



GOVERNMENT OF MALAYSIA



Environmental Sustainability in Iskandar Malaysia

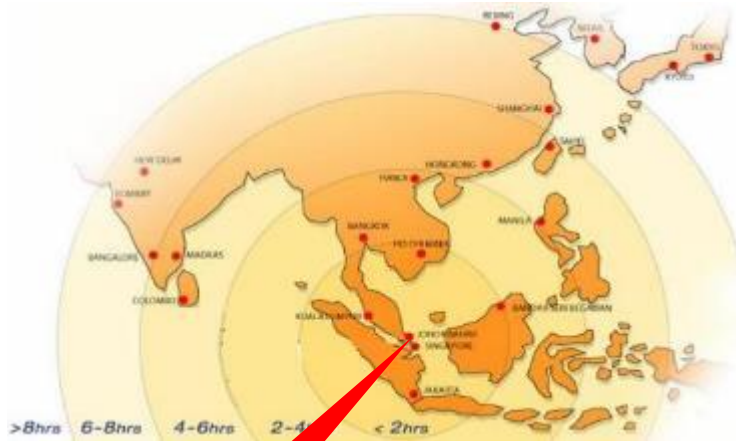
DATUK ISMAIL IBRAHIM
CHIEF EXECUTIVE
ISKANDAR REGIONAL DEVELOPMENT AUTHORITY (IRDA)



Iskandar Malaysia

Iskandar Malaysia is located in the main southern development corridor in Johor. Total area: 2,217 sq km (12% of Johor State); 3 times the size of Singapore.

Iskandar Malaysia covers FIVE local planning authorities.



Indicator	2015	2025 (CDP II)
Population (mil)	1.95	3.0
GDP per capita (PPP) in RM	33,634	42,631
Labour Force (mil)	0.94	1.46
Employment (mil)	0.92	1.43

Source: Johor State Economic Report 2015/2016, Johor State Economic Planning Unit



Iskandar Malaysia: Vision

“Strong and Sustainable Metropolis of International Standing”

HOLISTIC ECOSYSTEM



Iskandar Malaysia Holistic Eco-system

A resilient ecosystem, anchored by wealth generators, creating regional wealth that is to be shared equally among communities. Wealth generation and wealth sharing, balanced by optimal use of ecological assets, to enhance the Quality of Life in Iskandar Malaysia, turning it into a leading global region. Together with this, spatial management and good governance would enable the realisation of its Vision and goals by 2025.



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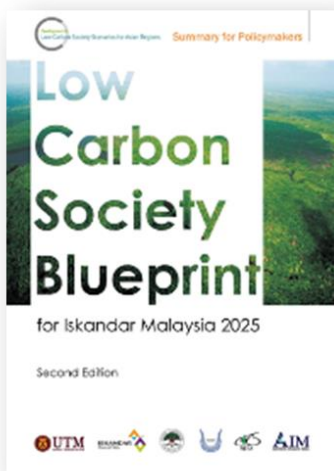
LOW CARBON SOCIETY BLUEPRINT FOR ISKANDAR MALAYSIA 2025



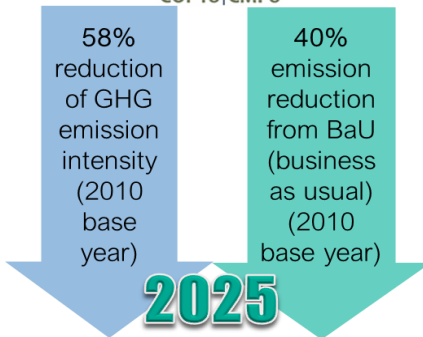
GLOBAL COVENANT of MAYORS for CLIMATE & ENERGY



Lima-Paris Action Agenda



DOHA 2012 UN CLIMATE CHANGE CONFERENCE COP18|CMP8



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	

- Launched on 30 November 2012 at the UNFCCC in Doha, Qatar;
- Serves as a guide for policy-makers, businesses, NGOs and others into going green;
- 12 Actions grouped into 3 Themes with a total of 281 Programmes;
- Each Action contains an analysis, list of programmes and potential reduction of GHG emission;
- 2018: Up to 50 programmes implemented;
- 2016: 10.7% GHG intensity reduction.



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Policy Roadmap Towards a Low Carbon Future for Iskandar Malaysia



United Nations
Framework Convention
Climate Change



CLIMATE CHANGE (COP21)

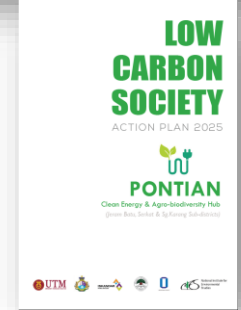
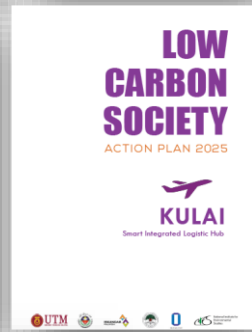
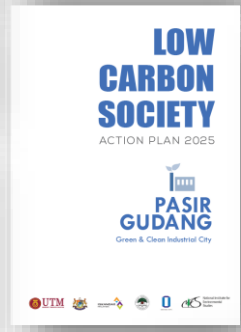
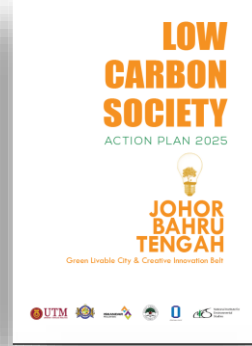
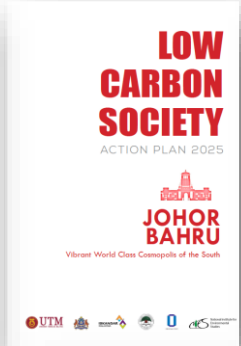
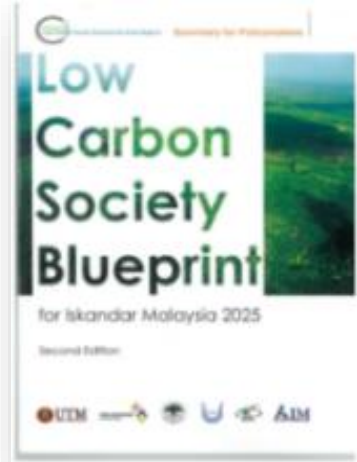
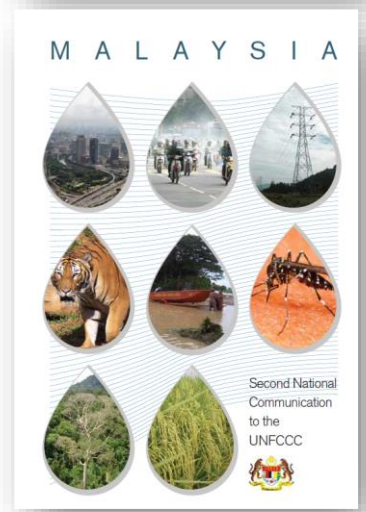
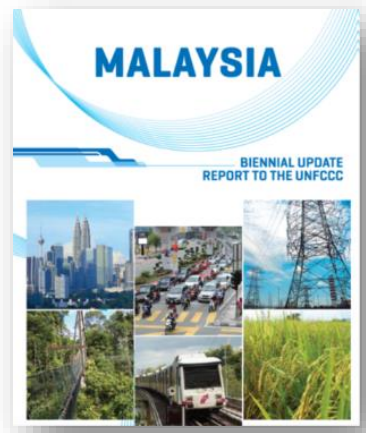
KEEP GLOBAL TEMPERATURES RISE
WELL BELOW **2°C** WITH ASPIRATION TO **1.5°C**

ALL COUNTRIES TO REPORT REGULARLY
ON THEIR EMISSIONS AND EFFORTS TO REDUCE THEM

NEW TRANSPARENCY AND ACCOUNTING SYSTEM IN PLACE

EVERY 5 YEARS **REVIEW EACH COUNTRY'S CONTRIBUTIONS** TO GHG EMISSIONS CUTS SO THAT THEY CAN BE SCALED UP

DEVELOPED COUNTRIES TO PROVIDE **\$100BN** CLIMATE FINANCE PER YEAR **UNTIL 2025**





GOVERNMENT OF MALAYSIA

Low Carbon Society Blueprint project implementation: 50 of 281 programmes completed/on-going



CASBEE ISKANDAR

A comprehensive built environment assessment tool customised for Iskandar Malaysia. **3 CASBEE Manuals** for Building, Municipal & City as well as pilot projects are completed.



Initiated in 2016, **Green Accord Initiative Award** is a recognition for green initiatives in townships, industrial and commercial buildings, and individual property.



Building Energy Monitoring & Reporting System (BEMRS) started in 2016 with a collaboration with Tokyo Metropolitan Government and 5 Local Authorities in Iskandar Malaysia.

ISKANDAR MALAYSIA ECOLIFE CHALLENGE

On-going for the past 5 years. In 2018, there is an increase to 400 schools with 40,000 students involved. Winner of **RCE Okayama Global Award 2018**.



Sungai Pulai Management Plan is completed in 2017 with an aim to ensure the Ramsar site is well managed and serves as a carbon sink for IM.



IM Partnership for Interdisciplinary Studies on Shoreline Ecosystems aims to streamline coastal initiatives from public, private, local and scientific communities.



Green Economy Guidelines were prepared for IM 9 promoted sectors. Implementation is being done through advisory, business seminars, green projects etc.



Responsible Tourism Development And Biodiversity Conservation Started in Kg. Sg. Melayu, it is duplicated in other coastal areas of IM.



A collaboration between **Pontian and Toyama City** under the Future City Initiative, the **first floating hybrid mini hydro system in Asia** was installed on 21 February 2018 with a capacity of 1000W.



i. Integrated Coastal Erosion Prevention Plan for Tg. Piai;
ii. Gazettement of Sg. Pulai as a State Park;
iii. Strategic enhancement of Kukup Island as a premier ecotourism destination.



SE4ALL: Global District Energy in Cities Initiative

Case for Action

Through EE initiatives, 24% of projected requirement can be reduced (912 MW)

10%



Domestic

51%



Commercial

39%



Industry

Due to our tropical climate, Iskandar Malaysia has **huge demand** for cooling especially in commercial buildings (40-50% of electricity consumption)

On-going projects under the GDE

MEDINI
ISKANDAR MALAYSIA



Rapid assessment study on District Cooling System in the Medini and Sedenak areas.

Enabling frameworks for district cooling in Iskandar Puteri City Hall area.



Main Findings: Compared with standalone and conventional cooling system, the district cooling system in the economic region can annually **reduce**:



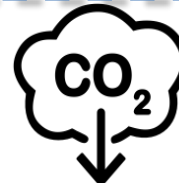
Electricity
> 30%



Water
25%



Operation fee
18%



CO2 Emission
> 35%



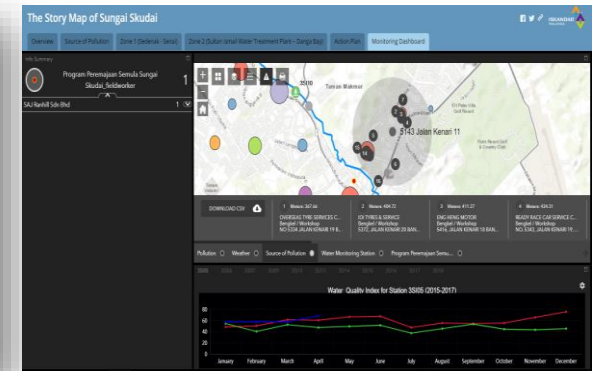
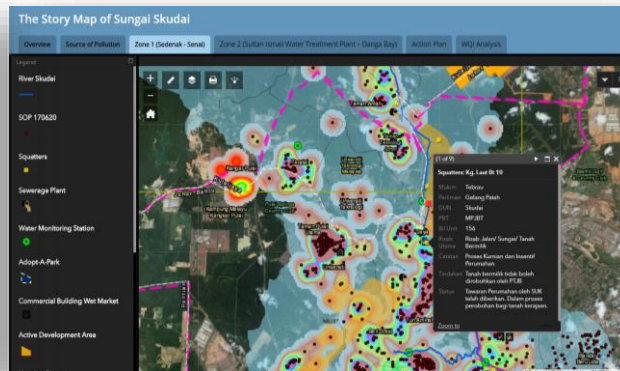
Refrigerant refill: 25% in 20 years of life cycle



Iskandar Malaysia River Monitoring & Management Tool (IM RMMT)



IM RMMT is a monitoring and management tool to consolidate data, analyse issues and come up with necessary actions and monitoring; the tool is integrated in the Urban Observatory platform.



Cases for action:

Uncoordinated collaborations to resolve river issues; and

Good Data needed to support the strategies to move forward.

Current challenges:

- Data collected by agencies are not shared between agencies
- Data collected in various platforms - GIS maps, drawings, physical maps, spreadsheets
- Ineffectiveness of focus area implementation and monitoring of

Status to Date:

The RMMT for the Skudai River as a pilot project championed as a State Initiative; Collated data from State, Federal Agencies and Local Authorities used for Skudai river enhancement programmes; and joint enforcements carried out based on available data and strategies



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International Collaborations & Recognition



SE4ALL – Sustainable Energy for All (under Global Energy Efficiency Program)

Iskandar Malaysia selected as 1 of 10 cities & regions, at the Climate Summit 23 Sept 2014 at the United Nations.

IRDA is a partner to the Lima-Paris Action Agenda (under SE4All)

Two accelerator platforms:

- Global District Energy in Cities Initiative
- Building Efficiency Accelerator.

Completed two studies for IM, in collaboration with the Centre for Low Carbon Cities:

- The Economics of Low Carbon Cities, 2014
- Policy Options for Low Carbon Cities, 2015

The Organisation for Economic Cooperation and Development –

Joint study under the Urban Green Growth in Dynamic Asia (Green Cities programme), together with Bangkok, Hai Phong, & Bandung.

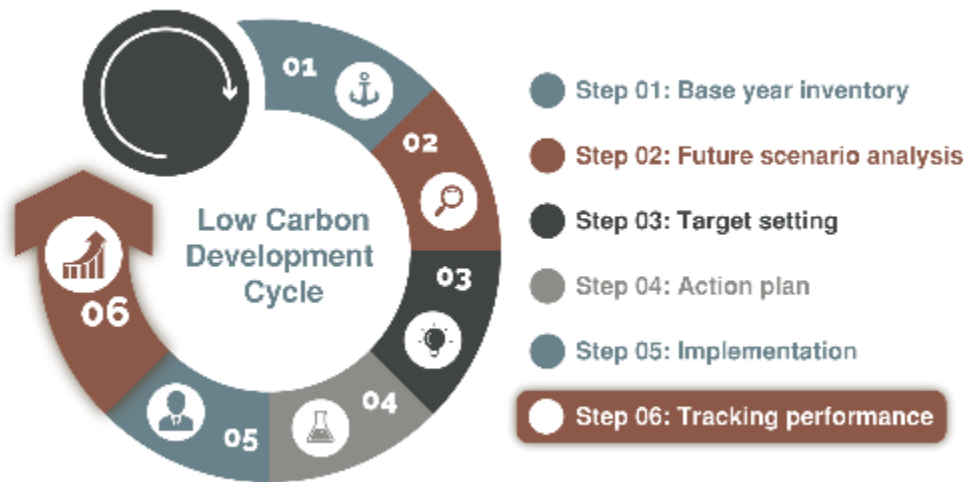
IM is the member for GCOM -Global Covenant of Mayor for Climate Energy

GCOM is the largest, global coalition of mayors and local officials with over 7,400 commitments from around the world.

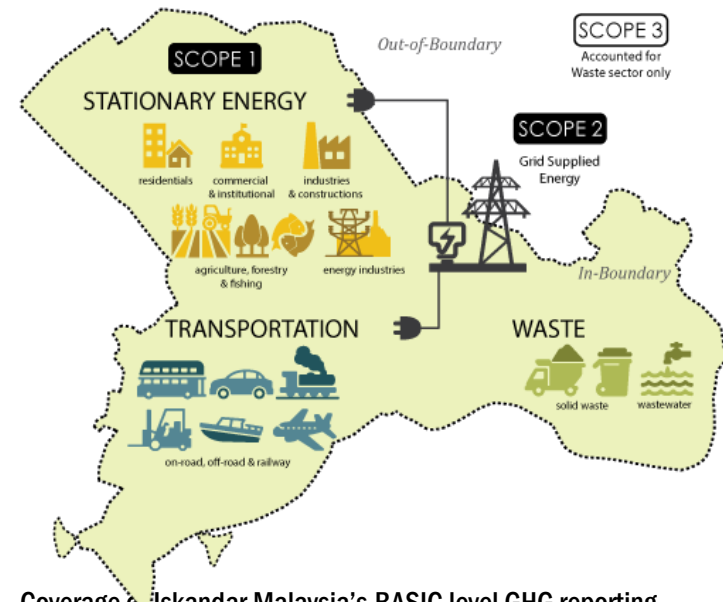


Iskandar Malaysia Greenhouse Gas (GHG) Inventory 2016

- Iskandar Malaysia has completed **6 stages** of the **Low Carbon Development Cycle** (2011-2016: Research/Science to 58% targeted reduction by 2025 to programme implementation). **Stage 6** of the cycle – **Tracking Performance of Implemented Low Carbon Society programmes** -> Iskandar Malaysia Greenhouse Gas Inventory 2016.
- Iskandar Malaysia uses the Global Protocol for Community Scale Greenhouse Gas Emission Inventories (GPC) - an internationally-recognised carbon monitoring and reporting framework (by World Resources Institute), recognised by the UNFCCC.



Low Carbon Development Cycle



Coverage of Iskandar Malaysia's BASIC level GHG reporting



Iskandar Malaysia Greenhouse Gas (GHG) Inventory 2016

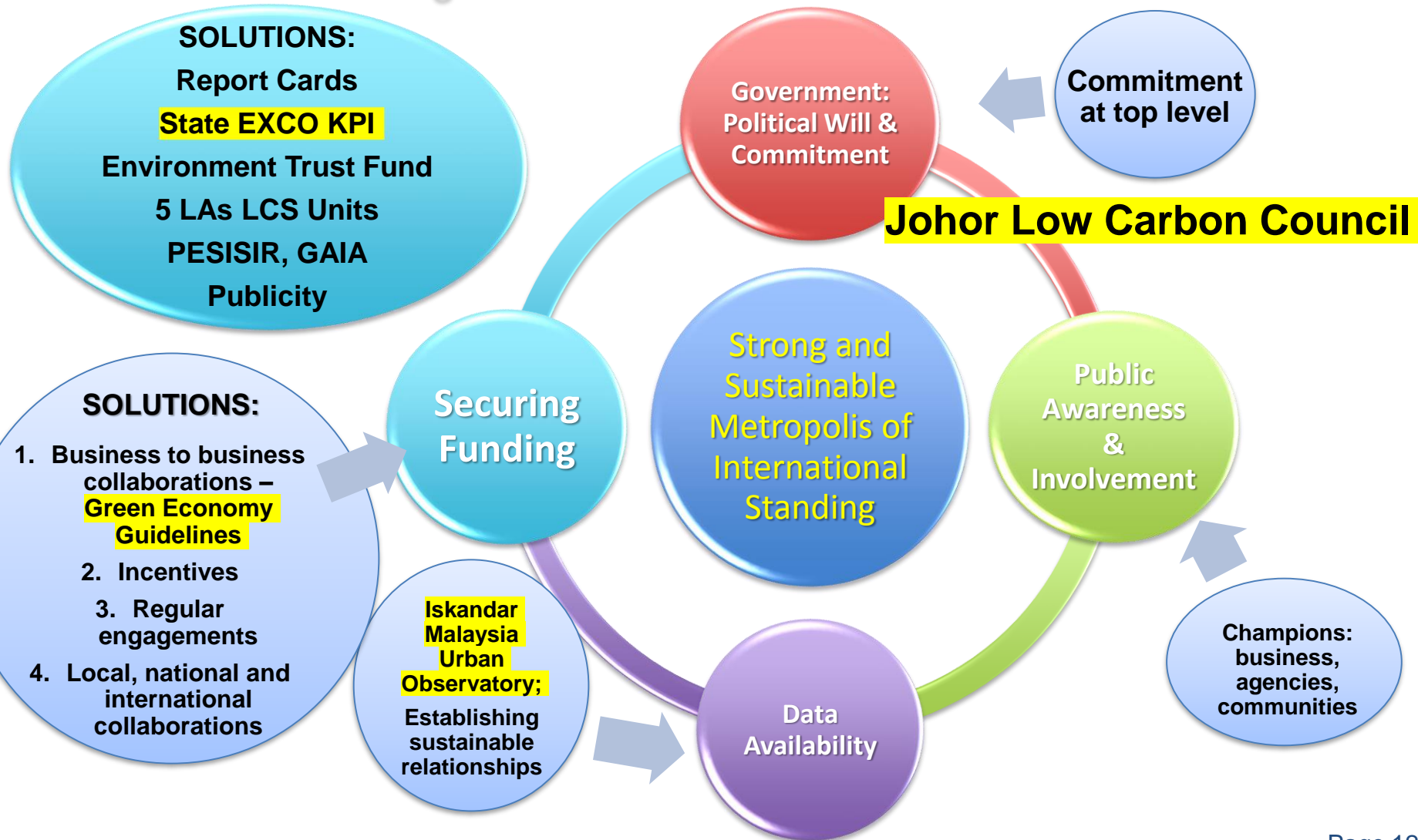


- This inventory had accounted 15.54 million tonnes of carbon dioxide equivalent for Iskandar Malaysia region in 2016.
- **64.5% of the total emissions is contributed by the stationary energy sector; 29.8% by the transportation sector and 5.7% by the waste sector.**
- Emission intensity per GDP in 2016 is 0.221 kilo tonnes of carbon dioxide per million ringgit Malaysia (ktCO₂/RM Million), which marks a **10.7% reduction compared with 2010 emission intensity** of 0.248 ktCO₂/RM Million.
- To meet the targeted emission intensity reduction of 58% of base year (2010) emissions by 2025, 8.0% is the average yearly reduction rate required from 2017 onwards.
- **The 2017 GHGI is currently being prepared.**
- **From 2018, IM will follow the GCoM approach.**



Challenges & Solutions

– for making our cities resilient to climate change in adherence to the SDGs & the New Urban Agenda by using the LCSBPIM 2025 as the driver





Key Takeaway

- Commitment and support from Government secured through IRDA governance structure (Co-Chairmen)
 - Federal Government
 - State Government
 - Local Authorities
- Incorporation of science into policy
 - Scientific modelling and scenario planning translated into summary for policy makers
- Participation by all levels of stakeholders through :
 - Government Agencies and Private Sector- Implementation and funding (PPP)
 - NGOs and community- Green/Local Champion and Implementation
 - University- Research
- Monitoring effort to ensure good progress and “measure to manage”
- GCOM requirement- climate change mitigation, adaptation, risk measurements.



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THANK YOU

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