CLIMATE ACTION IN TERRITORIAL PLANNING AND ITS SDGS LOCALISATION

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Urbanice Malayisa

5TH SPATIAL PLANNING PLATFORM
1st to 3rd February 2023
Kathmandu, Nepal

Malaysia is a fast growing nation with 78% or 25 million Malaysians living in urban areas.

MALAYSIA TODAY

POPULATION MALAYSIA

32.7 M (2021), 41.5 M (2040)

URBANIZATION RATE

78% (2021), 85% (2040)

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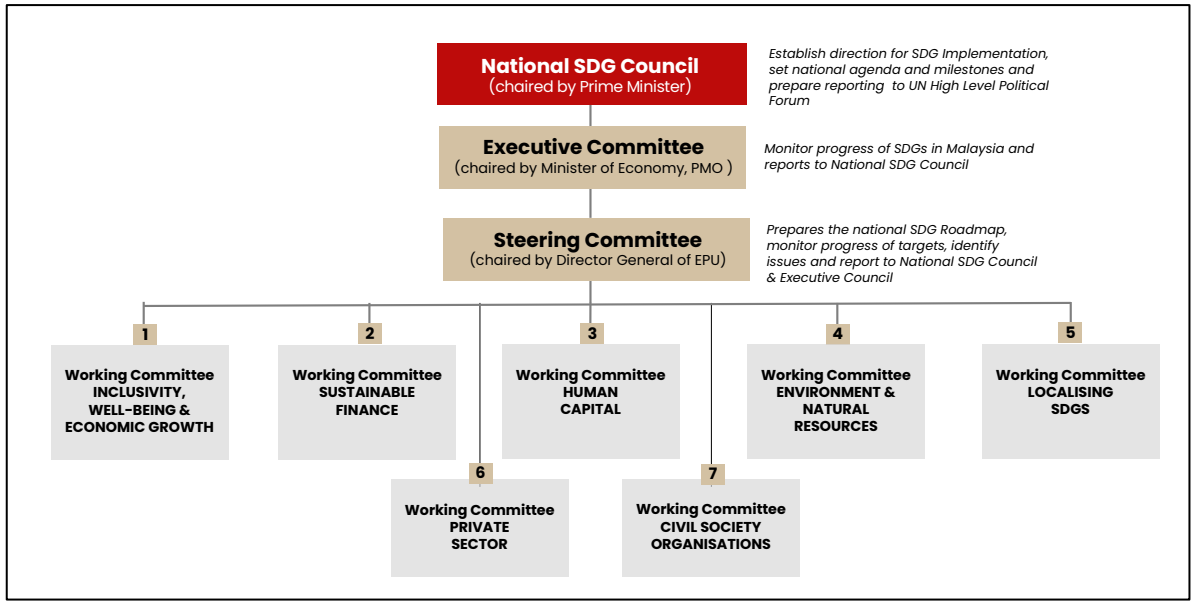
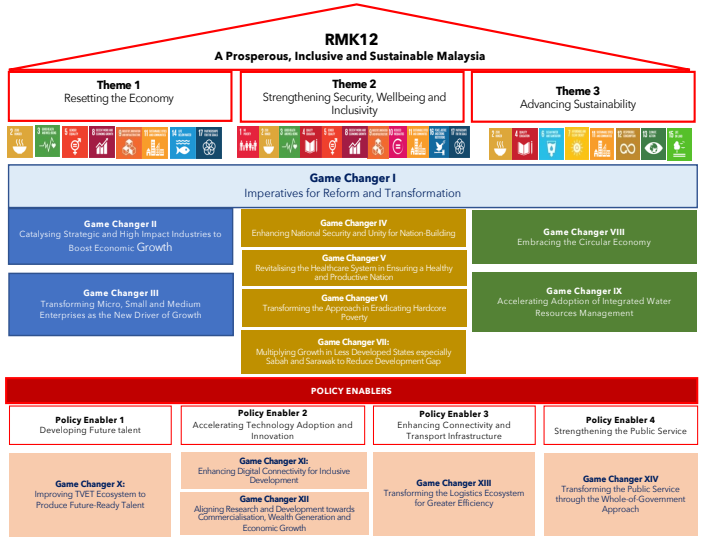
Malaysia has faced several environmental challenges and development has lost 29% of its tree cover which could lead to accelerated climate change, flooding and soil erosion.

1970-2013, Peninsular Malaysia, Sabah and Sarawak experienced surface mean temperature increases of 0.14-0.25°C per decade.

Malaysia Commits to the SDGs and has a strong institutional framework to support the sustainability agenda in Malaysia. It takes an integrated approach in pursuing the agenda.





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National Policies and Key Development Blueprints

Addressing Urbanisation and Climate Change Agenda Comprehensively

ECONOMIC PLAN MALAYSIA

3 Themes

- Resetting the Economy
- Strengthening Security, Wellbeing and Inclusivity
- Advancing Sustainability

DEVELOPMENT PLAN SYSTEM AND POLICIES IN MALAYSIA

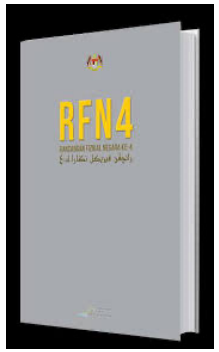
NATIONAL PHYSICAL PLAN
POLICIES , TARGETS & STRATEGIES

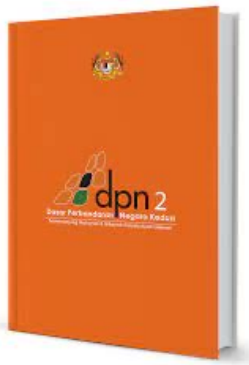
National Urbanisation Policy
National Physical Rural Development Policy

STATE STRUCTURE PLAN
State Policies and Strategies
State Sustainability Blueprint

LOCAL PLAN
District Wide Strategies and Development Control

SPECIAL AREA PLAN
Management Plan, Action Implementations Plan
Project and Budgets





POLICIES RELATED TO CLIMATE CHANGE AGENDA

1. National Policy on the Environment (2002)
2. National Water Resources Policy (2012)
3. National Forestry Policy (1978, Revised 1992)
4. National Policy on Biological Diversity (1998)
5. National Green Technology Policy (2009)
6. National Policy on Climate Change (2009)
7. National Solid Waste Management (2016)
8. National Low Carbon Cities Masterplan (2021)
9. Low Carbon Cities Framework (2011)
10. National Petroleum Policy (1975)
11. National Depletion Policy (1980)
12. Fourth-Fuel Diversification Policy (1981)
13. Fifth-Fuel Policy (2001)
14. National Biofuel Policy (2006)
15. National Energy Policy (2008)
16. Renewable Energy Policy and Action Plan (2010)
17. National Automotive Policy (2014)
18. National Agro-food Policy (2011)

12th Malaysia Plan sets clear targets in Advancing Sustainability

Addressing Urbanisation and Climate Change Agenda Comprehensively

URBANICE MALAYSIA | MALAYSIA SDG CITIES

Combating Climate Change and Reducing Disaster Risk

- 45% (2030) / 29.4% (2016) — Reduction in Greenhouse Gas (GHG) Emissions Intensity to GDP based on emissions intensity in 2005
- Integrated Weather and Flood Forecasting System / Integrated System for Three River Basins (2020 / 2020) — Development of Integrated Systems
- 30% (2020) / 30.7% (2020) — National Recycling Rate of Household Waste
- At least 20% (2020) / 20.7% (2016-2019) — Government Green Procurement
- 8,885 MW (2020) / 7,995 MW (2020) — Renewable Energy Installed Capacity
- DSM Master Plan (2020) / Energy Efficiency and Conservation Bill (2020) — Formulation of an Energy Demand Side Management (DSM) Master Plan
- 2 million (2020) / 1.6 million (2019) — People Protected through Flood Mitigation Projects

Conserving Natural Resources

- At least 10% (2020) / 5.5% (2020) — Coastal and Marine Areas Gazetted as Protected Area
- At least 17% (2020) / 10% (2018) — Terrestrial and Inland Water Areas Gazetted as Protected Area

Strengthening Governance

- An Environmental protection act (2020) / Review of Act 127 (2020) — Formulation of an Act to Enhance Environmental Protection

KEY CHALLENGES

- Unsustainable consumption and production practices
- Loss of biodiversity
- Lack of a supportive enabling environment
- Constraints in the energy sector to support growth
- Ineffective management of the water sector

RMK12

Theme 3: Advancing Sustainability

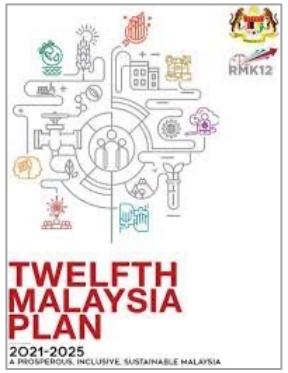
Chapter 8: Advancing Green Growth for Sustainability and Resilience

- Up to 45% (2030) — Reduction in Greenhouse Gas (GHG) Emissions Intensity to GDP by 2030 Based on Emissions Intensity in 2005
- 25% (2025) — Government Green Procurement
- At Least 10% (2025) — Coastal and Marine Areas Conserved through Gazettement and Other Effective Area-Based Conservation Measures
- At Least 20% (2025) — Terrestrial and Inland Water Areas Conserved through Gazettement and Other Effective Area-Based Conservation Measures

Chapter 9: Enhancing Energy Sustainability and Transforming the Water Sector

- National Energy Policy (2021-2025) — Introduction of a Comprehensive National Energy Policy
- 31% (2025) — Renewable Energy of Total Installed Capacity
- 98% (2025) — Coverage of Access to Clean and Safe Water in Rural Area
- 25% (2025) — Non-Revenue Water Level

○ Target

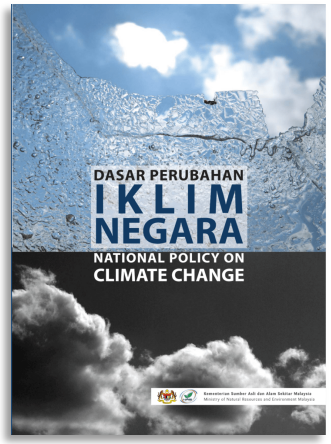


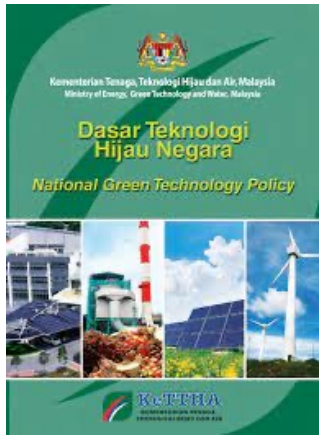
Advancing Green Growth for Sustainability and Resilience

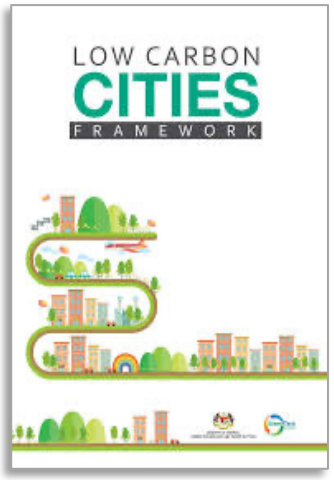
Enhancing Energy Sustainability and Transforming the Water Sector

Malaysia commits to the climate change agenda with its National Climate Change Policy and a reduction of 45% Carbon emission with strong enabling frameworks

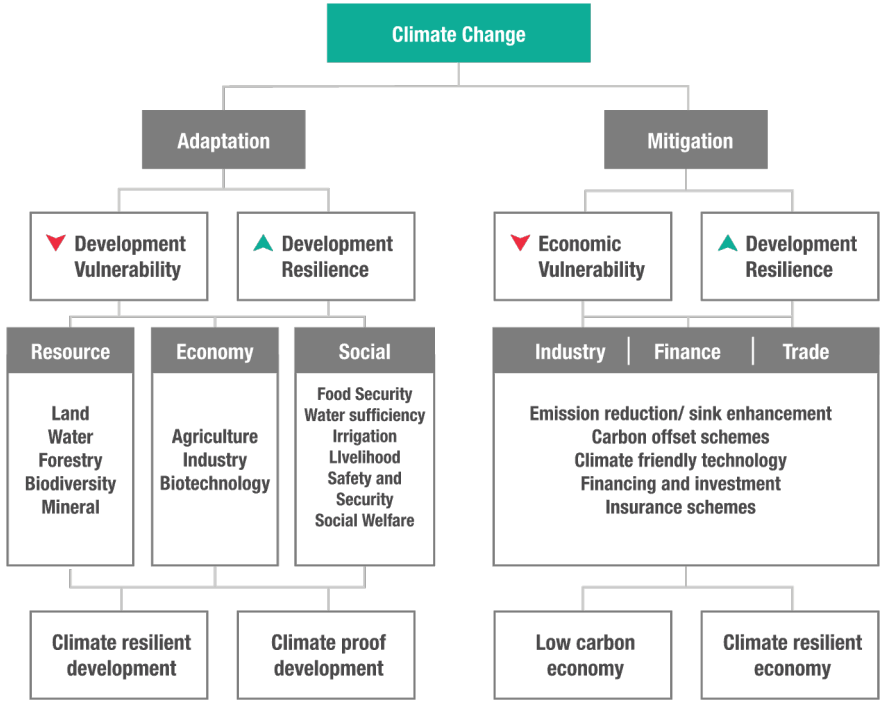
MALAYSIA CLIMATE CHANGE ACTION COUNCIL (MYCAC)







Framework of the National Climate Change Policy



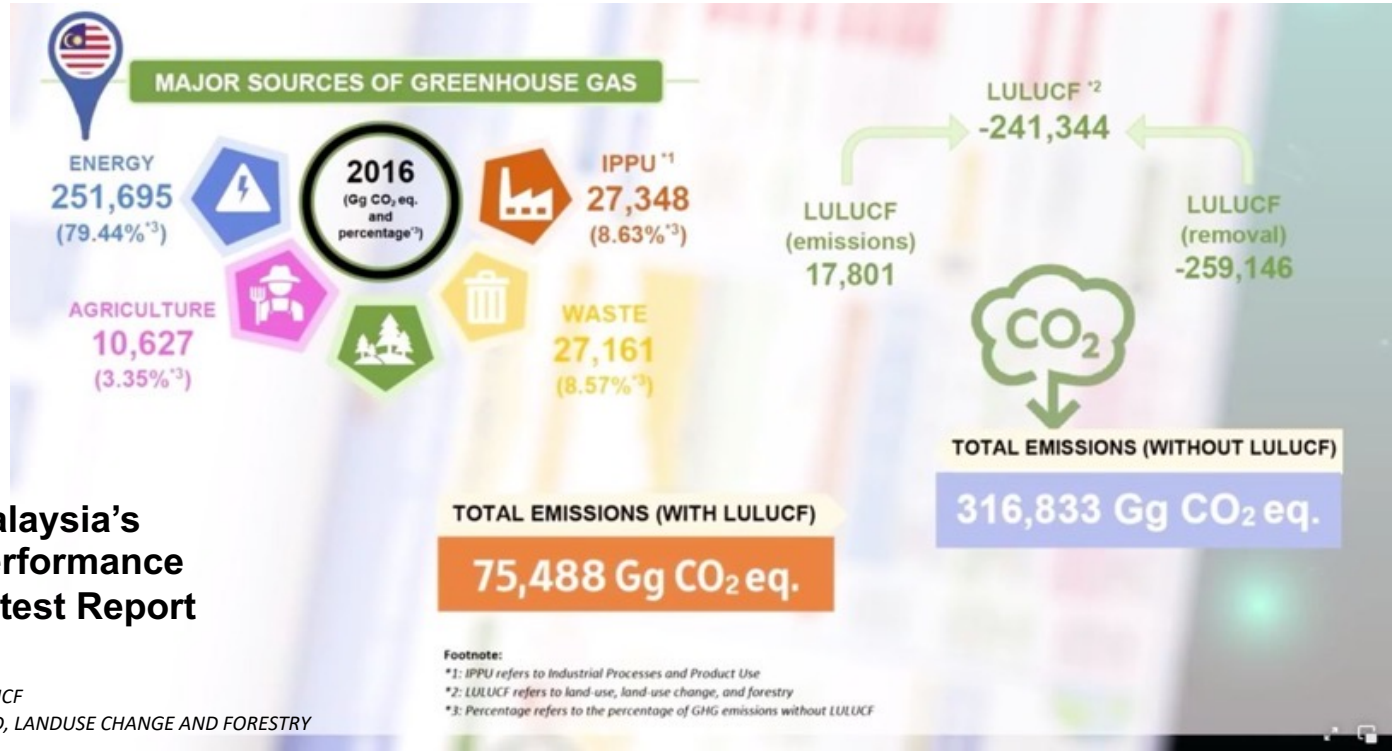
Where Are We and Are We Really Tackling Climate Change

MALAYSIA'S LARGEST EMISSION AVOIDANCE :

- **Forestry**
- **Energy**
- **Waste**

Malaysia Nationally Determined Contributions

5 Key Sectors Covered by NDC



Malaysia's Performance Latest Report

LULUCF
LAND, LANDUSE CHANGE AND FORESTRY

Sector	Sector Potential Mitigation Options
Energy	1. Implementation of RE for power generation 2. Implementation of EE in the industrial, commercial and residential sector 3. Implementation of RE in industrial, commercial and residential sector 4. Transportation – hybrid and electric vehicles, integrated transportation system, bio fuels, low carbon petrol and diesel
LULUCF	1. Maintain existing forest cover 2. Reduce emission from forest and land use related activities 3. Where appropriate, increase existing forest cover
Waste	1. Encourage methane capture facilities at new sanitary landfills 2. Encourage palm oil millers to capture biogas for power generation 3. Encourage composting of organic waste, especially food waste and 3R (Reduce, Reuse and Recycle)
Agriculture	1. Rice management with water saving production: intermittent flooding aerobic rice 2. Livestock waste management through aerobic manure composting biogas capture 3. Partial replacement of synthetic nitrogenous fertilizer
Industrial processes	1. Employ new processes and materials to reduce clinker use in cement production

- **MALAYSIA'S COMMITMENTS AND WHAT IT MEANS**

COP15 COPENHAGEN

On 17 Dec 2009, Malaysia commits to a **voluntary reduction of up-to-40%**in terms of emission intensity of GDP by the year 2020 compared to 2005 levels.

PARIS2015 UN CLIMATE CHANGE CONFERENCE COP21·CMP11

At COP 21 Paris –The commitment is to **reduce up to 45% in terms of emission intensity of GDP by 2030** compared to 2005 levels – 35% unconditional and 10% is condtion on climate finance.

UN CLIMATE CHANGE CONFERENCE UK 2021 IN PARTNERSHIP WITH ITALY

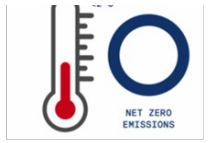
At COP 26 Glassgow – Malaysia's NDC **reduce its economy-wide carbon intensity by 45% unconditionally in 2030** compared to 2005 levels. It will cover 7 GHGs and targets carbon neutral by 2050.

1. Implement carbon pricing policy in phases to support national efforts to reduce GHG emissions;
2. Achieve 31% renewable energy capacity for power generation in 2025 and 40% in 2035 in national power grid through its Malaysia's Energy Transition Plan to 2021 - 2040;
3. 100% of government fleets to be non-internal combustion engine (ICE) vehicles by 2030;
4. Maintain at least 50% forest cover as pledged during the Rio Earth Summit 1992;
5. Implement natural-based solutions as a basis to reduce long-term impacts through planting of a 100 million trees;
6. Move towards Zero Waste directed to landfill throughWaste to Energy concept and increase recycling rate target to 40% by 2025;
7. Transform cities in Malaysia towards low carbon pathway as outlined under the National Low Carbon City Masterplan; and
8. Increase long-term resilience towards climate change impacts through the development of the National Adaptation Plan.

- **KEY TAKEWAYS & MAIN AGREEMENTS FROM RECENT COP**

COP 21 - PARIS AGREEMENT

MAIN AGREEMENTS



Limit the avg. global temperature increase to <2'C + achieve net zero emissions by mid century

Enhance resilience and adaptation to climate impacts certain to occur

Align financial flows in the world with these objectives

COP 26 - GLASGOW AGREEMENT

MAIN AGREEMENTS

Phasing out coal and fossils fuels

Speeding up affordable and green technology

Supporting developing countries

Reversing deforestation

Cutting methane emissions

COP 27 – SHARM EL-SHEIKH AGREEMENT

MAIN AGREEMENTS

Degree of Urgency: Accelerating Action to Keep 1.5°C on the Table

Breakthrough Agreement on New "Loss and Damage" Fund for Vulnerable Countries

The private sector stepped up across the areas of climate ambition, low-carbon technology and climate adaptation

China and the US rejoin COP to tackling climate change

National Physical Plan

Addressing Spatial Growth by Managing Resources and Natural Disasters

SPATIAL MANAGEMENT PLAN

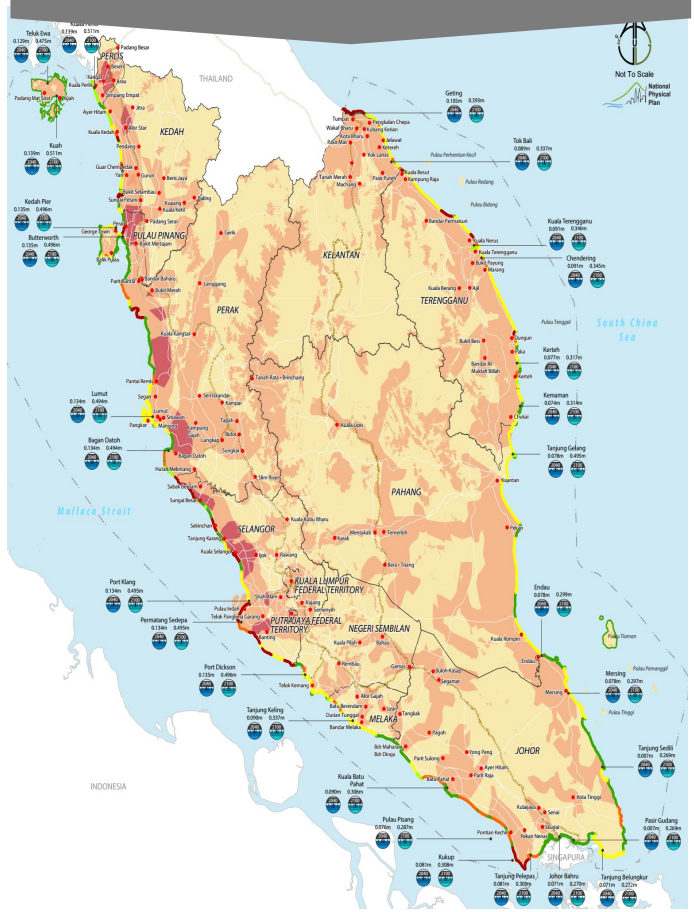
A plan that manages spatial and physical development that translates the direction and strategy of the National Physical Plan 3

1. To manage and drive the current and future development directions;
2. To ensure every development optimizes existing resources and infrastructure;
3. To become a mechanism and guide in making decisions

SMP1
Spatial Growth Framework Plan

SMP2
Resource Management Plan

SMP3
Natural Disaster Risk Area Management Plan



National Physical Plan

Addressing Spatial Growth by Managing Resources and Natural Disasters

SMP2: RESOURCE MANAGEMENT PLAN

Managing national resource areas for sufficiency of main resources to cater for 2040 population target of 46.5 million

Components

Natural Resource

- Permanent Forest Reserves
- Conservation area
- Heritage sites

Water Resource

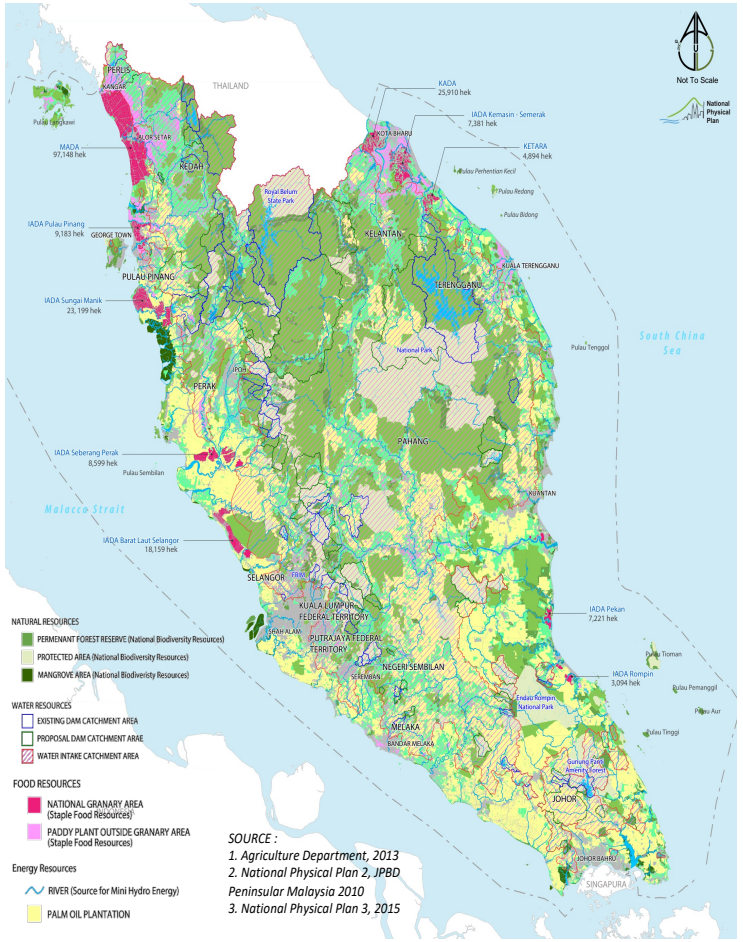
- Dam catchment areas
- Water intake catchment area
- River

Food Resource

- National rice bowl area
- Paddy field outside of rice bowl area
- Permanent Food Production Area (TKPM)
- Aquaculture Industry Zone (ZIA)

Energy Resource

- Dam catchment areas as hydro energy resource;
- Rivers as mini hydro energy resource;
- Oil palm plantations as biomass energy resource; and
- Sanitary landfills ad biogas energy resource.



SMP3: NATURAL DISASTER RISK AREA MANAGEMENT PLAN

Monitoring natural disaster risk area by determining the risk factor of the area towards safer and resilient development

Components

Flood Risk

- Flood prone areas (including settlements at river and beach coasts)

Landslide Risk

- Elevated areas with contours exceeding 1000m;
- Elevated areas with contours in between 300m -1000m; and
- Sloped areas.

Earthquake & Tsunami Risk

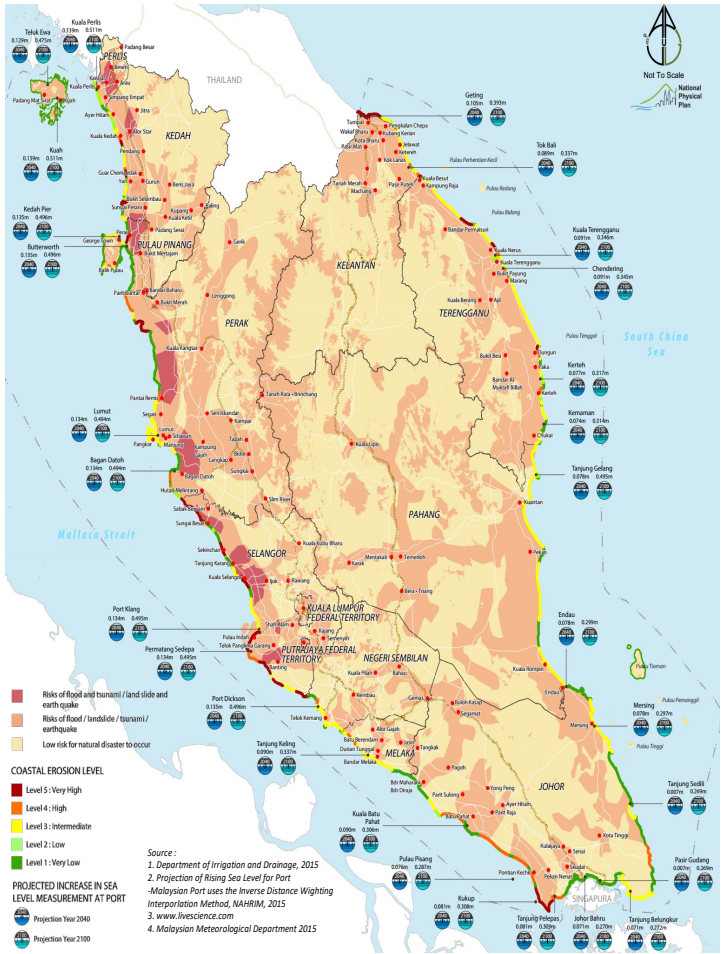
- Earthquake risk zone (earthquake intensity); and
- Tsunami risk zone (Zone 1).

Coastal Erosion Risk

- Coastal erosion risk area category 1-5

Sea Level Rise Risk

- Projection of sea level rise for main seaports in Peninsular Malaysia using 'Inverse Weighting Interpolation' technique as projected rise indicator



NORLIZA HASHIM/NOV 2017/UM/EAROPH/APUDG

National Physical Coastal Zone

Guiding Planning and Development Along the Coastal Zones of Peninsular Malaysia

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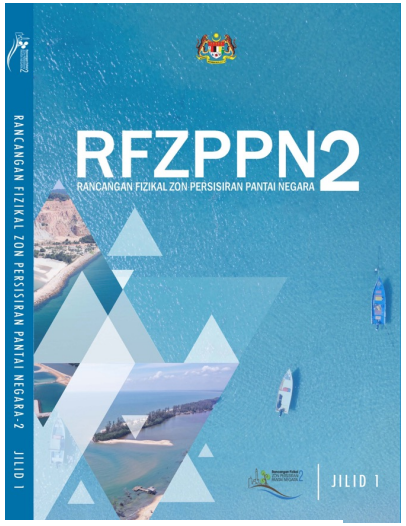
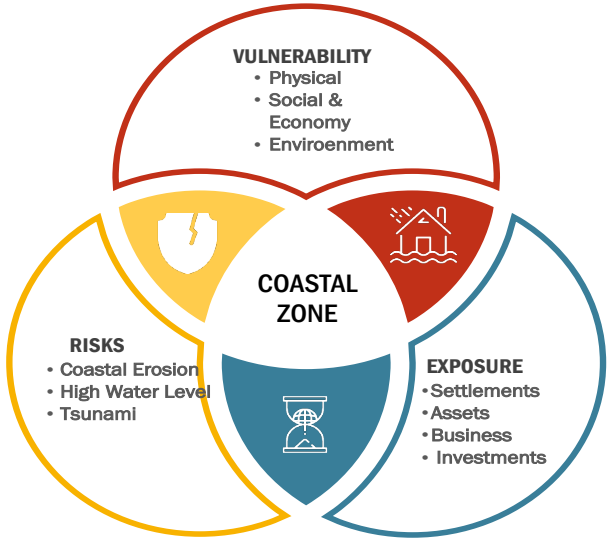
MALAYSIA SDG CITIES



- Length of Coastal Zone 3,853 km
- Beach Areas 440 km
- 45 Local Authorities
- 2344 Villages
- 5.9 million population
- 430 Heritage Sites



Coastal Erosion[i] — **425.80 kilometer** long of coastal areas will be eroded

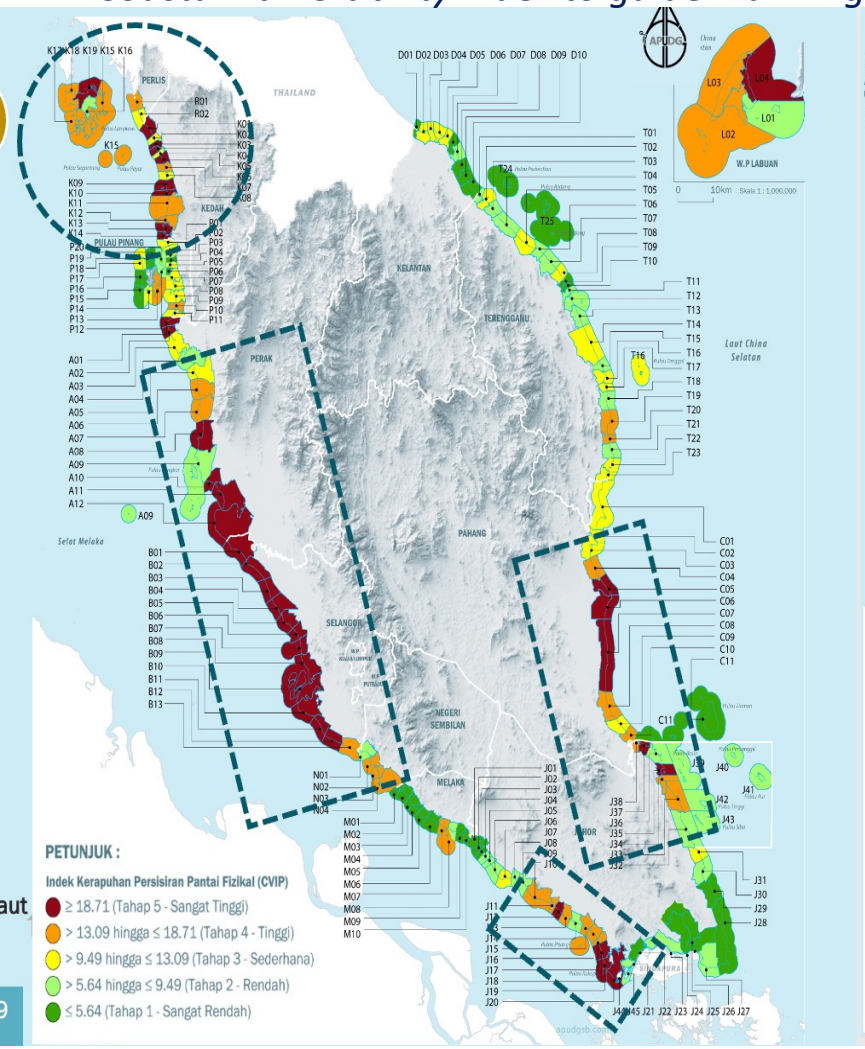
Sea Level Rise*[ii]

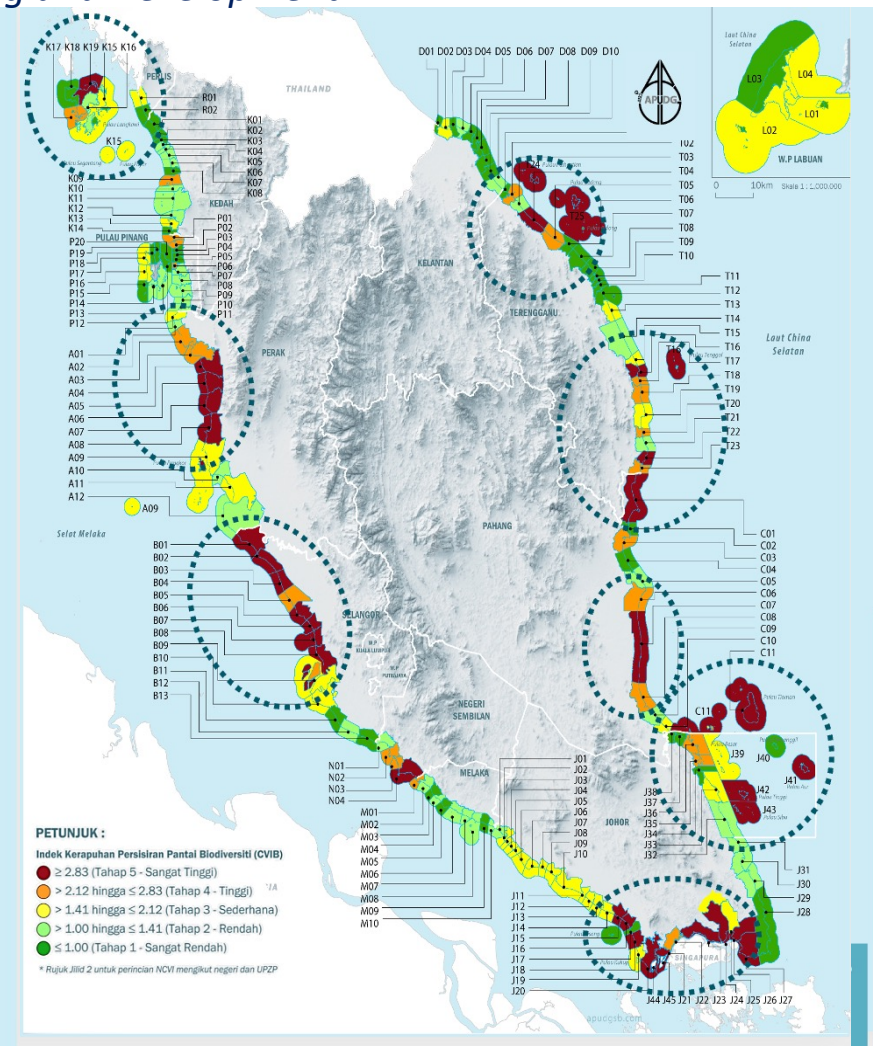
2030	➡	20,670 hectares affected
2050	➡	23,120 hectares affected
2100	➡	33,562 hectares affected

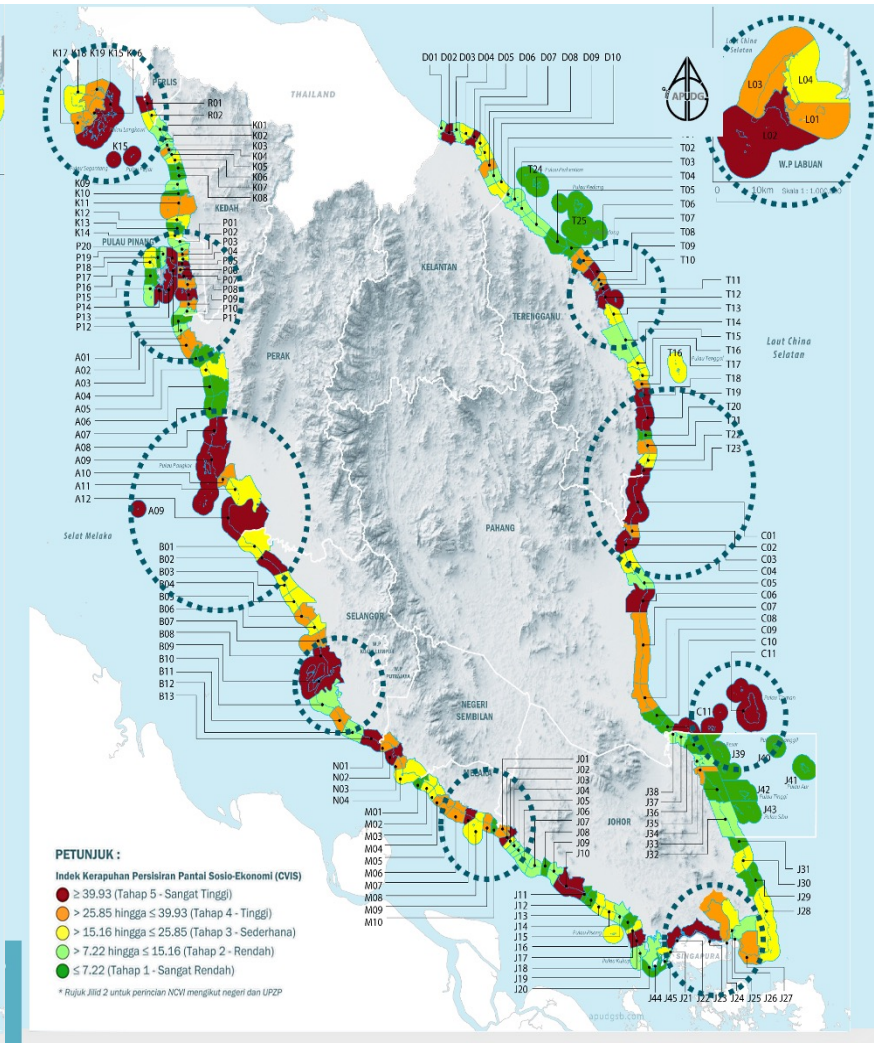
Tsunami *[iii] — **123,057 hectares of built up area affected by** berisiko tsunami

National Physical Coastal Zone

Coastal Vulnerability Index to guide Planning and Development







Coastal Vulnerability Index
PHYSICAL (CVI_P)

07 Parameter

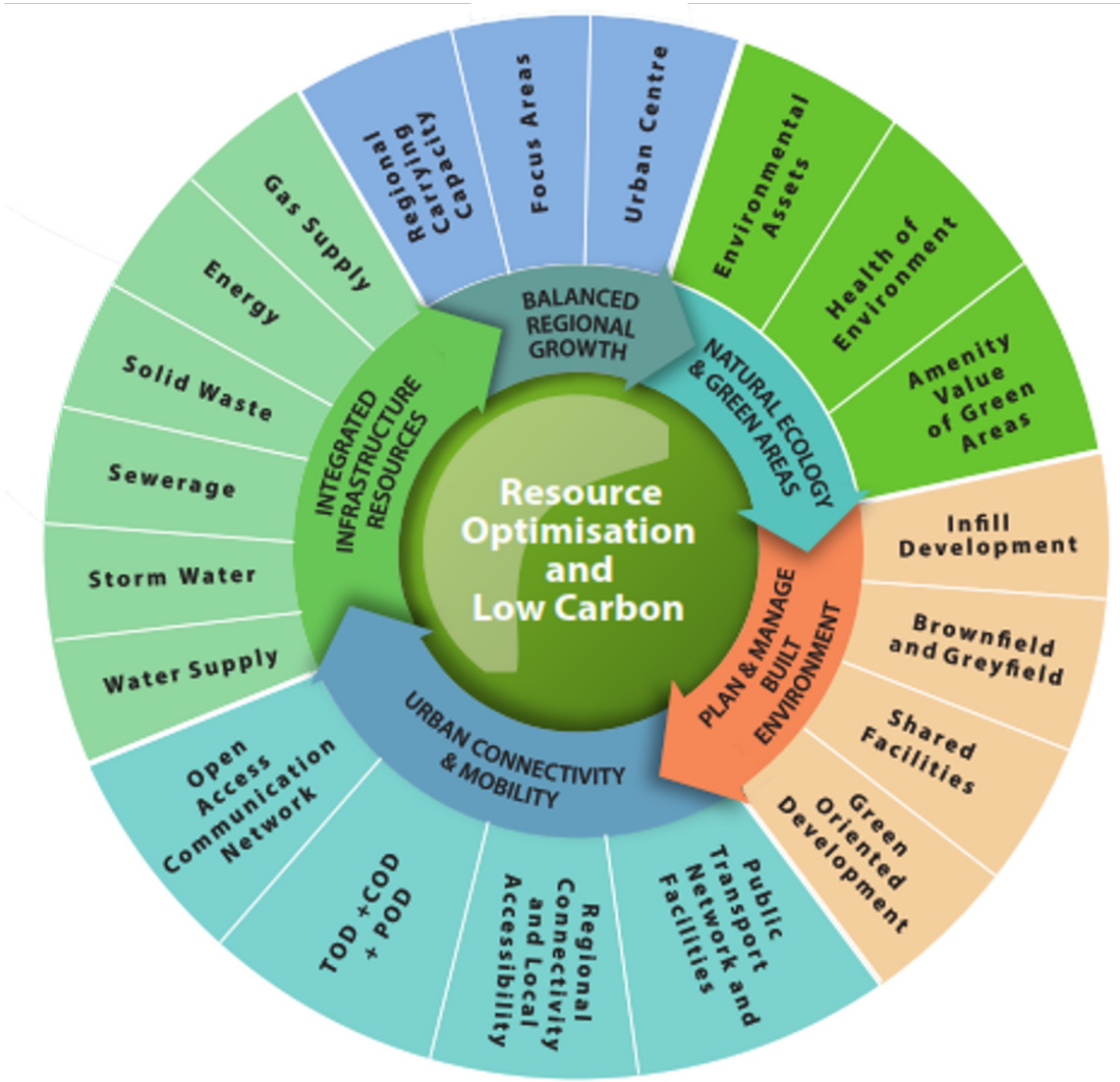
Coastal Vulnerability Index
BIODIVERSITY (CVI_B)

04 Parameter

Coastal Vulnerability Index
SOCIO-ECONOMY (CVI_S)

07 Parameter

REGIONAL ACTION TOWARDS CLIMATE ACTION
Iskandar Malaysia commits to Climate Action Through Resource Optimisation and Low Carbon Agenda



5 Strategic Thrusts **20** Key Directions **49** Initiatives

This is achieved by promoting sustainability and efficient resource-use in five strategic thrusts:

ST RO1 : Balanced Regional Growth

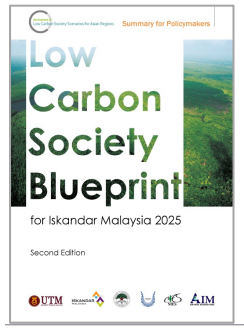
ST RO2 : Protect and enhance natural ecology and green areas

ST RO3 : Plan and Manage the Built Environment

ST RO4 : Enhance Urban Connectivity and Mobility within the region

ST RO5 : Promote Integrated Infrastructure Resources

REGIONAL ACTION TOWARDS CLIMATE ACTION
Iskandar Malaysia commits to Climate Action Through Resource Optimisation and Low Carbon Agenda



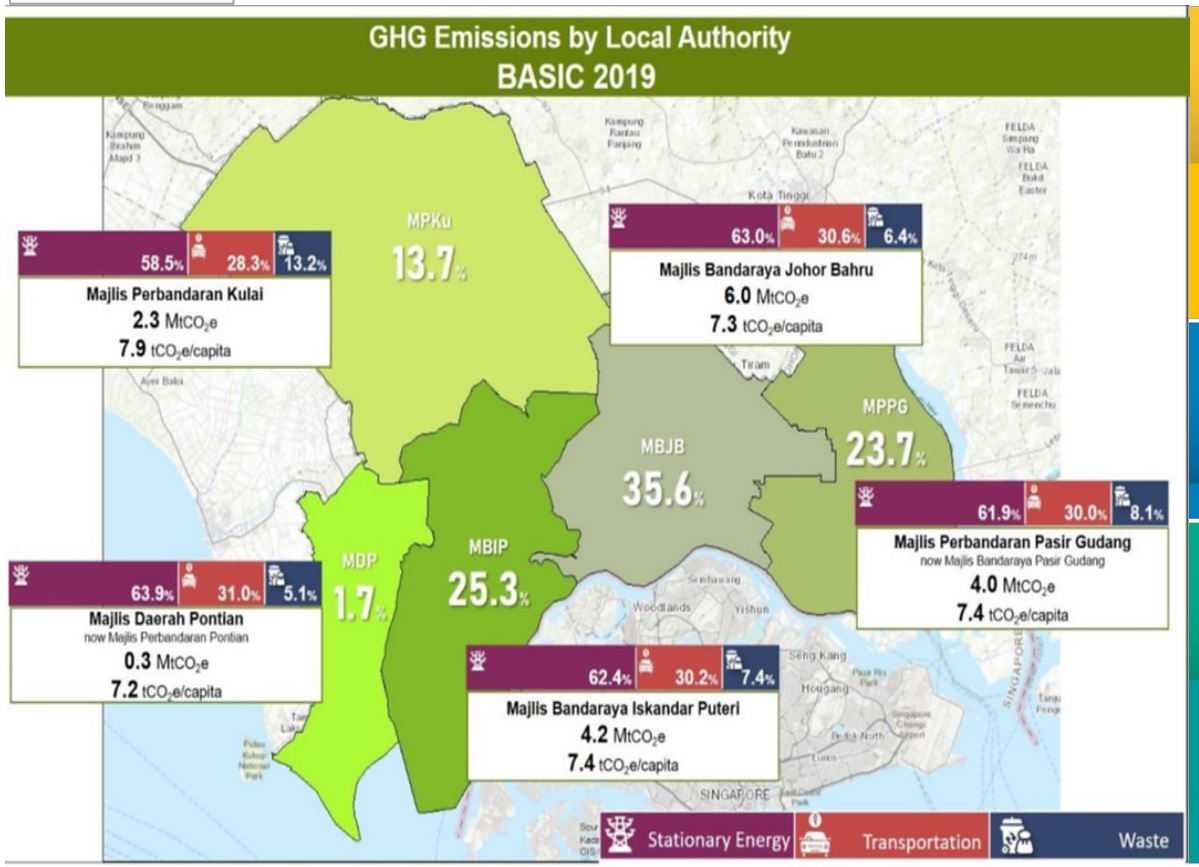
The Low Carbon Society (LCS) Blueprint for Iskandar Malaysia outlines a set of holistic climate change mitigation policies and practical strategies to propel sustainable, low-carbon-focused development in the region. blueprint was structured based on the 12 LCS Actions.

This is for consistency and ease of reference by the five (5) local authorities related to propose key projects designated for each municipality.

58% reduction of GHG emission intensity by 2025 (2010 base year)

40% emission reduction from BaU (business as usual) by 2025 (2010 base year)

2025



GREEN ECONOMY

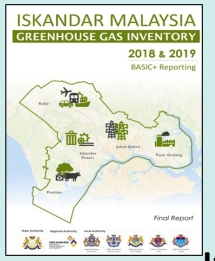
Actions	Contribution (t CO2eq)	% Share
Action 1: Integrated Green Transportation	1,916,000	15%
Action 2: Green Industry	1,094,000	9%
Action 3: Low Carbon Urban Governance*	-	-
Action 4 Green Building and Construction	1,203,000	9%
Action 5: Green Energy System and Renewable Energy	2,725,000	21%
	6,937,000	**54%**

GREEN COMMUNITY

Actions	Contribution (t CO2eq)	% Share
Action 6: Low Carbon Lifestyle	2,727	21%
Action 7: Community Engagement and Consensus Building**	-	-
	2,727	**21%**

GREEN ENVIRONMENT

Actions	Contribution (t CO2eq)	% Share
Action 8: Walkable, Safe and Livable City Design	263	2%
Action 9: Smart Urban Growth	1,214	10%
Action 10: Green and Blue Infrastructure and Rural Resources	392	3%
Action 11: Sustainable Waste Management	1,224	10%
Action 12: Clean Air Environment*	-	
	3,094	**25%**



Iskandar Malaysia GHG Inventory 2019

Iskandar Malaysia BASIC+ emissions intensity by GDP in 2019 was 0.2320 ktCO2e/RM million respectively.

A reduction of 19.7% from its base year 2010.

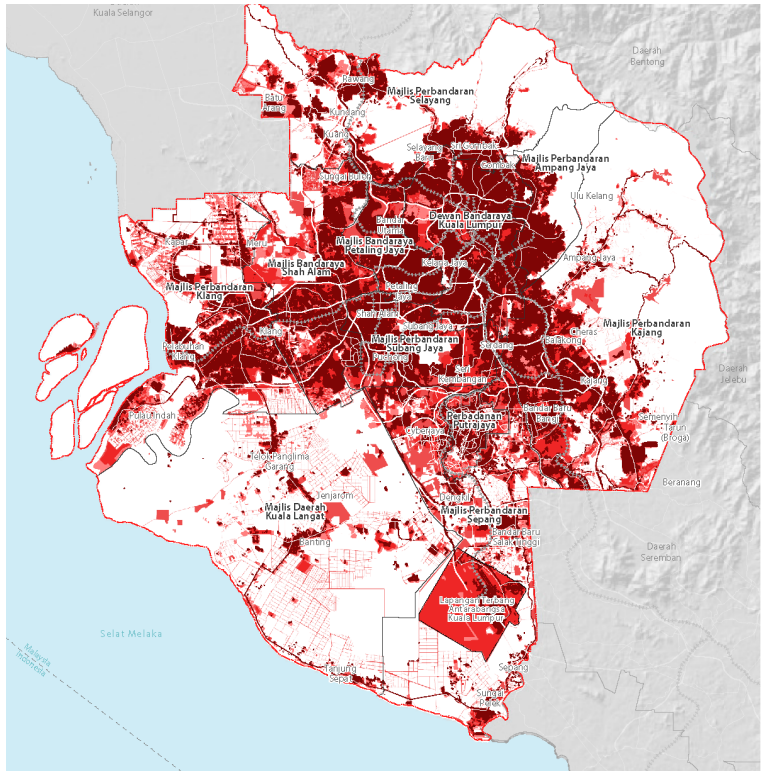
1st region to adopt Global Protocol for Community scale GHG emission inventory.

Common Interest, Assets and Challenges

Collaborative Governance required to address inter boundary issues

URBANICE MALAYSIA

MALAYSIA SDG CITIES



Joint Operations Bodies

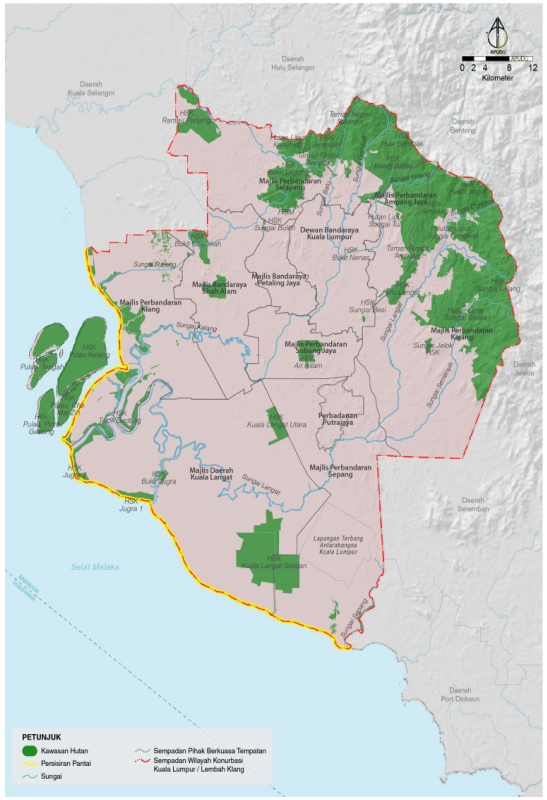
National Ministries/Agencies

State Government

Local Government

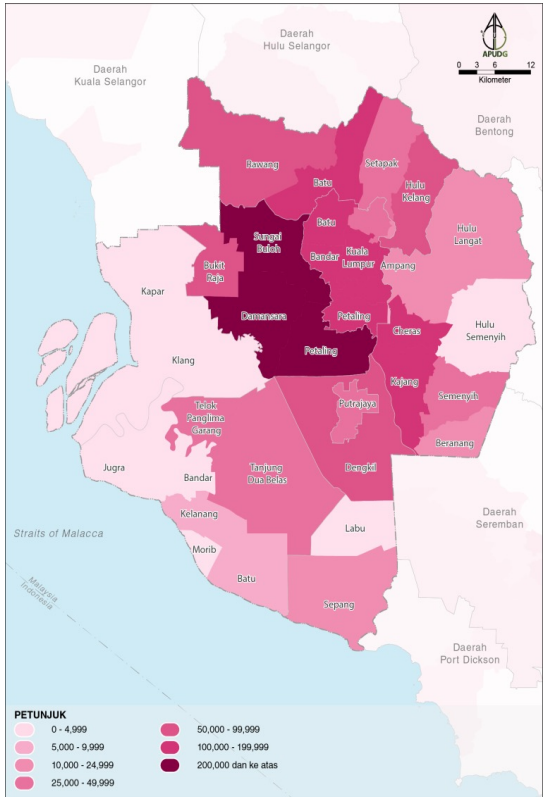
Sumber Semula Jadi

Sumber semula jadi seperti sungai, air, hutan simpan serta pesisir pantai dikongsi bersama antara PBT dan kawasan pentadbirannya



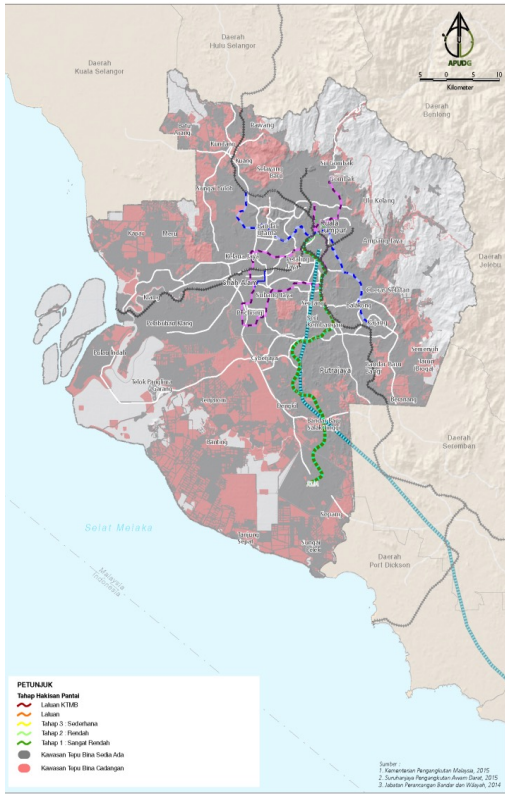
Hab Pekerjaan

Rangkaian pusat-pusat pekerjaan serta kediaman yang berhubung di antara bandar-bandar berlainan menjadi pemangkin kepada pertumbuhan wilayah dinamik



Infrastruktur

Perkongsian infrastruktur antara kawasan pentadbiran juga memainkan peranan dalam membantu pembangunan wilayah yang kukuh



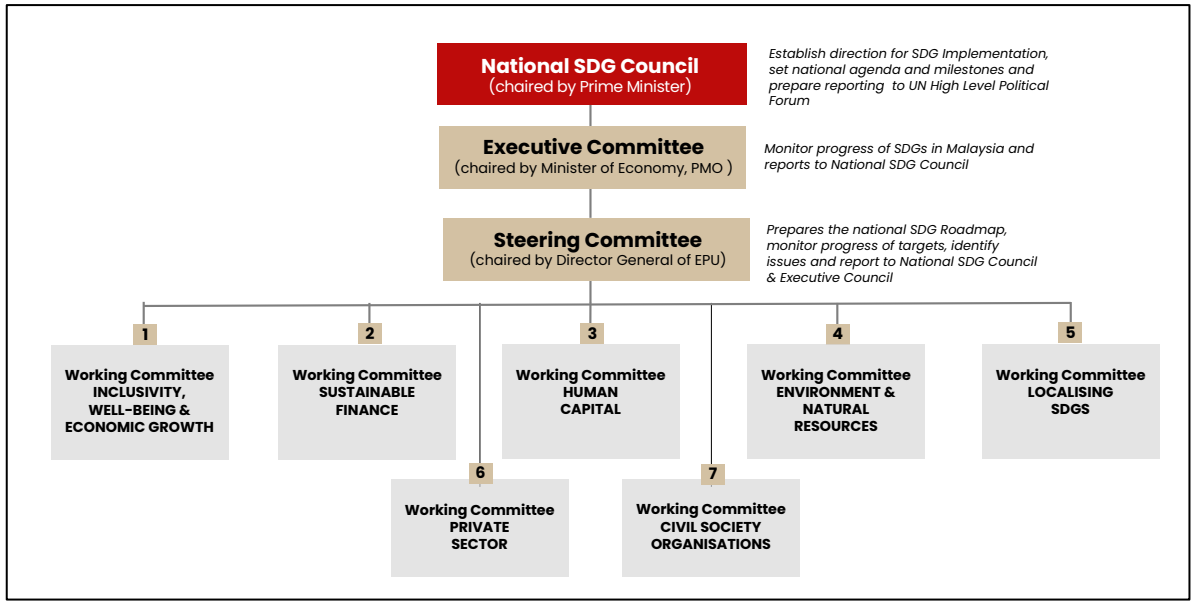
30%
National population

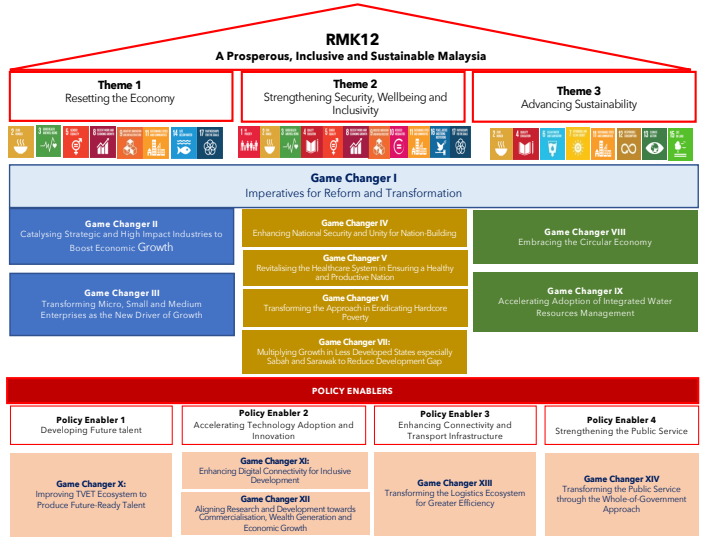
37.4%
National GDP

2+8+11
States, Districts and Local Governments

40
Urban Centres

Malaysia Commits to the SDGs and has a strong institutional framework to support the sustainability agenda in Malaysia





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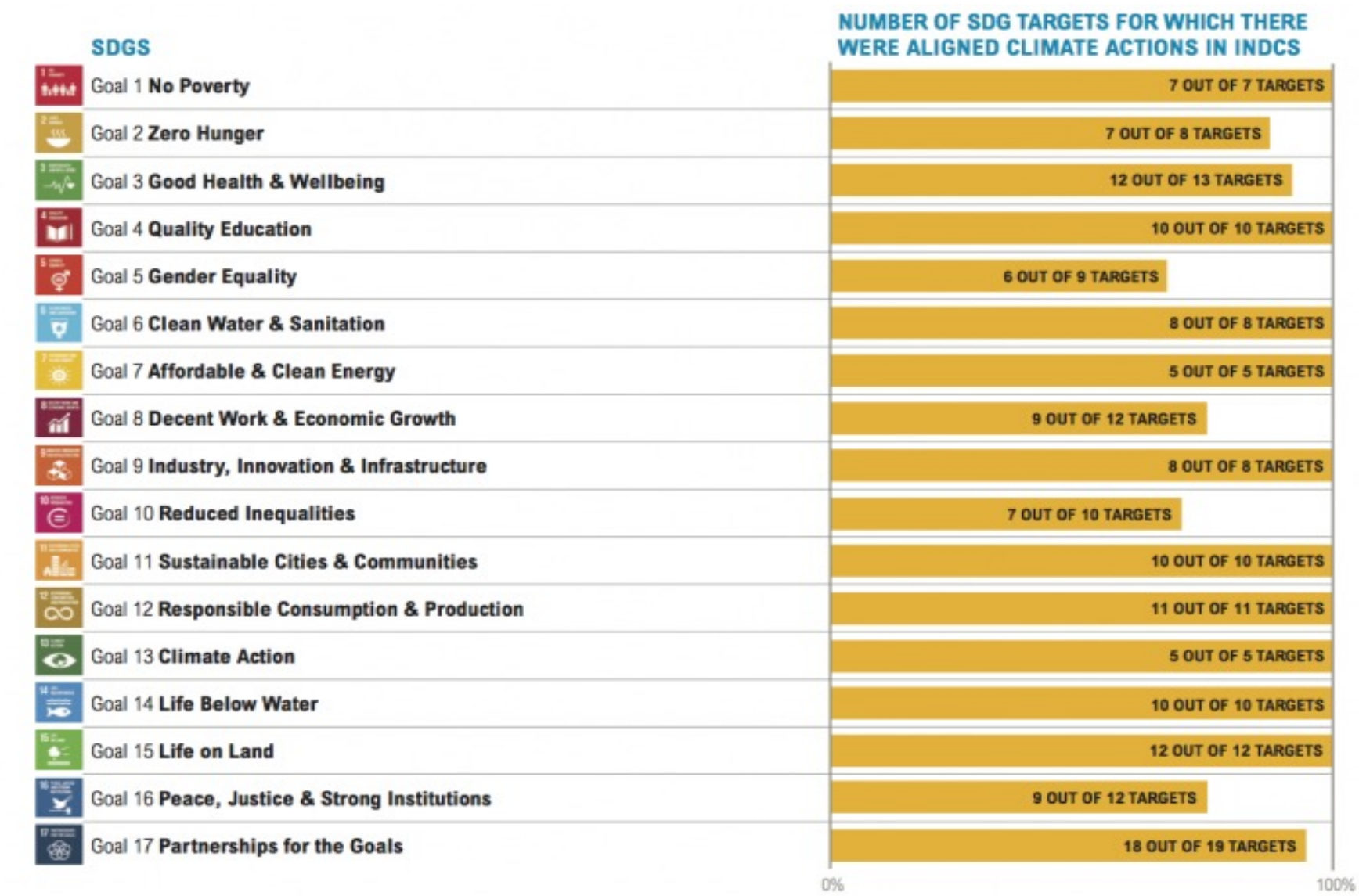
Climate change and sustainable development are Two Sides Of The Same Coin

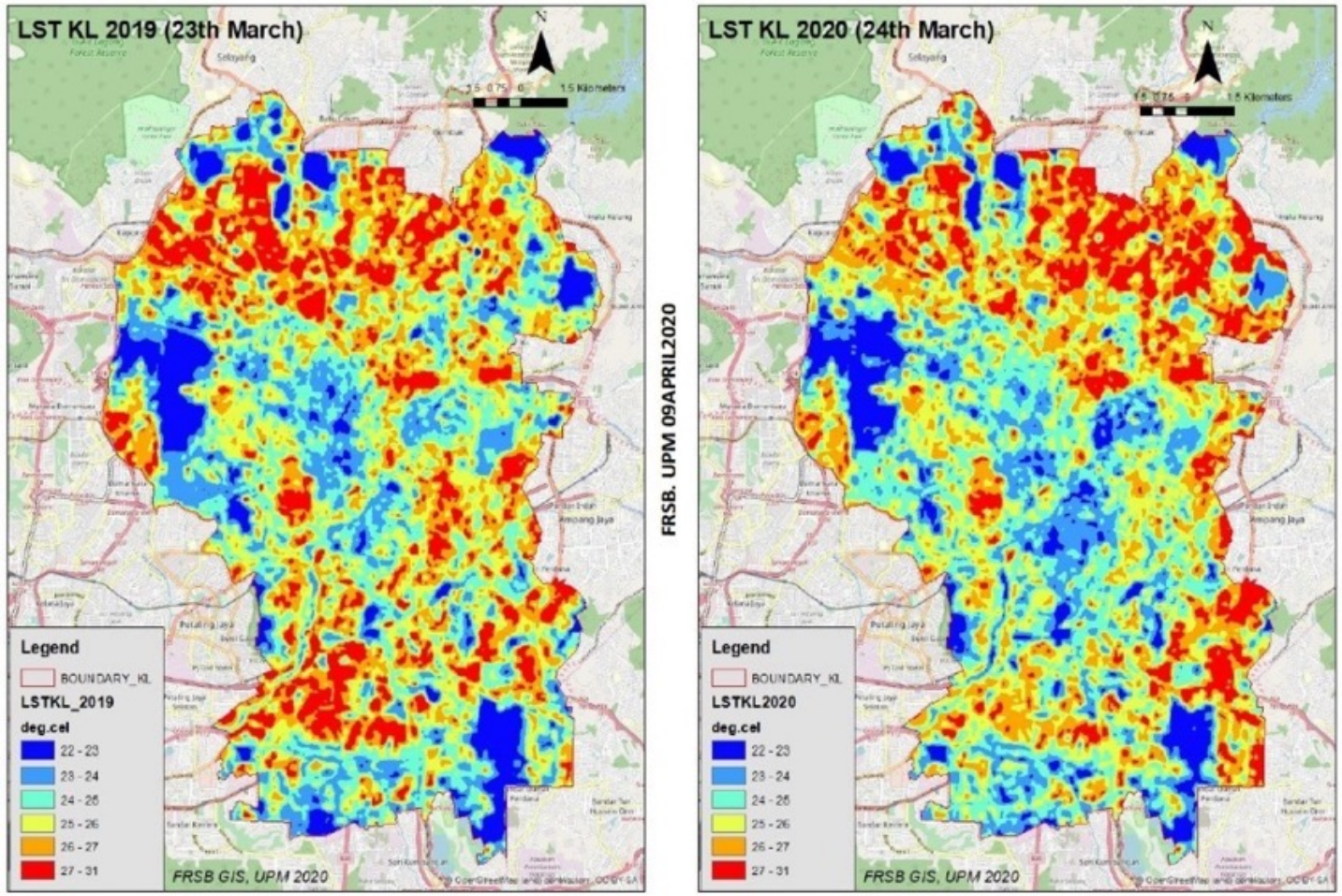


Climate change is the accelerator of all other global trend challenges in food security, water scarcity and chaotic urbanisation. The development agenda is closely interlinked with the climate agenda: it has been estimated that as many as **154 of the 169 SDG targets are aligned with climate action**s. The message is clear: seeing all SDGs as parts of an interlinked goal is absolutely necessary for successful implementation of SDG 13.

In urban areas, climate change crisis intensifies as we faced severe floods due to increase in annual rainfall and effects of the monsoon.

Urban Activities Contributes Significantly to UHI

Cities are getting warmer, storms and heavy rains are causing all kinds of natural disasters



Researchers from Univerity Putra Malaysia analyse surface area temperature of Kuala Lumpur. (Group of researchers led by Prof. Madya GS. Dr. Mohd Johari Mohd Yusof has studied the impact of pandemic Covid-19 on the effect of the city heat island.

LOCKDOWN - Kl's UHI Improves With 2.84 Degrees Drop In Temperature.

23 March 2019 - 30.95 degrees Celsius
24 March 2020 - 28.11 degrees Celsius

UHI contributes towards :

- Higher energy consumption
- Higher Green House Gas Emission (NO2, CO2, etc)
- Human Health and Comfort Levels
- Impaired Water Quality

Malaysia SDG Cities

encourages cities to have set targets and goals towards the sustainability agenda and ensure no one is left behind

Launched on the 29th September 2020 by Prime Minister of Malaysia @ MUF2020

In localizing the SDGs, the Malaysia SDG Cities will adapt, implement and monitor the SDGs goals and targets at the local level.

Aligning To National & State Policies And Plans

To implement the National SDG Roadmap for Malaysia, the need to align local SDGs programs and initiatives with State and National is important. This will support a bottom-up process, where the City Roadmap and Voluntary Local Reviews by Local Governments will provide the mechanism for implementation and monitoring.

Vertical Integration

National

Policies, Blueprints, Development Plans and Voluntary National Reviews

State

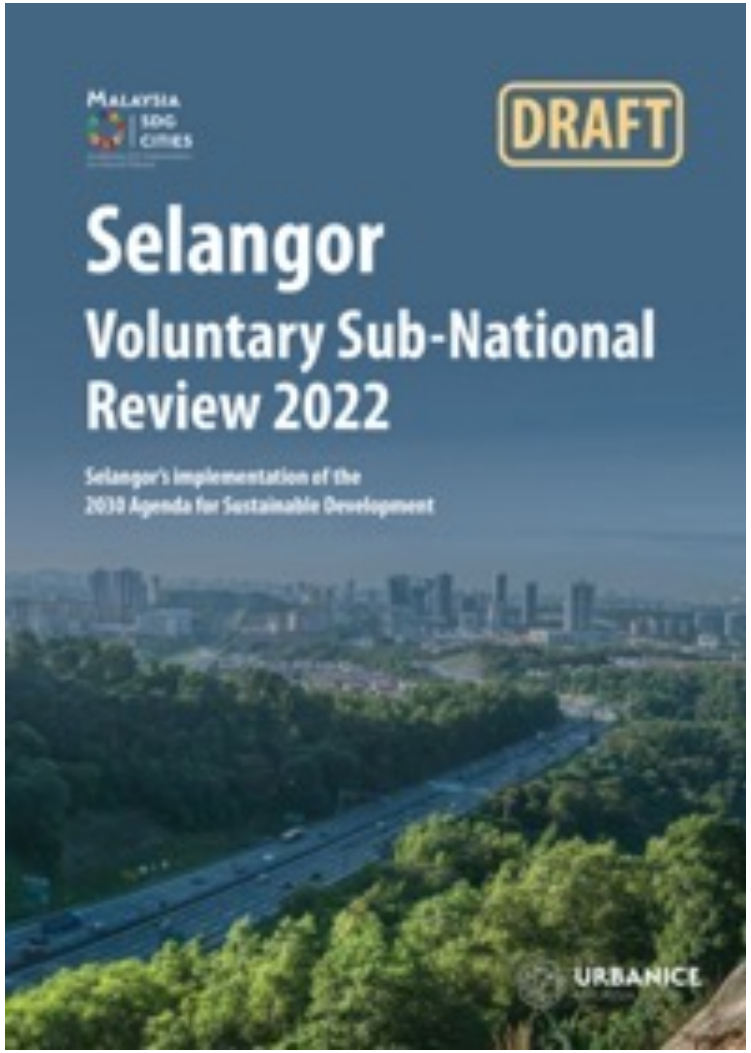
Policies, State Development Plans and State Sustainable Agenda

Local

Local Plans, Strategic Plans, Action Plans, Guidelines, Rules and Regulations.

- City Voluntary Local Review
- SDG Cities Report
- Community Programs and Initiatives

MALAYSIA'S VOLUNTARY SUB-NATIONAL REVIEWS (VSRs)



Selangor SDG Roadmap and VSR Preparatory Committee

Selangor State Town & Country Planning Department
Chairman

URBANICE Malaysia
SDGs Subject Matter Expert

MEMBERS

State Secretariat t of Selangor
State Economic Planning Unit
Local Planning Authorities
Technical Agencies in Selangor State

Key Private Sector Players
Proton, Nestle, Prasarana, Developers etc

Surrounding Local Government
Kuala Lumpur City
Seremban City Counci;
Tg Malim City Council

Role
- Coordinates the flow of data and information from all members that are crucial for SDG implementation

Role
- Knowledge sharing and capacity building
- Develop the assessment on Selangor's SDG progress
- Prepares the SDGs progress report, its roadmap and timeline

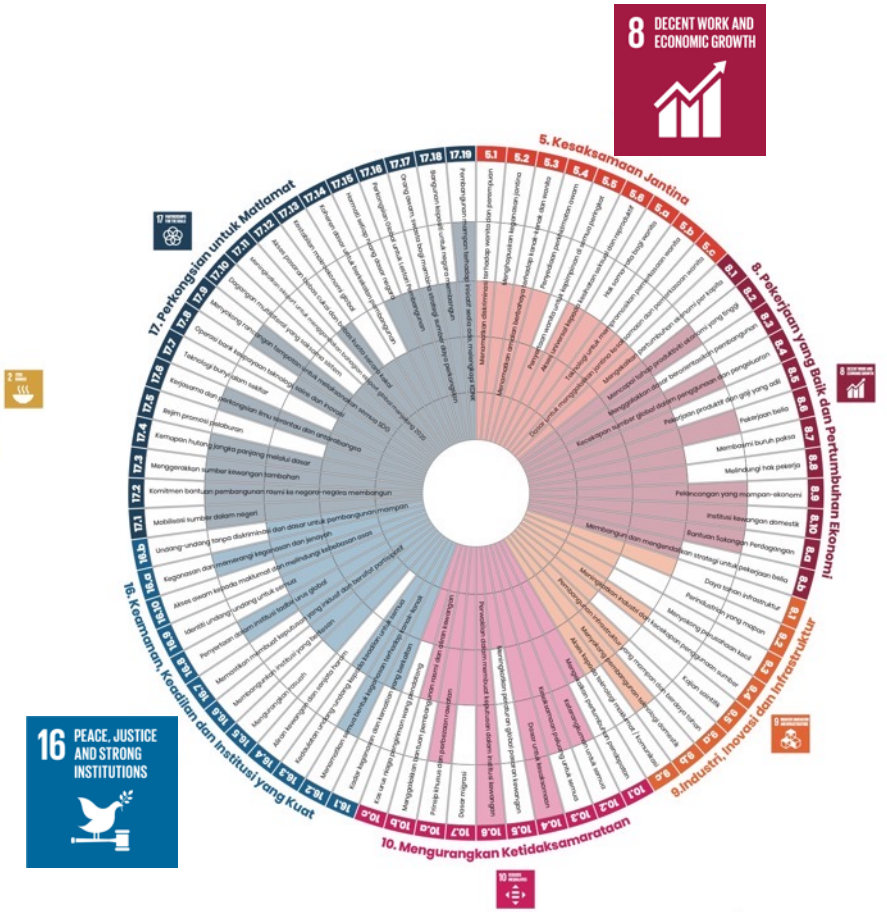
Members Role
- Provision of Data, Information on the stated SDG Targets
- This includes programs and initiatives undertaken at State level
- Involved in focus group discussions

Preparatory Time
- 12 months
- May 2021-May 2022

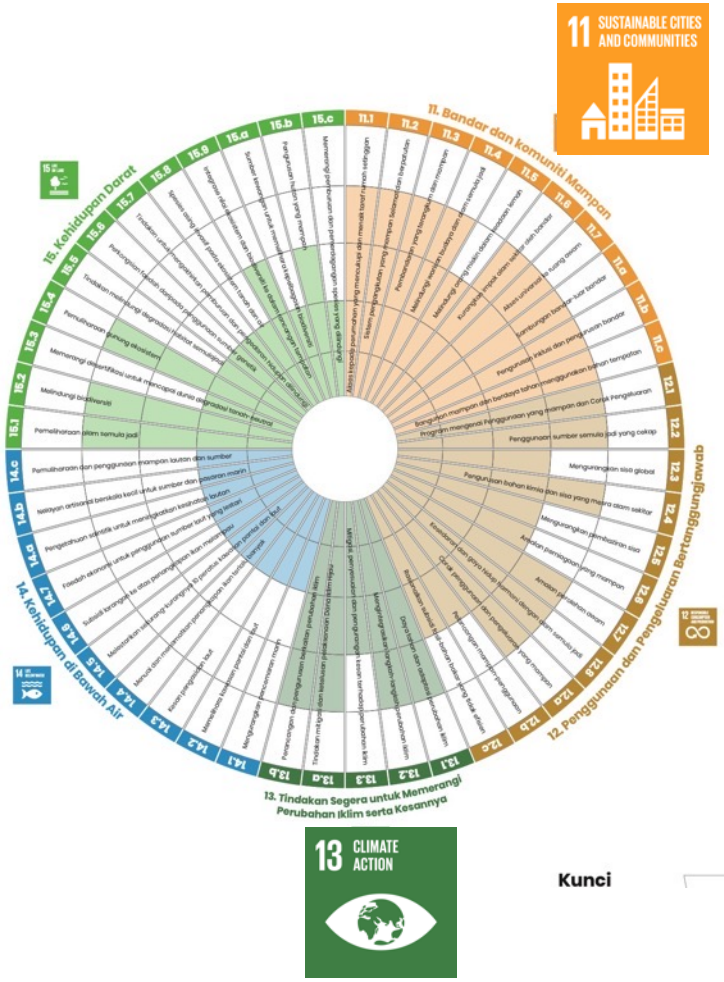
SELANGOR SDGs ROADMAP – WHEEL CHART ASSESSMENT AND STAKEHOLDERS PERCEPTION

Ensure Inclusive Growth and Development for All

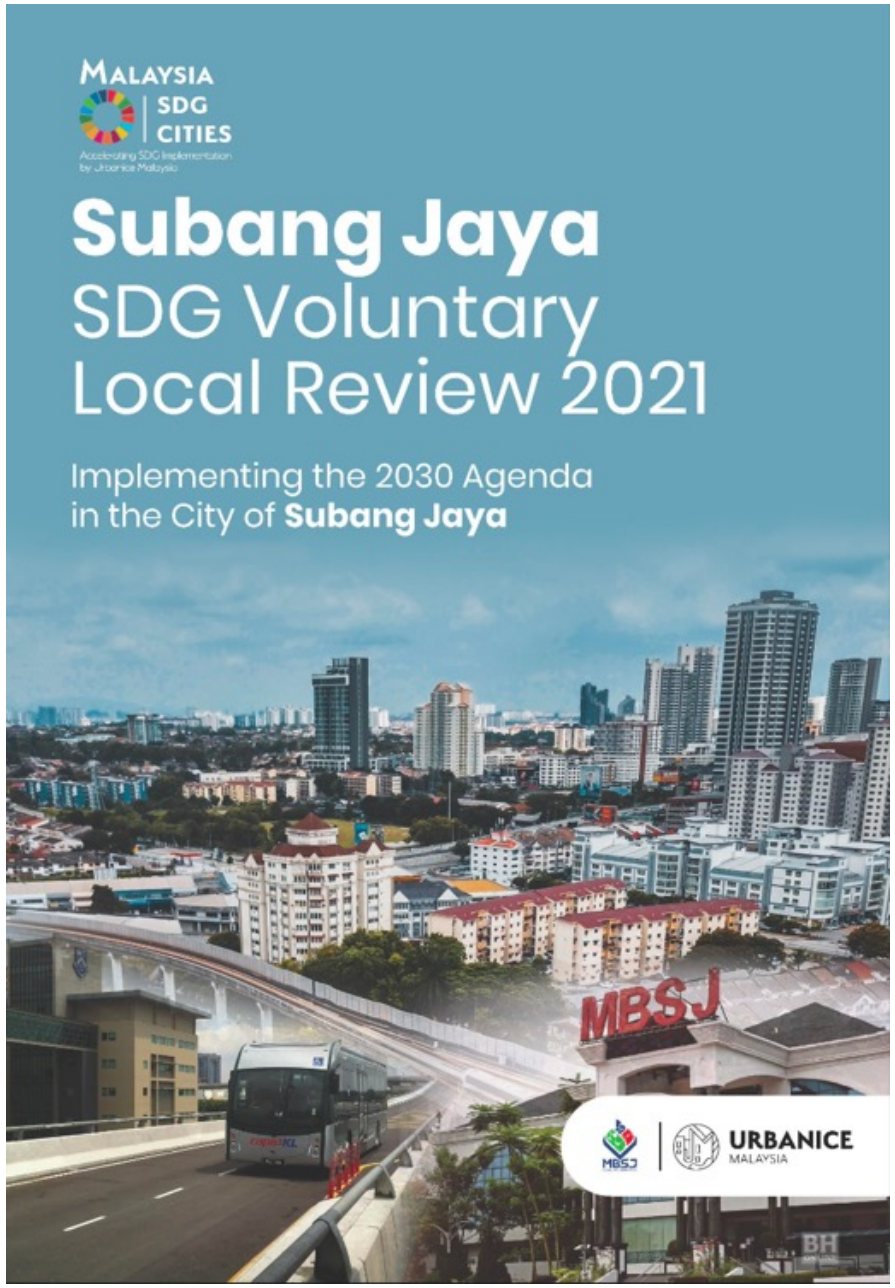
Enhance to Quality Services to Address Disparities



Promote Environmental Sustainability to Mitigate Climate Change



Source : FGD Hybrid Selangor SDG Roadmap 8 Nov 2021



Vision

To become a world class city council based on smart township, prosperous city, and ideal living by 2030

Mission

Manage world class municipality towards making Subang Jaya prosperous, smart and dynamic

Key Principles

Professionalism, skilled, trend setter, passionate teamwork, and leading by example

Planning and Development Framework

MBSJ Local Plan 2035

Sustainable Development Framework

Subang Jaya Sustainable City 2019-2024

Subang Jaya Sustainable City 2019-2024 is prepared as a blueprints of 6 main action plans which aims to develop MBSJ as a sustainable city which give a choice and opportunities based on sustainable city 3 main pillars i.e social, economy and environment.

SDG Priorities Today

Key Initiatives

- Local Agenda 21
- Low Carbon City Framework
- National Community Plan

Action Plans and Key Focus

- Green City
- Healthy City
- Smart City
- Well-being City
- Women Friendly City
- Safe City

National	Malaysia SDG Commitments	Voluntary National Review 2018	Voluntary National Review 2021	Malaysia SDG Cities
Global	17 Goals	ESCAP		

SDGs in Subang Jaya

First phase of SDG reporting for Subang Jaya consist of 7 SDGs

First phase of SDG reporting is to focus on existing initiatives that has a strong tangible projects, coherent policies, structured implementation mechanism and institutional support which successfully influenced wide range of stakeholders in Subang Jaya. It is also where Subang Jaya has devoted their efforts and resources in terms of projects, plans, initiatives and policies.

Next phase of SDG reporting for Subang Jaya

Phase 2 on the other hand is where the city wants to develop more knowledge, gather more data and conduct more analysis to shape its work and this include refining and reordering the formulated framework through lesson learnt. 10 SDGs will be targeted for completion by 2030 and its implementation may vary base on resources available. It is hope in the next VLR reporting, Subang Jaya will be reporting these SDGs as well.

MINISTRY OF DEVELOPMENT & LOCAL GOVERNMENT

KPKT

URBANICE
MALAYSIA

Thank You

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