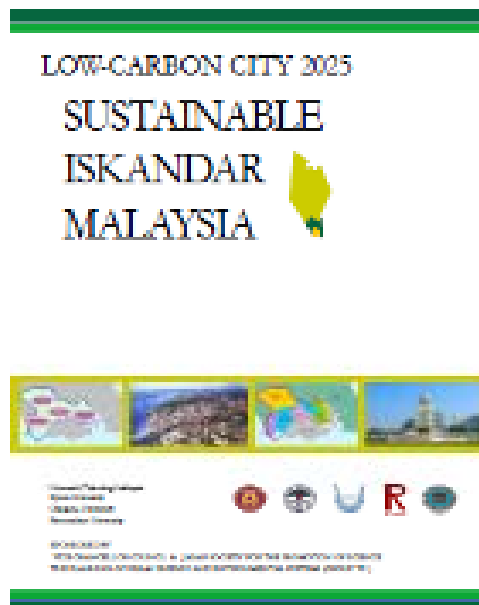
National



# REGIONAL COOPERATION

- EXPERT/ MODELING INPUT
- FINANCIAL SUPPORT
- CAPACITY BUILDING
- NETWORK

## THE CASE OF ISKANDAR MALAYSIA



# BACKGROUND

## MALAYSIA: KEY ECONOMIC DEVELOPMENT CORRIDORS

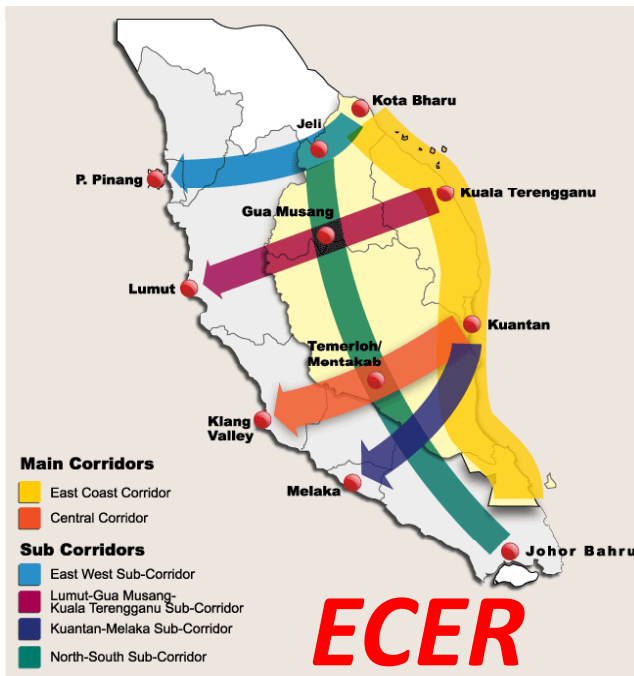


*Iskandar  
Malaysia*



**NCER**

**KORIDOR  
UTARA**  
NORTHERN CORRIDOR  
ECONOMIC REGION  
SOCIOECONOMIC  
BLUEPRINT  
2007-2025



**ECER**



# 3. Background of Iskandar Malaysia

## *Location of Iskandar Malaysia*





# 01 Introduction

## Development of Low Carbon Society Scenarios for Asian Regions



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)

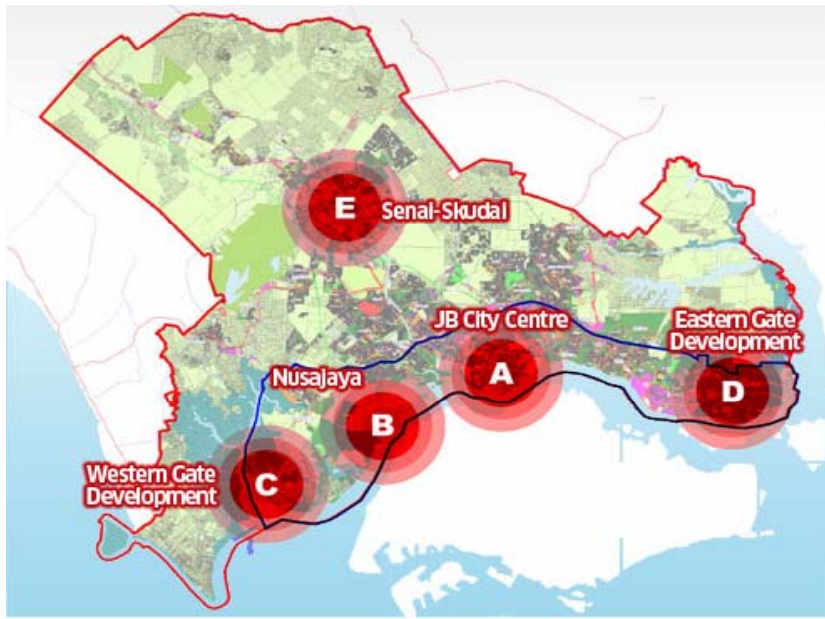
# Iskandar Malaysia at a Glance

A



E

B



C



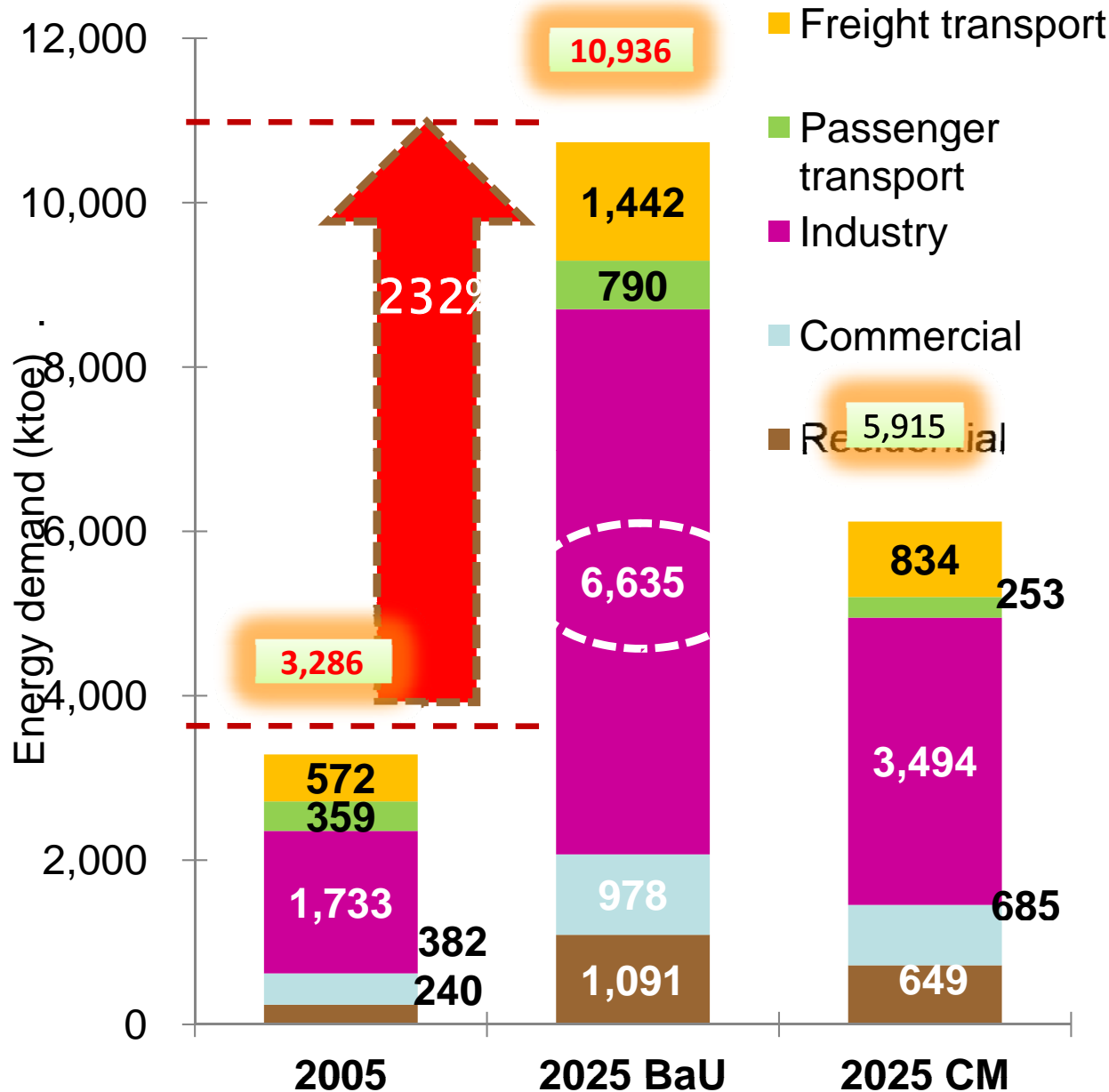
D



# Socio Economic Scenario of IM

	2005	2025	2025/ 2005
<b>Population</b>	1,353,200	3,005,815	2.2
<b>No. of households</b>	317,762	751,454	2.4
<b>GDP (mil RM)</b>	37,641	176,224	4.7
<b>GDP per capita (RM/capita)</b>	27,817	58,628	2.1
<b>Gross output (mil RM)</b>	121,431	474,129	3.9
Primary industry (mil RM)	1,860	5,375	2.9
Secondary industry (mil RM)	83,502	263,444	3.2
Tertiary industry (mil RM)	36,069	205,309	5.7
<b>Floor space for commercial (mil m<sup>2</sup>)</b>	6.8	19.3	2.8
Offices	1.3	1.7	2.9
Shops	5.7	16.3	2.9
Hospitals & Schools	0.6	1.2	2.1
<b>Passenger transport demand (mil p-km)</b>	3,816	8,677	2.3
<b>Freight transport demand (mil t-km)</b>	1,652	5,303	3.1

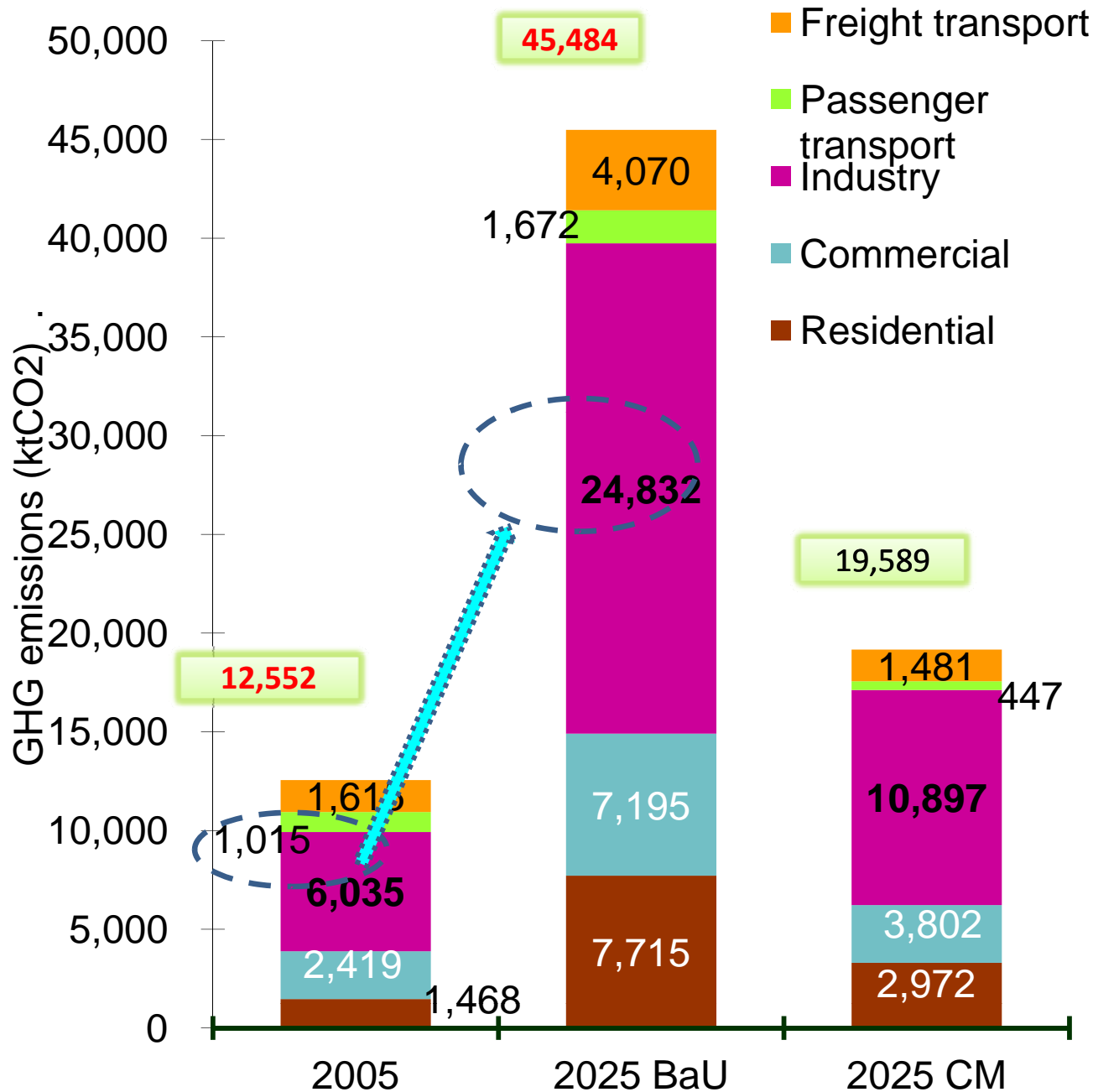
# Energy Demand By Sector



**Energy demand in IM** is projected to increase from **3,286 ktoe** (toe: tonne oil equivalent) in 2005 to **10,936 ktoe** in 2025 for the BaU case (*BaU: business as usual*)

Industry is expected to be 6,635 ktoe and will maintain the largest share of 61%.

# GHG Emission By Sector

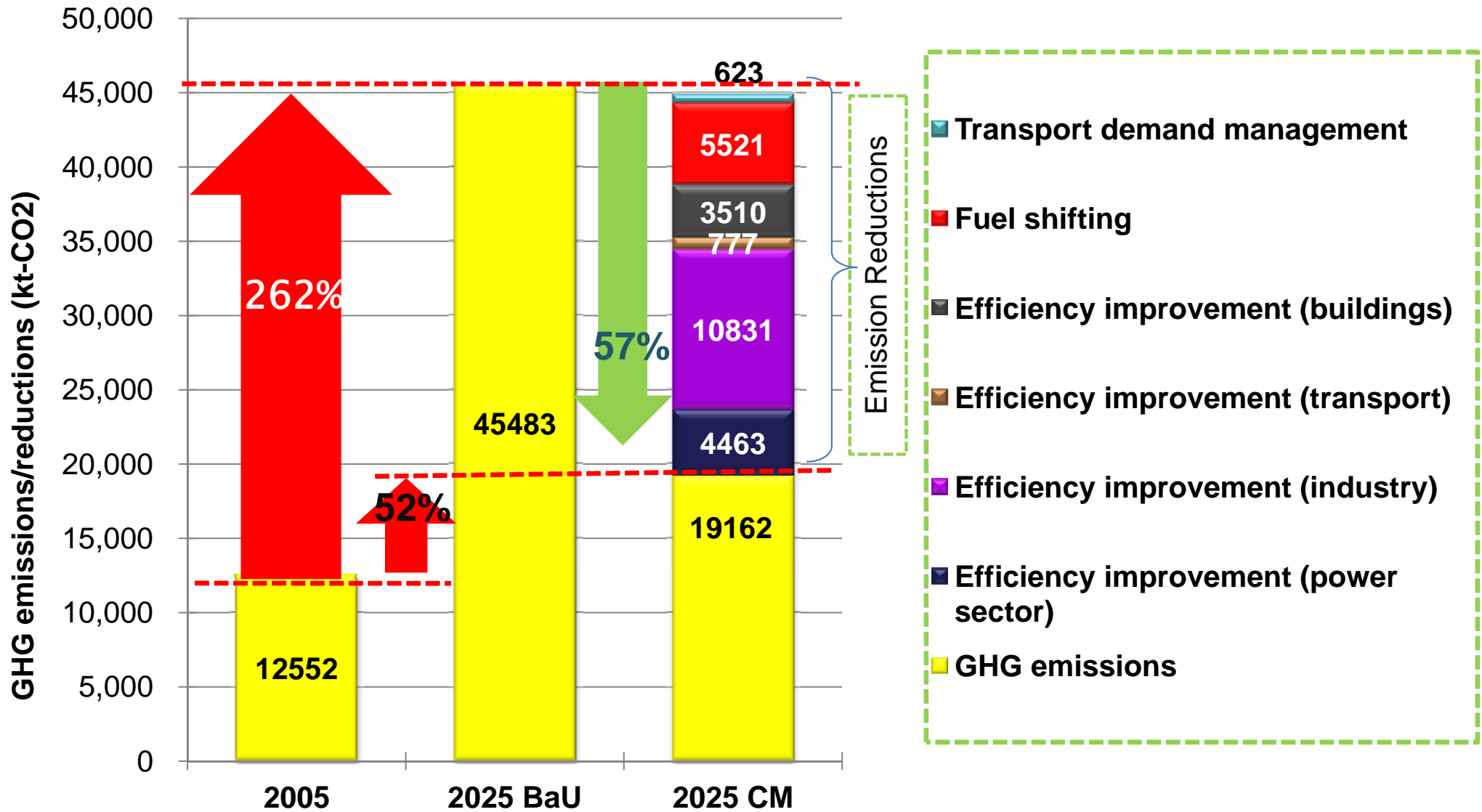


**GHG Emissions in IM** are projected to increase from 12,552 ktCO<sub>2</sub> (2005) to 45,484 ktCO<sub>2</sub> (2025 BaU)

**Industry Sector** will increase 4.1 times in total as compared to 2004 in GHG emission . (54% of total GHG emission in 2025 BaU)

**GHG emissions per capita** : 9.3 tonnes of CO<sub>2</sub> /capita (2005) to 15.1 tonnes /capita (2025 BaU ), with CM will be reduced to 6.5 tonnes of CO<sub>2</sub>/capita.

# Potential Mitigation in IM



# Low Carbon Cities Policy Package

## Buildings

- Environmental performance standard and evaluation of buildings
- Adjustment of tax rate of fixed asset tax
- Low interest loans to investment to energy efficient buildings

- Environmental performance standard of equipments
- Environmental labeling
- Education and information service
- Green purchasing policy

- Subsidy to introduce photovoltaic power generation system

## Transport & Land use

- Urban planning
- Transport planning
- Tax rate adjustment to fixed asset
- Investment to public transport

- Environmental performance standard of vehicles
- Tax rate adjustment to energy efficient vehicles
- Promotion of bio fuel

## Industry

- Subsidy to investment to energy efficient equipments
- Promotion of technology transfer

- Incentive to introduce energy efficient equipments & buildings
- Incentive to introduce renewable energy

- Controlling urban growth & choice of transport mode

Energy efficiency improvement

Lowering CO<sub>2</sub> intensity

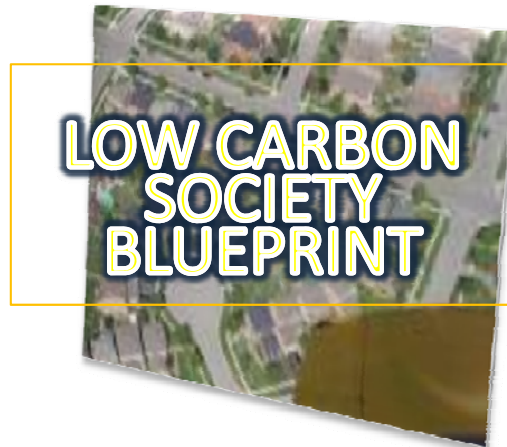
Transport demand control

Mitigation of GHG emissions from Iskandar Malaysia





# IRDA Blueprints that promote LCS



# Themes & New List of the Dozen Actions

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

## 5 Conclusion

### The Way Forward- Regional network and cooperation

Quantification from LCS modeling assist **better understanding** on impact of proposed actions, sub actions and programs.

Good **baseline study, consensus building and low carbon blueprint plan** will help to develop an **integrated climate resilient , Low carbon framework** for a city or region.

Green cities or Local carbon cities need to have a **LOW CARBON SOCIETIES mindset/** behavior and **Joint effort** between different professions (Planners, architect, engineer and related environmental profession)

Important to have a Asian (eg IGES & AIM workshop) and **International platform** for **research collaboration** between researchers in LCS as well as **capacity building opportunities.**

# Activities of Low carbon Societies 2011- Community, local, national and international level



Minister launching LCS



LCS talks



FGD- stakeholders



Capacity building



Press conference



COP 17



school students & teachers



LCS at rural area



COP 17



Thank You!  
Terima Kasih! 谢谢! धन्यवाद!  
ขอบคุณครับ kaub koon krup  
どうもありがとう