



LOW CARBON SOCIETY BLUEPRINT

PENGERANG

2030

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BACKGROUND OF PBT Pengerang

BACKGROUND OF **PBT PENDERANG**



The idea of setting up the Pengerang PBT begins from the Johor State Budget 2016 speech by YAB Dato' Haji Mohamed Khaled bin Nordin, The Chief Minister of Johor Dated 19 November 2015

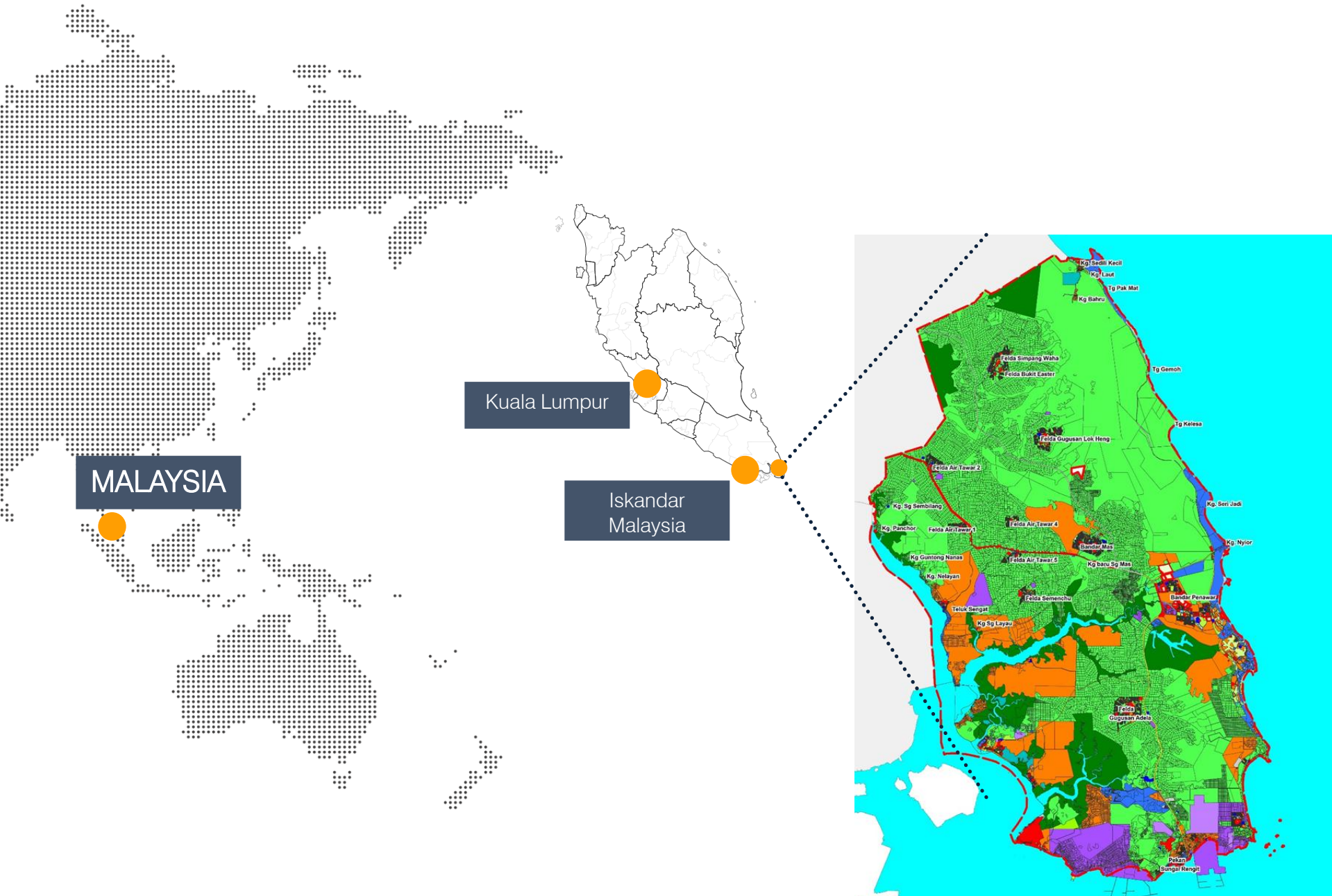
BACKGROUND OF **PBT PENDERANG**



“ Establish a exclusive municipality in Penderang to support the rapid growth and development of Penderang Intergrated Petroleum Complex (PIPC) and it's surrounding areas. Jcorp will be appointed to administer it until such time as the State Government will decide. ”

- YAB Dato' Haji Mohamed Khaled bin Nordin

BACKGROUND OF PBT PENDERANG



BACKGROUND OF **PBT PENDERANG**



Location

At the southern east coast of Peninsular Malaysia, within the State of Johor

Function

Regional Oil & Gas Storage and Trading Hub, Tourism Industries and Eastern Johor Economic Corridor

Area

1,288.3km² (128,830 hectares),
PIPC: 80.9km² (8,093 hectares) of total Penderang area

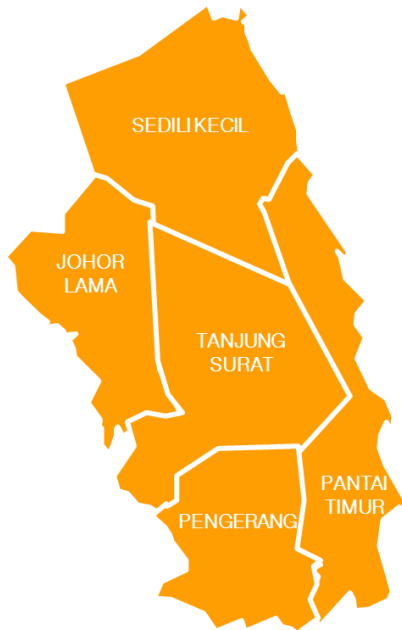


BACKGROUND OF **PBT PENGERANG**



Population

86,632 (2010),
128,500 (2020),
252,800 (2030)



Administration

Pihak Berkuasa Tempatan Pengerang
(PBT Pengerang)



Vision

Clean, Green, Safe and Smart Pengerang
2030

2

PENGERANG
INTEGRATED PETROLEUM COMPLEX

ECONOMIC TRANSFORMATION PROGRAMME

**Oil & Gas is one
of the 12 National
Key Economic
Areas (NKEAs) in
Malaysia's
Economic
Transformation
Programme (ETP)**



Oil, Gas and Energy



Palm Oil & Rubber



Financial Services



Tourism



Business Services



Electronics & Electrical



Wholesale & Retail



Education



Healthcare



Communications
Content and
Infrastructure



Agriculture



Greater Kuala Lumpur/
Klang Valley

EPP4

Create a
Regional Oil
Storage and
Trading Hub

EPP13

Increasing
Petrochemical
Output

ECONOMIC TRANSFORMATION PROGRAMME



Downstream Oil & Gas
development in Johor is part
of EPP4 and EPP13 under
ETP Oil, Gas and Energy
(OGE) NKEA

EPP4

Create a Regional Oil Storage and Trading Hub

2020 total
new jobs:
800

2020 GNI
impact:
**USD 0.5
Billion**

EPP4 in Johor - Malaysia can become a regional oil storage hub with proximity to Singapore, deep water and land availability

- Demand to build storage capacity for the region
- Complementing Singapore, the only major independent terminal and storage facility in South East Asia
- Potential for oil trading business, development of downstream industry (e.g.: refinery, oil based petrochemical complex, LNG regasification terminal)

EPP13 Increasing Petrochemical Output

Private
Investment
**RM89
Billion**

Public
Investment
**RM1.7
Billion**

EPP13 in Johor - Petrochemical Complex will be built in Pengerang



- 20,000 acres (~80 km²)
- PETRONAS Pengerang Integrated Complex (PIC)
- DIALOG-Vopak Deepwater Petroleum Terminal
- Refineries
- Petrochemical Plants

3

PRO ACTIVE POLICY PLAN
**PENGERANG LOW CARBON SOCIETY
BLUEPRINT 2030**

AIM OF PLCSBP 2030

POLICYMAKERS

INVESTORS, BUSINESSES

NGOs

COMMUNITIES

The *Pengerang Low Carbon Society Blueprint 2030* (PLCSBP 2030) aims to provide a *clear policy framework* with implementation programmes to achieve **low carbon development** that enhances the economy, empowers communities and conserves the environment in the PBT Pengerang administrative area towards realising a **Clean, Green, Safe and Smart Pengerang by 2030**



BACKGROUND OF **PLCSBP 2030**



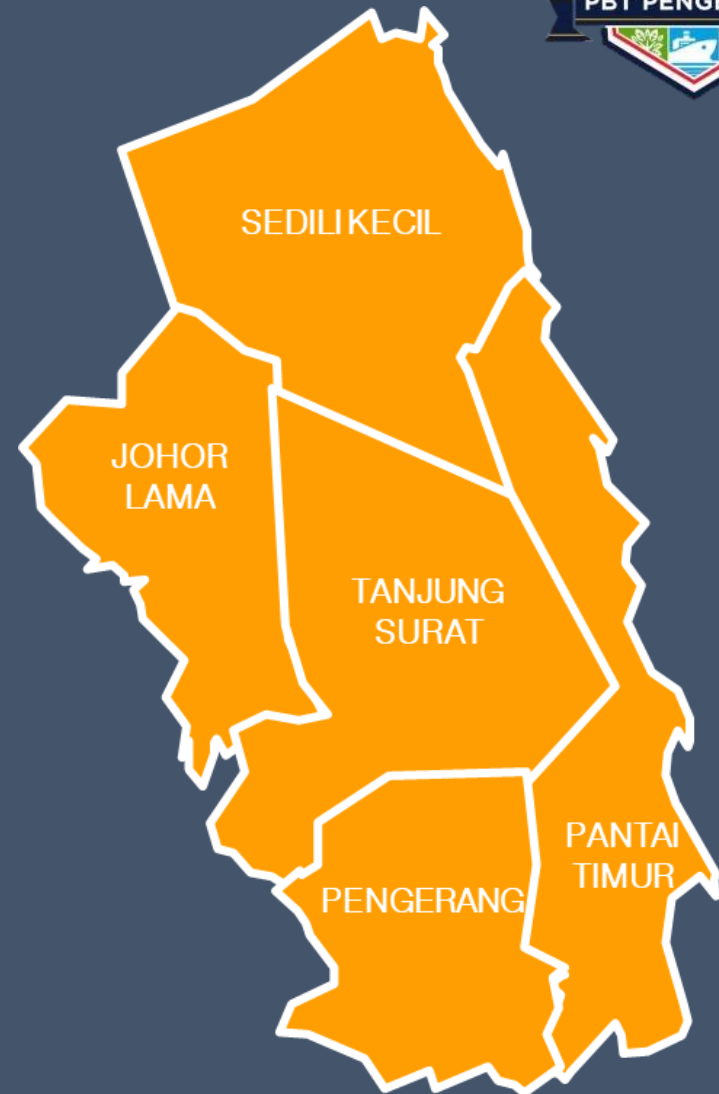
The PLCSBP 2030 will cover **5 Mukim** of the **Kota Tinggi District**: Sedili Kechil, Tanjung Surat, Pantai Timur, Pengerang and Johor Lama.

Total area = 128,830 hectares
(1288.83 km²)

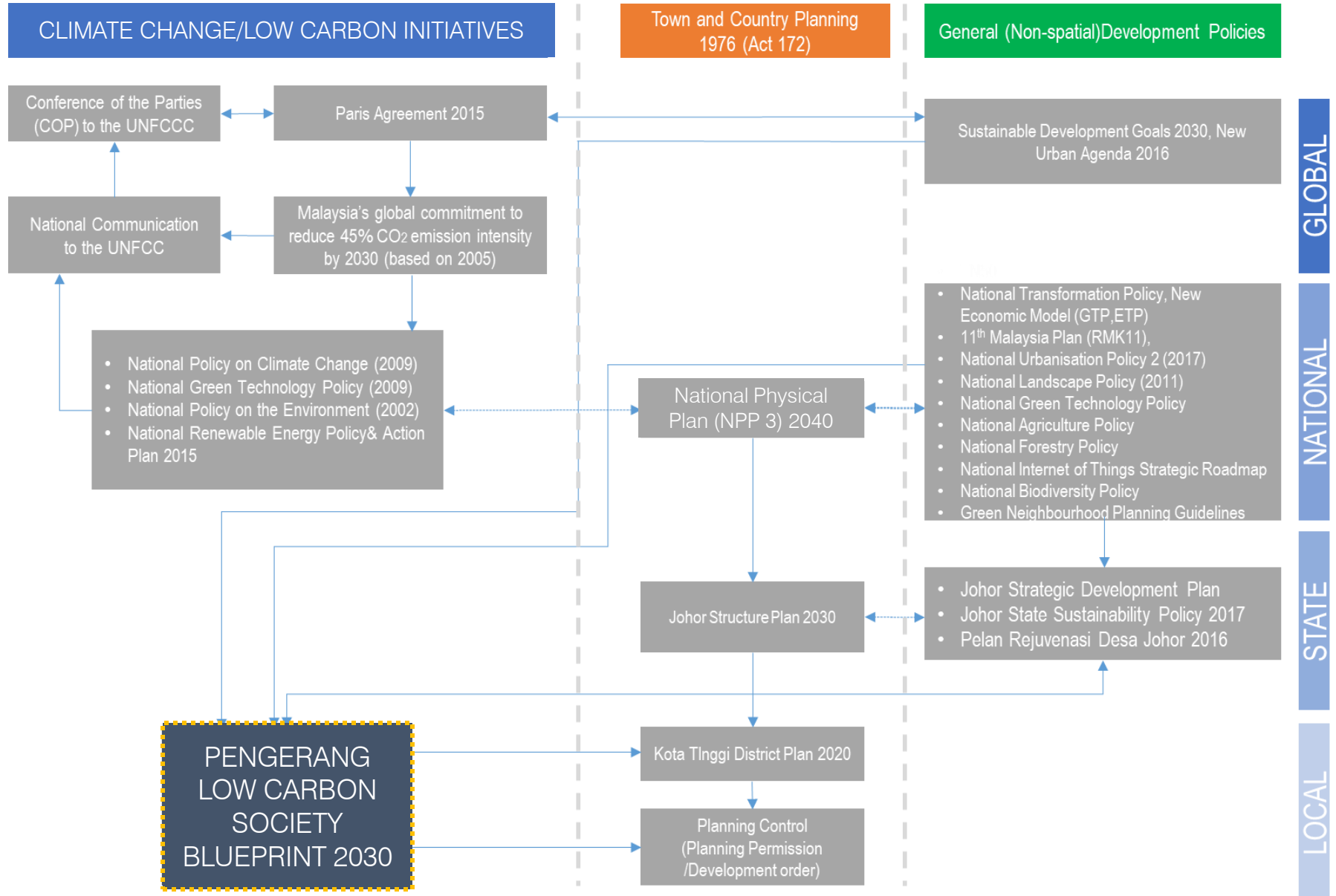
PBT Pengerang

Population (2010) = 86,632

Population (2020) = 128,467
(RTDKT2020)

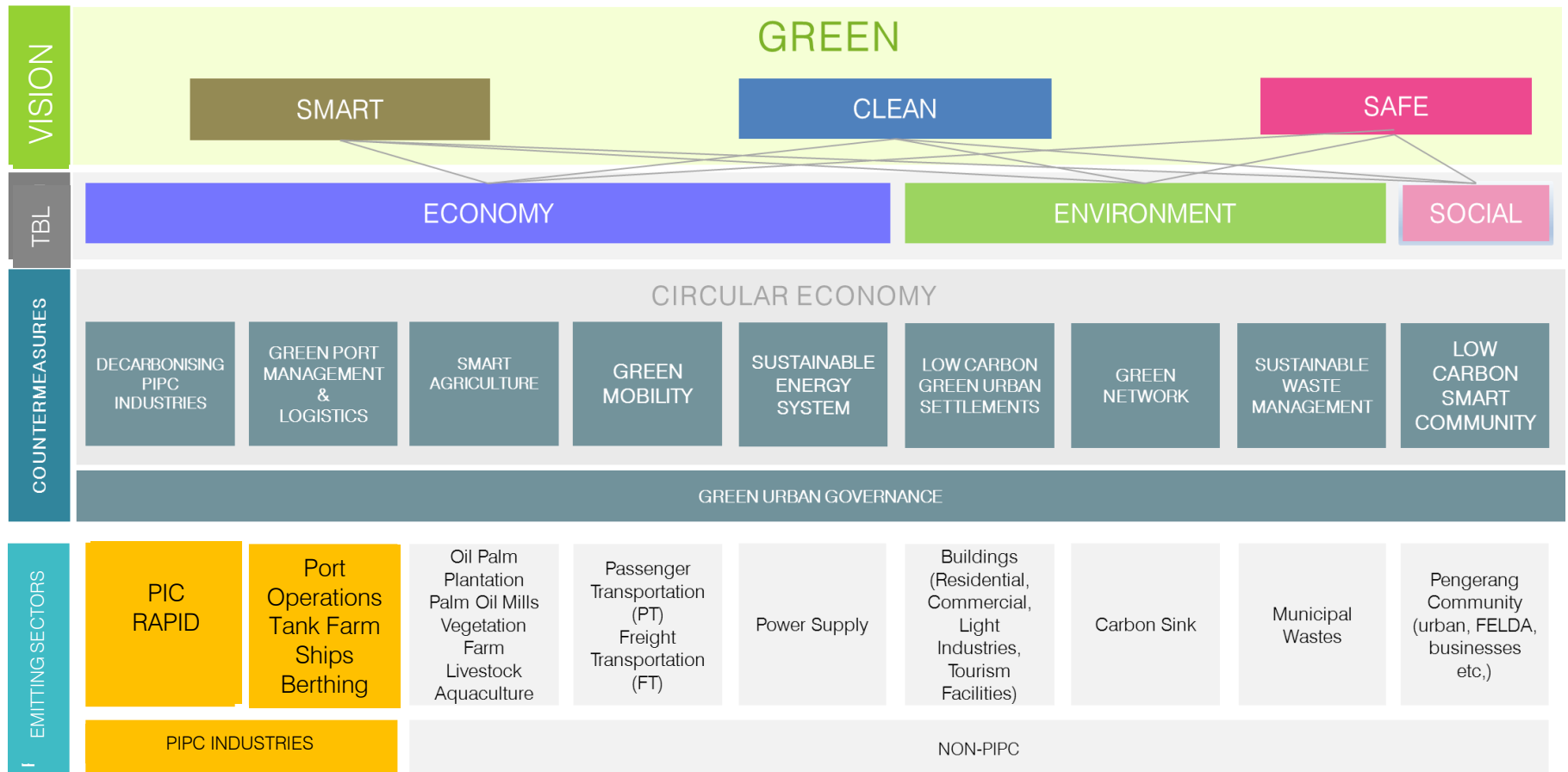


POLICY CONTEXT OF PLCSBP 2030



FRAMEWORK OF PLCSBP 2030

PENGERANG LOW CARBON SOCIETY BLUEPRINT 2030



SCOPE OF PLCSBP 2030



**1.DECARBONISING
PIPC INDUSTRIES**



**2.GREEN PORT
MANAGEMENT
& LOGISTICS**



**3.SMART
AGRICULTURE**



**4.GREEN
MOBILITY**



**5.SUSTAINABLE
ENERGY
SYSTEM**



**6.LOW CARBON
GREEN URBAN
SETTLEMENTS**



**7.GREEN
NETWORK**



**8.SUSTAINABLE
WASTE
MANAGEMENT**



**9.LOW CARBON
SMART
COMMUNITY**



**10.GREEN
URBAN
GOVERNANCE**

SCOPE OF **PLCSBP 2030**

DECARBONISING PIPC INDUSTRIES



Assessment on the current scenario of **industries activities** in Pengerang especially PIPC area for carbon emission



Recommendation on actions/measures to reduce carbon emission through **green industries initiatives** that covers PIPC specifically

PORT MANAGEMENT & LOGISTICS



Assessment on the current and future scenario of **port management and its logistics**



Assessment of the **current and future maritime activities** in the port of Pengerang and its contribution to carbon emission

SCOPE OF **PLCSBP 2030**

SMART AGRICULTURE



Assessment on the current and future scenario of **agriculture activities** in Pengerang including the contribution of agriculture to carbon emission



Identification of measures/actions towards **sustainable agriculture**

GREEN MOBILITY



Assessment on the current scenario of the **transport system** for carbon emission



Scenario development for future **transportation and logistics** in Pengerang



Recommendation on actions/measures to reduce carbon emission through **integrated green transportation and logistics**



SCOPE OF **PLCSBP 2030**

SUSTAINABLE ENERGY SYSTEM



Implication of the existing **energy generation and consumption pattern** on carbon emission



Assessment on the impact of carbon mitigation in the **energy sector, including the improvement of energy efficiency (EE), the use of renewable energy (RE) and energy management**

LOW CARBON GREEN URBAN SETTLEMENTS



Assessment on the **current land use development** scenarios in terms of carbon emission.



Evaluation on the impact of existing **land use policies** on the level of carbon emission.



Identification of **land use patterns and structures** towards effectively reducing carbon emissions to consider the economic implications

SCOPE OF **PLCSBP 2030**

GREEN NETWORK



Provision of **information and technical advice** on green space for carbon sequestration, biodiversity and carbon reduction potential **through forest conservation and tree planting**

SUSTAINABLE WASTE MANAGEMENT



Provision of information and technical advice on **municipal solid waste and agriculture waste management** with low carbon emission characteristic



Identification of the following emissions associated with **electricity consumption, operations and treatment processes** in **wastewater treatment plant (WWTP)** and **sludge treatment**



Evaluation on **carbon footprint of WWTP** based on plant operations and processes, including direct and indirect emissions

SCOPE OF **PLCSBP 2030**

LOW CARBON SMART COMMUNITY



Promotion on **education and public awareness campaigns (community and schools)** on the importance of low carbon lifestyles and the environment



Promotion on the **involvement of stakeholders** in the low carbon development and environmental conservation programmes

GREEN URBAN GOVERNANCE

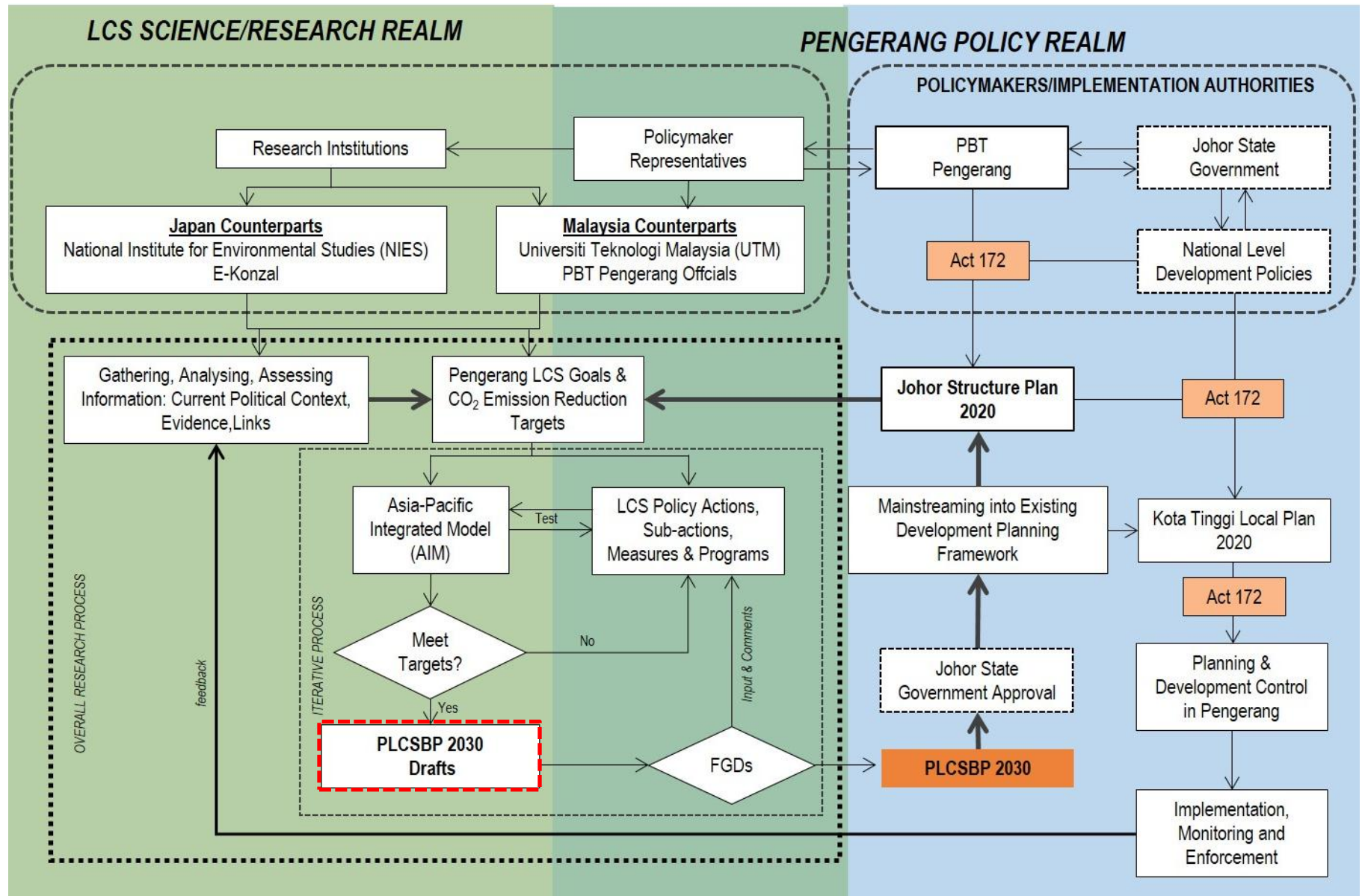


Mainstreaming of **low-carbon society policies** into the development control system/mechanism of Pengerang including incorporation of Malaysia standards, guidelines and best practices that are relevant to carbon emission mitigation

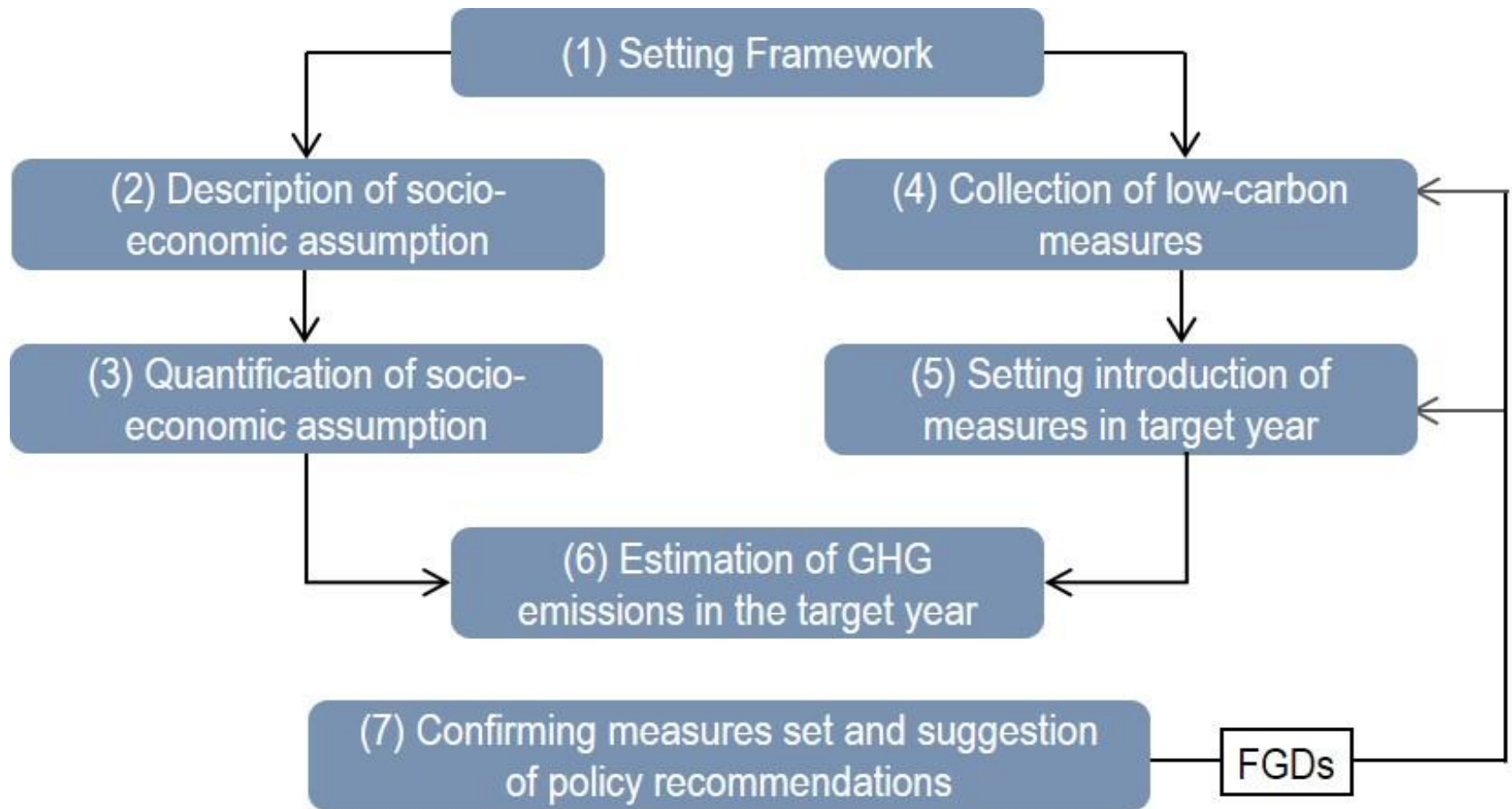


Provision of **information and advice** in terms of administration and institutional management; capacity building for government officials; and implementation and monitoring of low carbon policies and measures

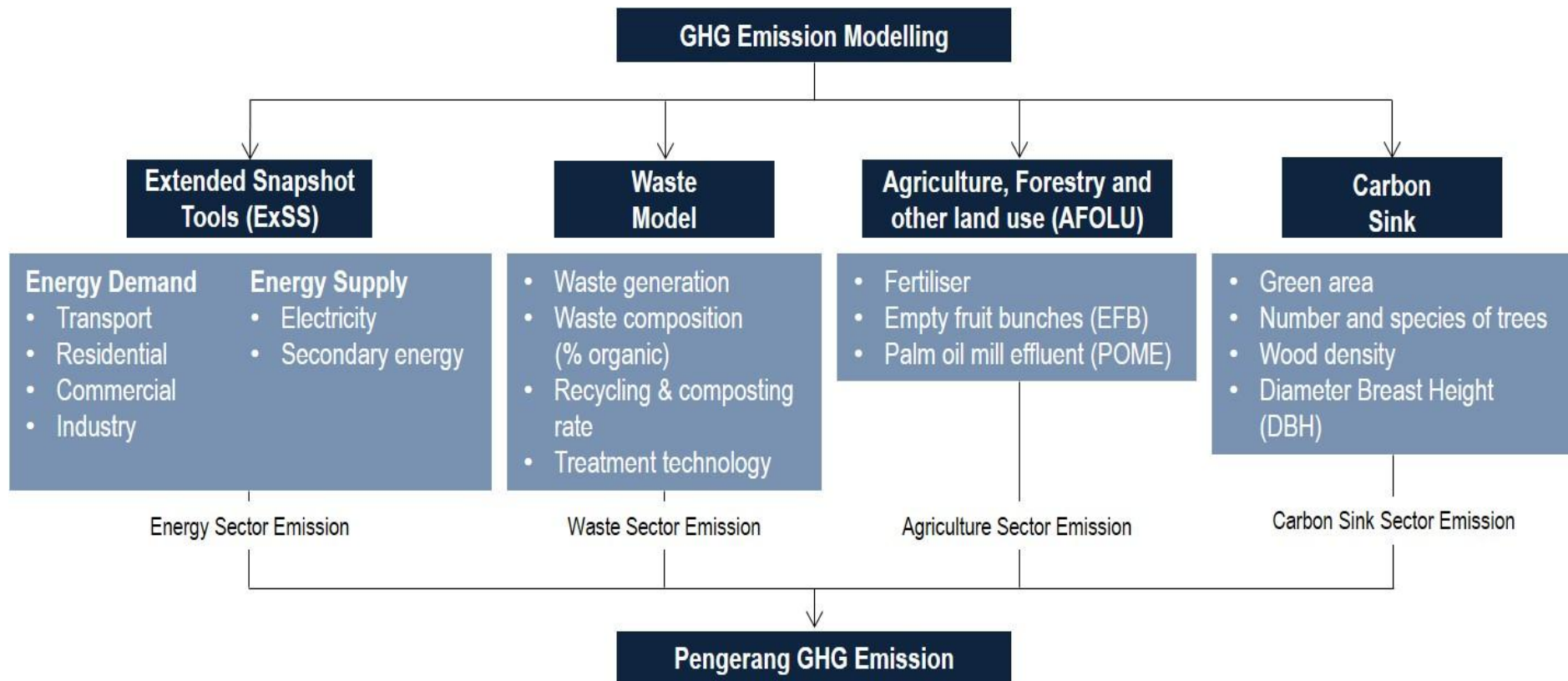
PLCSBP 2030 METHODOLOGY



PLCSBP 2030 METHODOLOGY

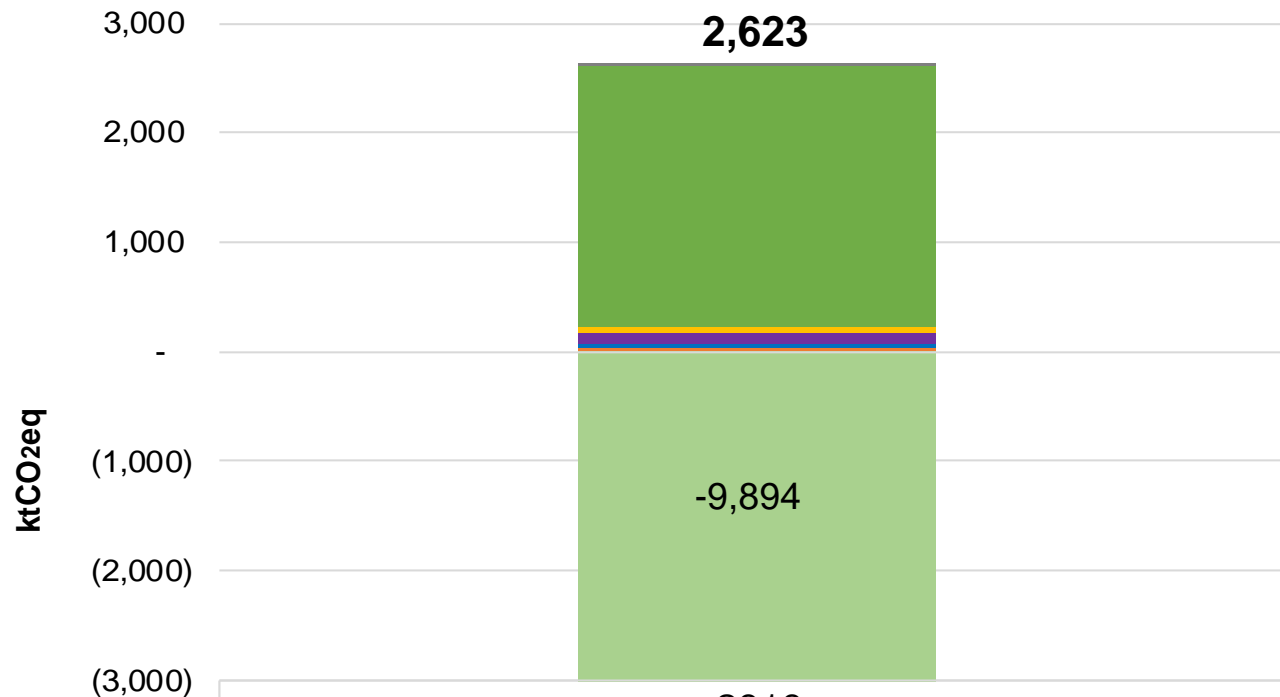


PLCSBP 2030 METHODOLOGY



PRELIMINARY BASELINE STUDY

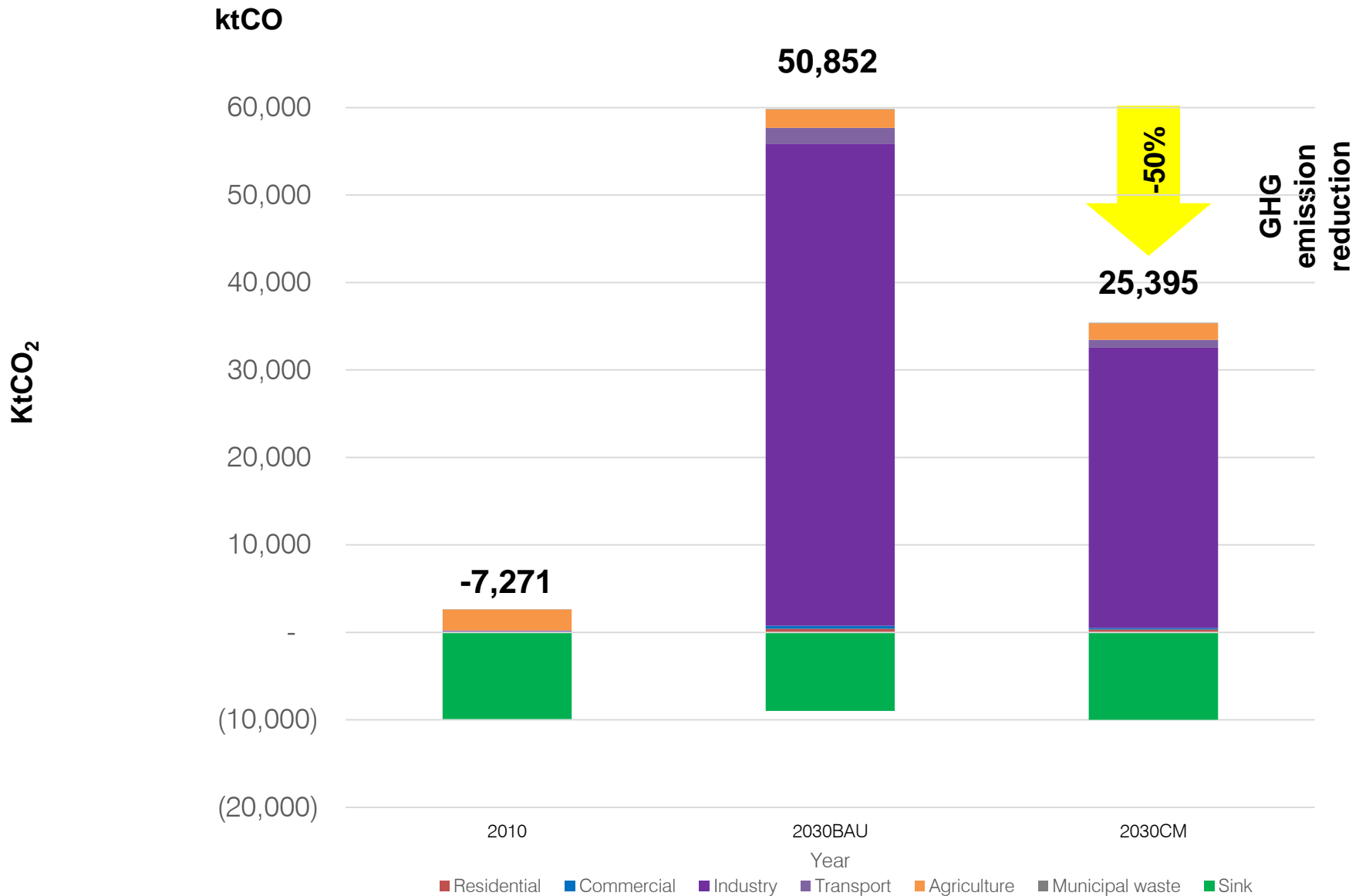
PENGERANG GHG EMISSIONS 2010



	2010	%
Sink	(9,894)	-0.39
Municipal waste	14	0.61
Agriculture	2,391	105.65
Transport	52	2.29
Industry	86	3.80
Commercial	36	1.59
Residential	45	1.98

PRELIMINARY BASELINE STUDY

PENGERANG GHG EMISSION PATHWAY 2030



4

POTENTIAL EMISSION REDUCTION AND MITIGATION ACTIONS

50%

Carbon emission reduction
by 2030*



DECARBONISING PIPC INDUSTRIES

2010

N.A.

2030

10%

Potential reduction in energy
consumption



GREEN PORT MANAGEMENT & LOGISTICS

2010

N.A.

2030

10%

Potential reduction in energy
consumption

*The environmental targets are subject to change as more
accurate data become available



SUSTAINABLE ENERGY SYSTEM

2010

0

2030

40%

Percentage of renewable energy



LOW CARBON GREEN URBAN SETTLEMENTS

2010

0%

2030

30%

Percentage of certified green buildings



SUSTAINABLE AGRICULTURE

2010

0

2030

50%

Percentage of RSPO certified plantations



GREEN MOBILITY

2010

15%

2030

45%

Modal share of public transport



SUSTAINABLE WASTE MANAGEMENT

2010
12%

2030
60%

Diversion of solid wastes from landfill



GREEN NETWORK

2010
9.7%

2030
15%

Coverage of forest and urban parks



LOW CARBON SMART COMMUNITY

2010
0

2030
50%

Percentage of communities involved in green campaigns and programmes

Preparation of Pengerang Low Carbon Society Blueprint 2030.

To be completed by **August 2018**