

## Tanjung Piai



Ramsar Convention on Wetlands define wetlands as: "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres"

## Pulau Kukup



Pulau Kukup - gazetted as National Parks under the Johor National Parks Enactment.

Pulau Kukup is a unique mangrove island, the second largest uninhabited mangrove island in the world.

Situated about one kilometer from the mainland and supports a variety of wildlife such as Flying foxes (*Pteropus vampyrus*), Smooth otters (*Lutra perspicillata*) and Bearded pigs (*Sus barbatus*).



LAND USE ISKANDAR MALAYSIA 2010	
Housing	Agriculture
Commercial	Open Space & Parks
Industry	Forest
Institution & Public Amenities	Vacant Land
Infrastructure & Utilities	Water Bodies
Transportation	Under Construction

Source: IRDA Comprehensive Development Plan, 2006-2025 (CDP). Comprehensive Development Plan II, 2014-2025 (CDP II).

## Sungai Pulai

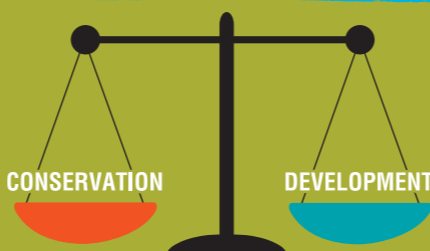


## Sungai Johor

The Johor river basin consists of several tributaries: Linggiu, Sayong, Penggeli and Permadi. The river is a vital natural heritage and steeped in history.



## Balancing Conservation & Development in Iskandar Malaysia



Iskandar Malaysia: Sustainable Metropolis of International Standing	
Government: Political Will & Commitment	Awareness-Raising & Public Involvement
Mechanism for Success IM Environmental Policy	
Capacity - Building	Funding

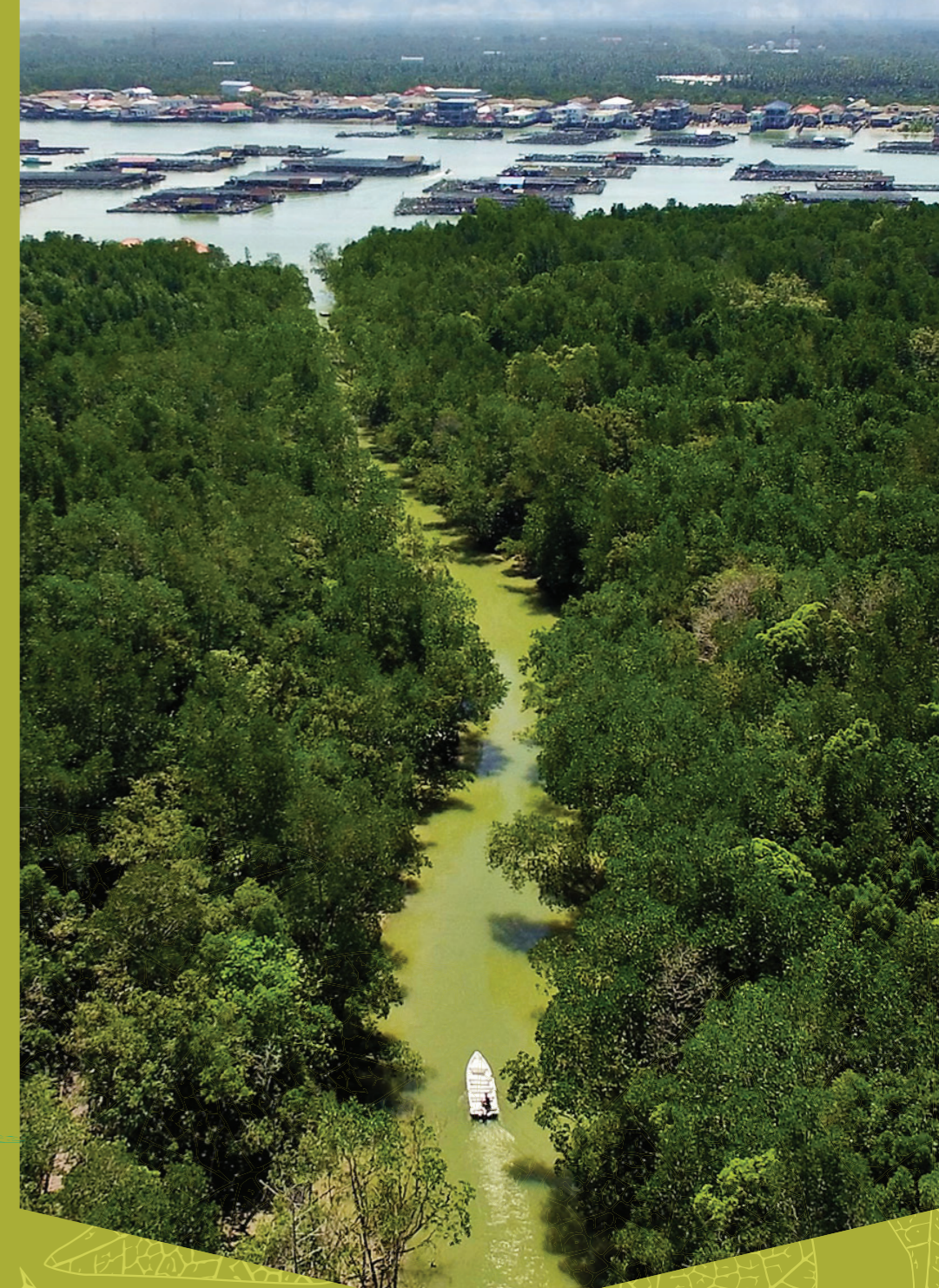


How do we distribute and support the human population in a rich & equitable manner without destroying the natural environment that provides for short-term material needs, as well as our spiritual, cultural, and intellectual needs?

## Strategic Directives, Plans, Blueprints for Sustainable Development

- The Eleventh Malaysia Plan RMK11, 2016-2020**
  - Pursue Green Growth as means to step up the Nation's pledge to environment and sustainability.
  - Shift from a "grow-first, clean up later" development model to a more resilient, low-carbon, resource-efficient, and socially inclusive development
- Johor Sustainability Policy / Dasar Kelestarian Negeri Johor**
  - Conserve and protect Johor's natural assets; control pollution & boost green technologies
  - Ensure economic developments & people's welfare are in sync towards sustainable development
- The Comprehensive Development Plan II (CDPii)**
  - Develop Iskandar Malaysia in a holistic manner & consider wealth generation; resource optimisation and low carbon; and wealth sharing and inclusiveness as the three main elements to drive development in the economic region.
  - A need to balance conflicting demands for change with protection and conservation of key assets, both in built-up and rural areas.
- Main Blueprints**
  - Environmental Planning Blueprint (EPB) • Shoreline Management Plan (SMP)
  - Low Carbon Society Blueprint for Iskandar Malaysia (LCSPBIM)

Source: IRDA Comprehensive Development Plan, 2006-2025 (CDP). Comprehensive Development Plan II, 2014-2025 (CDP II).



# Iskandar Malaysia Environment and Natural Resources



# Treasures of Iskandar Malaysia



Iskandar Malaysia is rich with mangrove forests, dryland forests, long seafronts and suburbs dotted with villages. Iskandar Malaysia also has three Ramsar sites, wetlands of international importance. Unlike other Ramsar sites in the world, Ramsar sites in Pulau Kukup, Tanjung Piai and Sungai Pulai in Iskandar Malaysia are located very close to urban areas and are easily accessible.

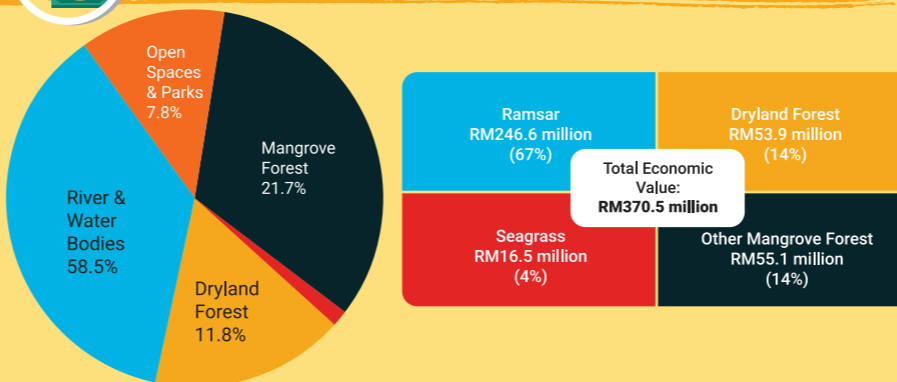
## Iskandar Malaysia Natural Assets

- RAMSAR Sites (Sungai Pulai, Tanjung Piai and Kukup Island)
- Tg. Adang, Merambong Shoal and Merambong Island
- Sg. Johor Forest Reserve
- Sedenak Forest Reserve
- Bukit Hantu Forest Reserve
- Sultan Iskandar Reservoir
- 2, 155 of Public Open Spaces



Source: IRDA Comprehensive Development Plan, 2006-2025 (CDP), Comprehensive Development Plan II, 2014-2025 (CDP II).

## Annual Economic Value



24,629 hectares of land contribute to the natural ecology in Iskandar Malaysia

## Marine Habitats

IM is unique as it has coastlines facing both the Straits of Melaka; Tebrau Straits and the South China Sea.

Tebrau Straits coastal habitats are typically coastal and riverine mangrove belts, as well as large tracts of seagrass beds in the shallow waters around the river mouths of Sg Pulai and Sungai Johor.

These mangrove and seagrass habitats provide crucial ecosystem services, as they directly support coastal fisheries by providing important nursery areas for juveniles of commercially valuable fisheries.



## Pulau Merambong

Pulau Merambong is a small rocky island with interesting geological features that support a rich marine life that includes soft corals, stone crab, octopi and nudibranch.



Source: IRDA Comprehensive Development Plan, 2006-2025 (CDP), Comprehensive Development Plan II, 2014-2025 (CDP II).

## Seagrass Distributuion

Seagrass	Area (Hectares)
Tanjung Adang Darat Shoal	42
Tanjung Adang Laut Shoal	40
Merabong Shoal	30
<b>Total</b>	<b>112</b>



## Marine Habitats: RAMSAR Johor - Wetlands of International Importance

Three ecological sites in Iskandar Malaysia, namely Tanjung Piai, Sungai Pulai and Pulau Kukup, have been internationally recognised as Ramsar sites. Its high economic value of RM5 billion in perpetuity and RM250 million annually is contributed by its rich biodiversity of flora and fauna.

	Tanjung Piai	Sg Pulai	Kukup
<b>Mangrove Diversity</b>	20 true mangrove species 9 associated species	24 true mangrove species 21 associated species Rare and endemic species including Avicennia lanata (Api-api Berbulu)	18 true mangrove species
<b>Habitat (endangered species)</b>	Spoon-billed Sandpiper, Chinese Crested Tern, Pin-tailed Macaques, Smooth Otter, Bearded Pig, Mangrove Pitta, Scaly Anteater, Flying Fox	Flat-headed cat, Pin-tailed Macaques, Smooth Otter, Bearded Otter, Bearded Pig, Wild Pig, Slow Loris, Mangrove Pitta, Scaly Anteater, Dusky Leaf Monkey	Spoon-billed Sandpiper, Chinese Crested Tern, Pigtailed Macaques, Smooth Otter, Breded Pig, Lesser Adjutant, Spotted Greenshank, Malaysia Plover Asian Dowitcher, Dusky Leaf Monkey, Flying Fox

The Ramsar Convention is an international treaty for the conservation and sustainable use of wetlands. It is also known as the Convention on Wetlands and named after the city Ramsar in Iran, where the Convention was signed in 1971.

Source: IRDA Comprehensive Development Plan, 2006-2025 (CDP), Comprehensive Development Plan II, 2014-2025 (CDP II).