

Preventing Plastic Waste Leakage

The Potential of Drain and River Interception in Reducing Marine Litter

**Malaysia National Stakeholder
Consultation on Marine Litter**

Solving Plastic Pollution at Source
Klana Beach Resort, 71050 Port Dickson, Negeri
Sembilan

05-06 November 2019



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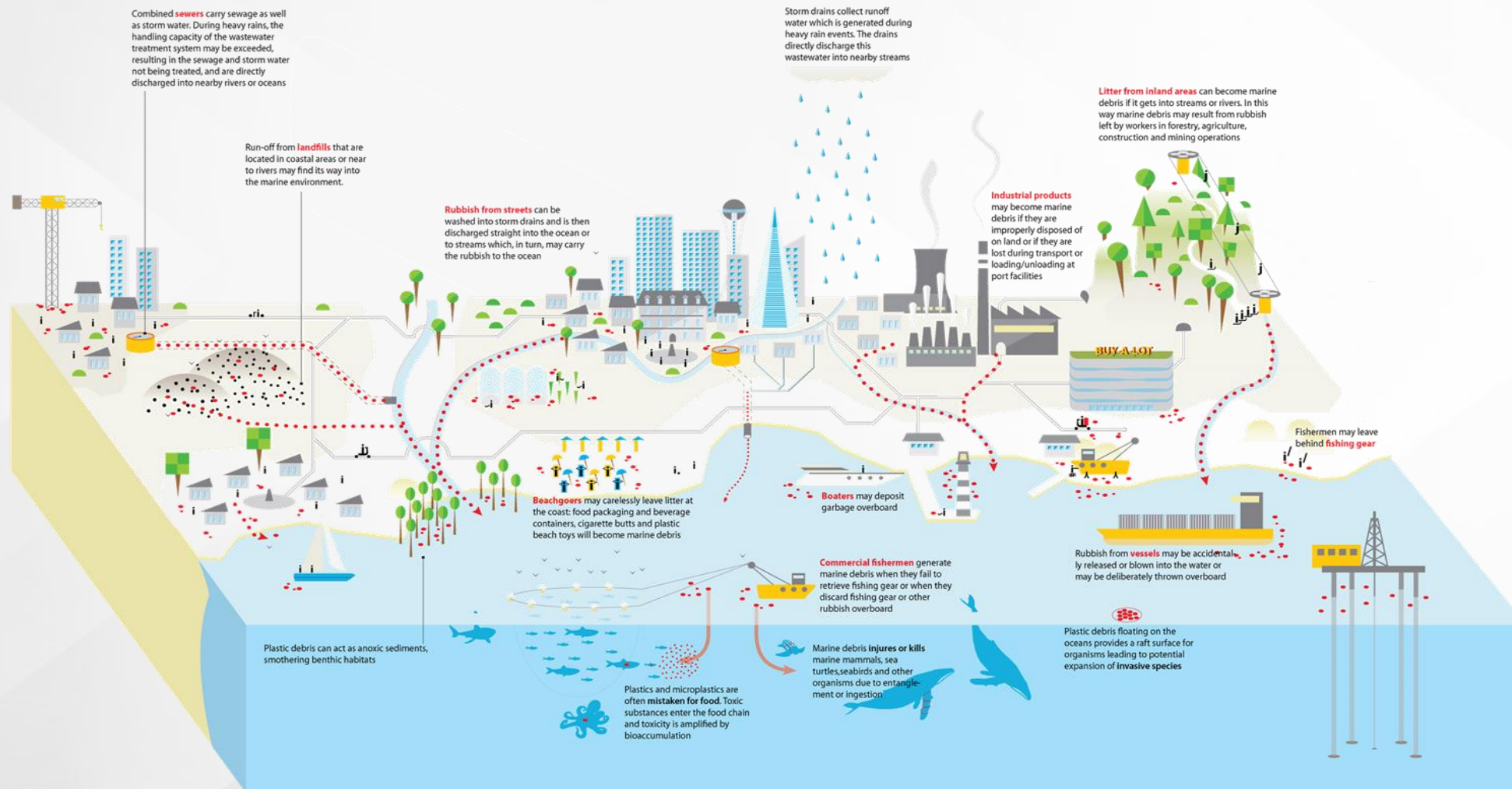
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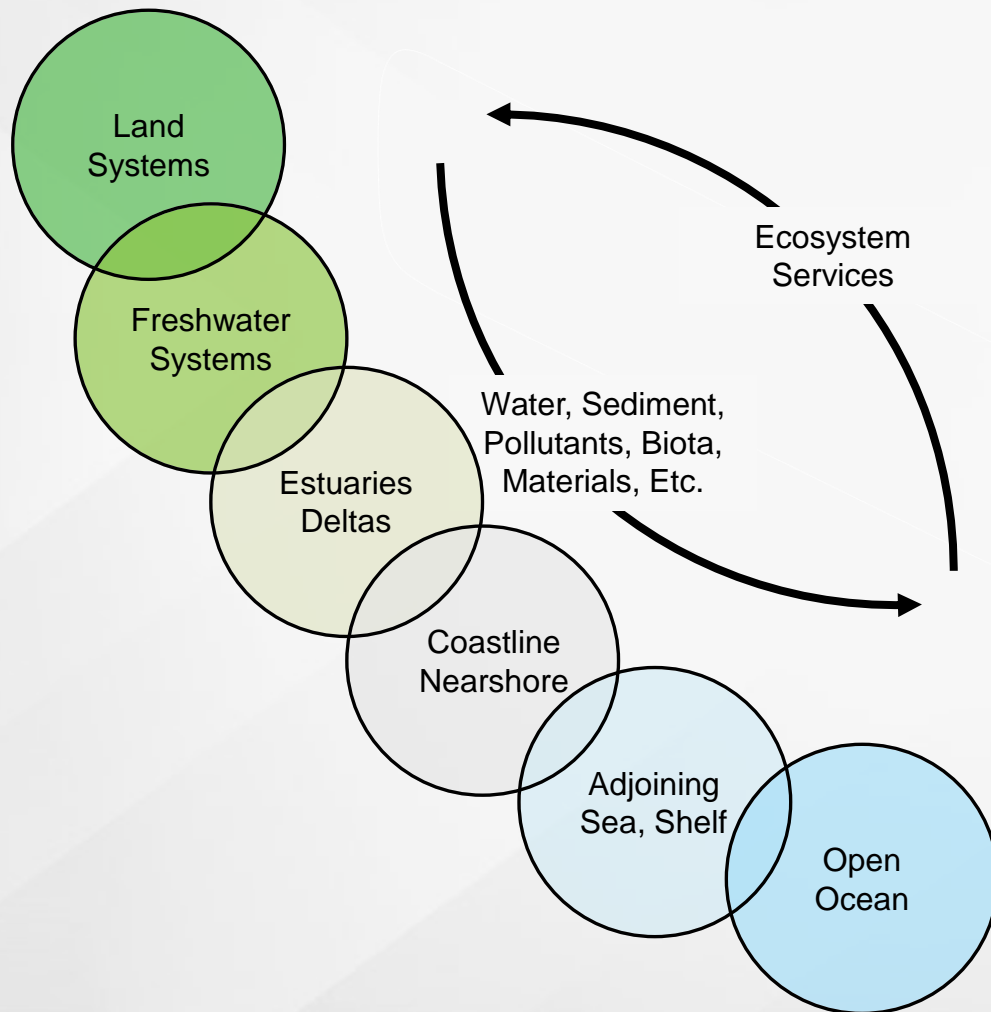
AGENDA

- **Plastic debris in the ocean: a multiplicity of sources and pathways**
- **Interconnectedness between terrestrial and marine ecosystems**
- **Environmental Problems of Rivers**
- **Sungai Klang Project**
 - **Coverage & Interception**
 - **Workflow**
 - **Activities**
 - **Intercepted Tonnage**
 - **Operational Challenges**
 - **Other Challenges**
- **Summary**

Plastic debris in the ocean: a multiplicity of sources and pathways

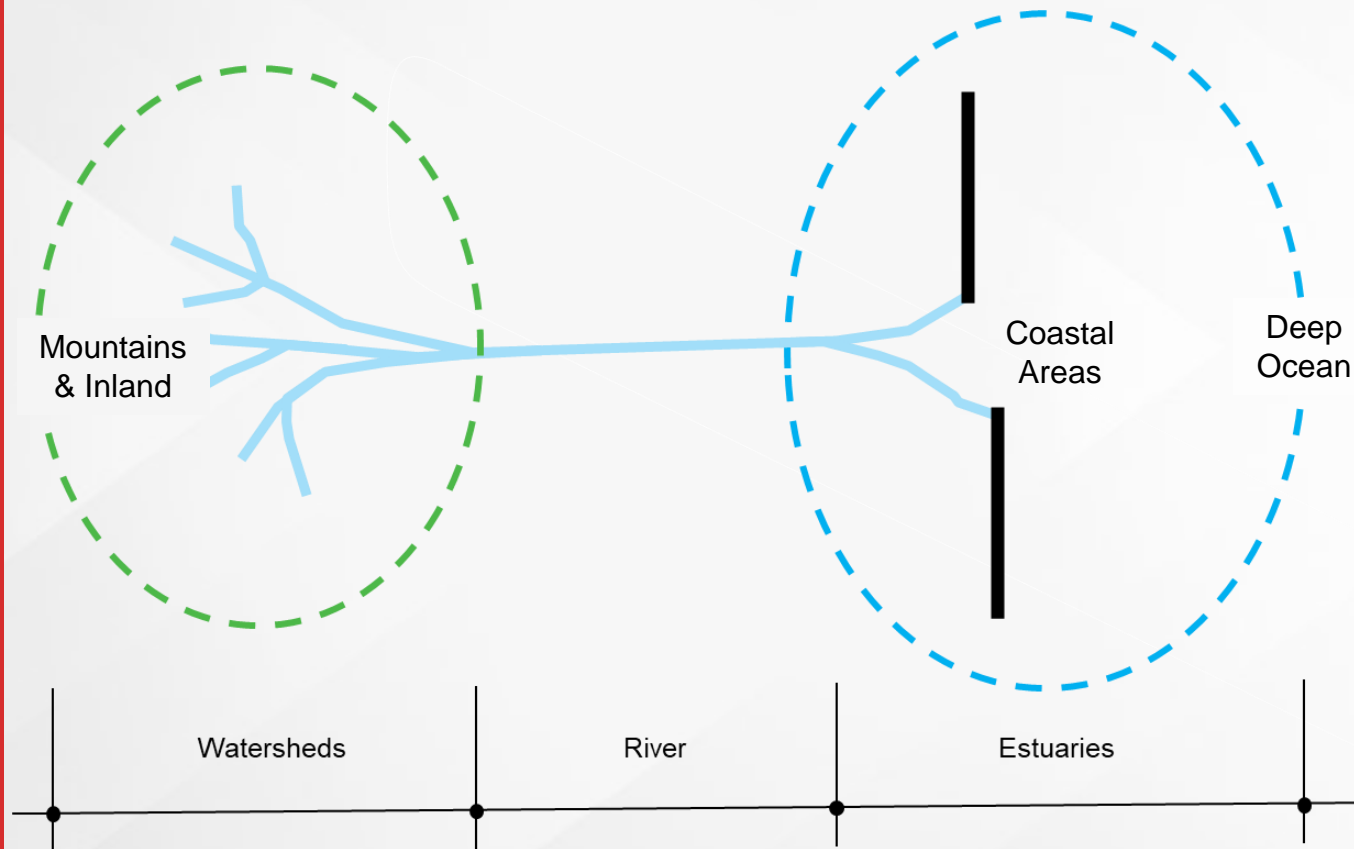


Interconnectedness between terrestrial and marine ecosystems



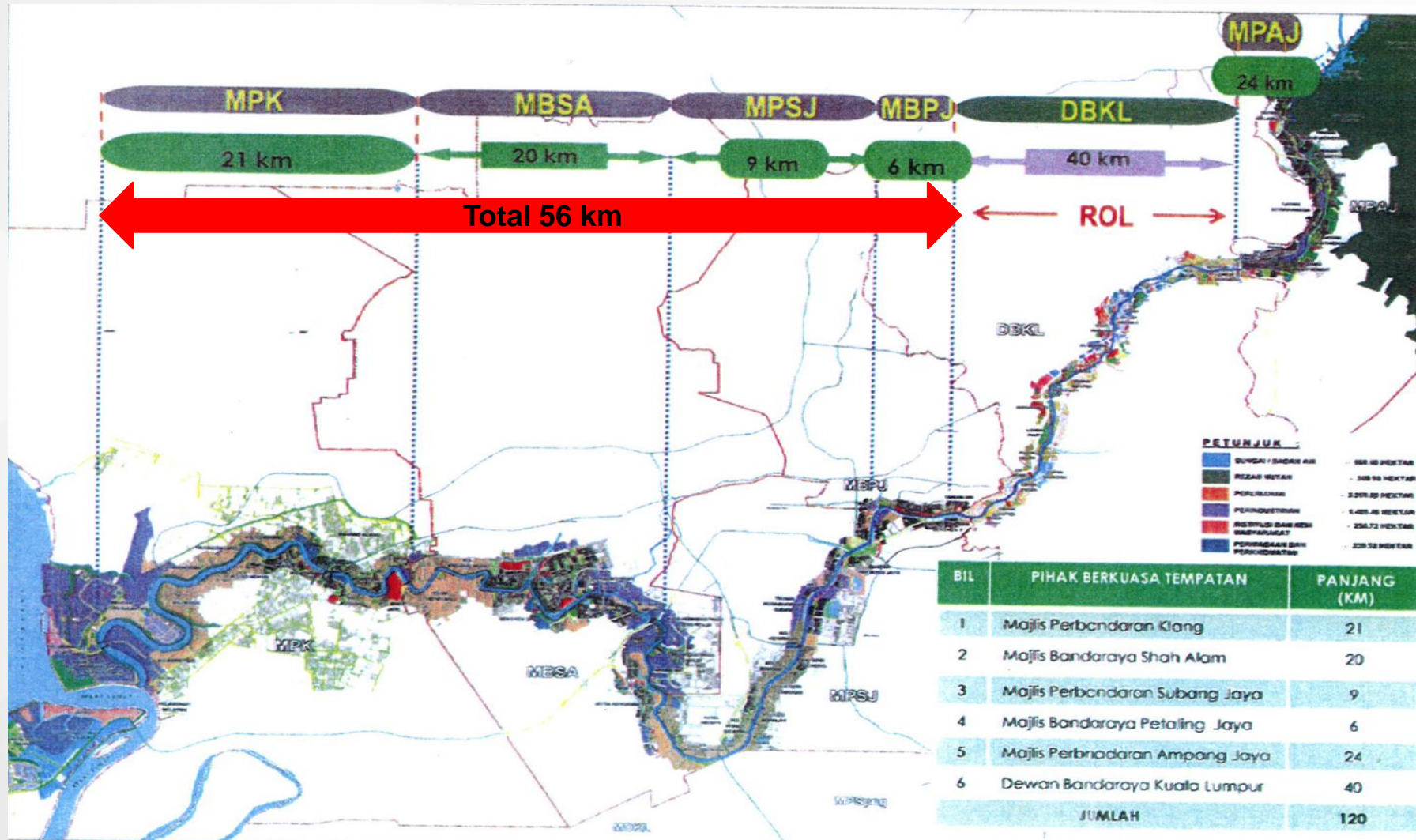
- Land and water are linked in a natural system called a **catchment**, which is literally the area of land that catches water and directs it to a stream, river, lake or ocean. In this way, a catchment is the land where water collects as it travels from **Source to Sea (S2S)**.

Environmental Problems of Rivers



- Rivers have also become the receiving water body for urban drainage systems. Therefore, it has become extremely difficult to separate river from the rest of the drainage system.

Sungai Klang Project



Coverage & Interception

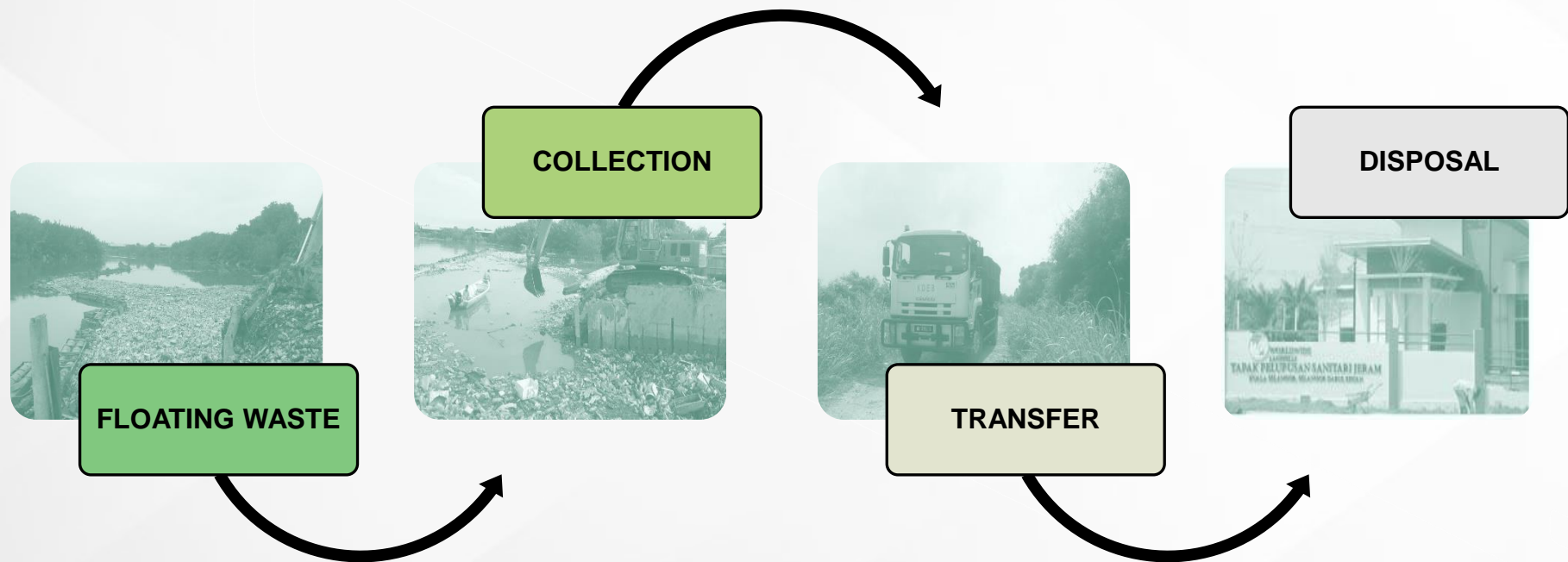
- Total coverage area 56km
 - MPK – 21km
 - MBSA – 20km
 - MBSJ – 9km
 - MBPJ - 6km
- 3 main Log Booms
 - Sg Pinang
 - Sg Kandis
 - Seksyen 23, Shah Alam
- 48 mini Log Booms

Operations

- Machines:
 - Excavator: 3
 - Boat : 5
 - Barge : 1
 - RORO :5
- The operations runs 6 days a week
 - daily collection average of 40-45Mt
 - daily disposal 14 trips



Workflow



Excavator Activities



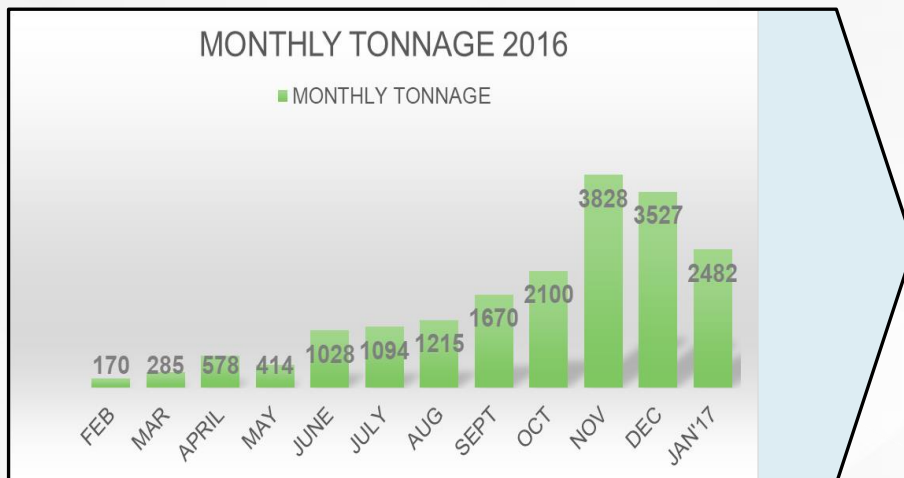
Boat Activities



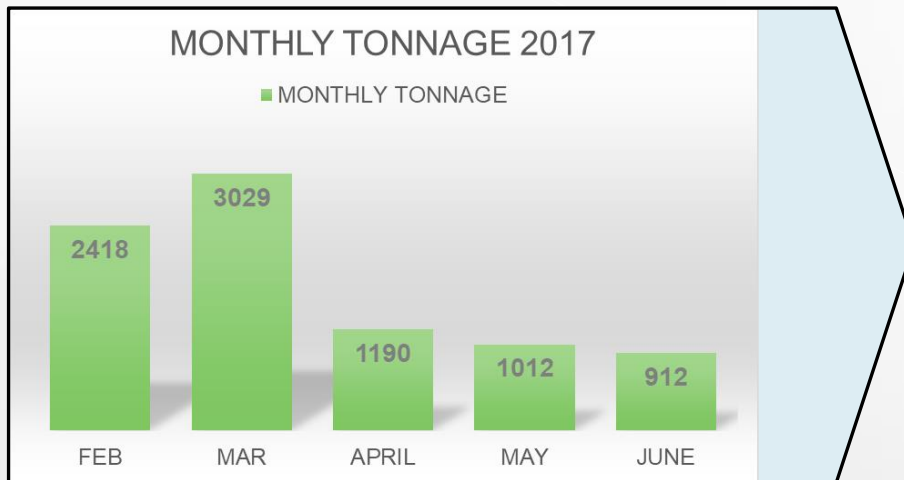
Mini Log Boom Activities



Intercepted Tonnage

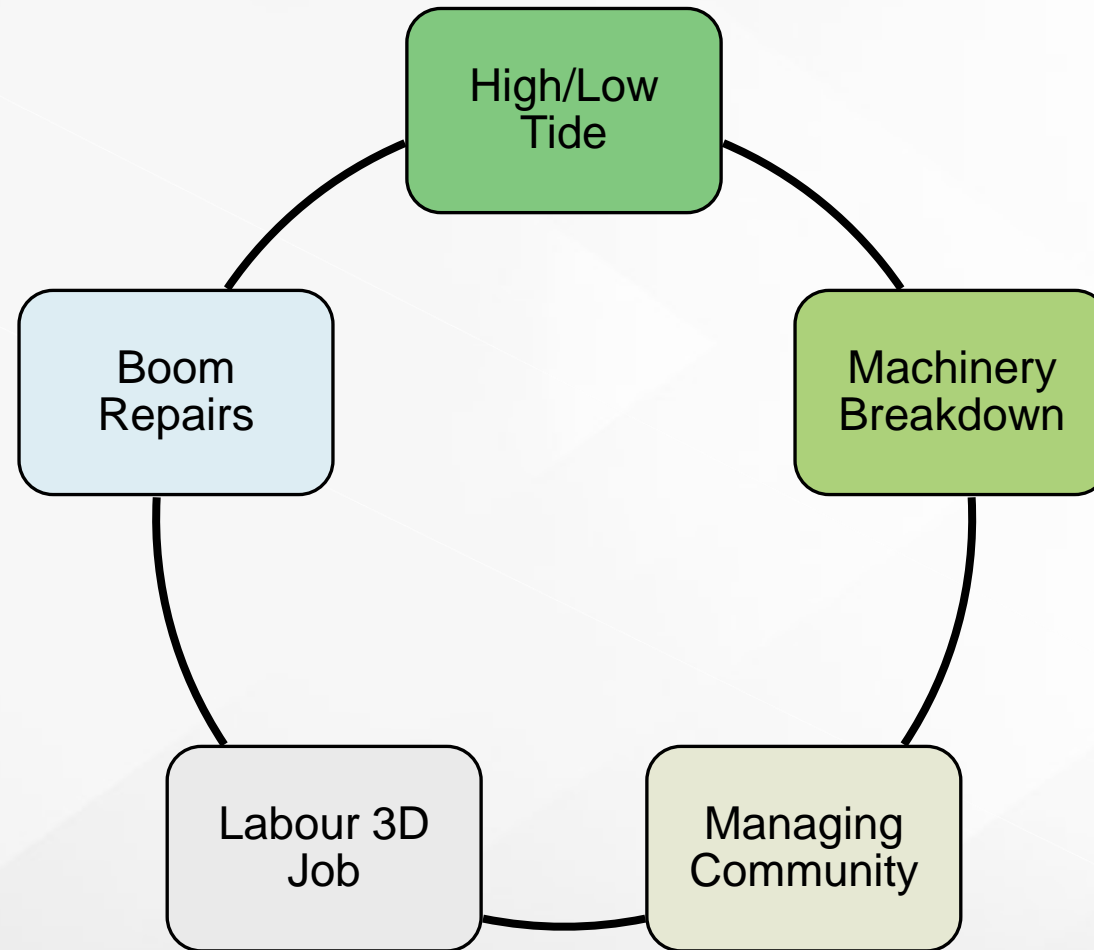


TOTAL TONNAGE 2016
18,391 Mt

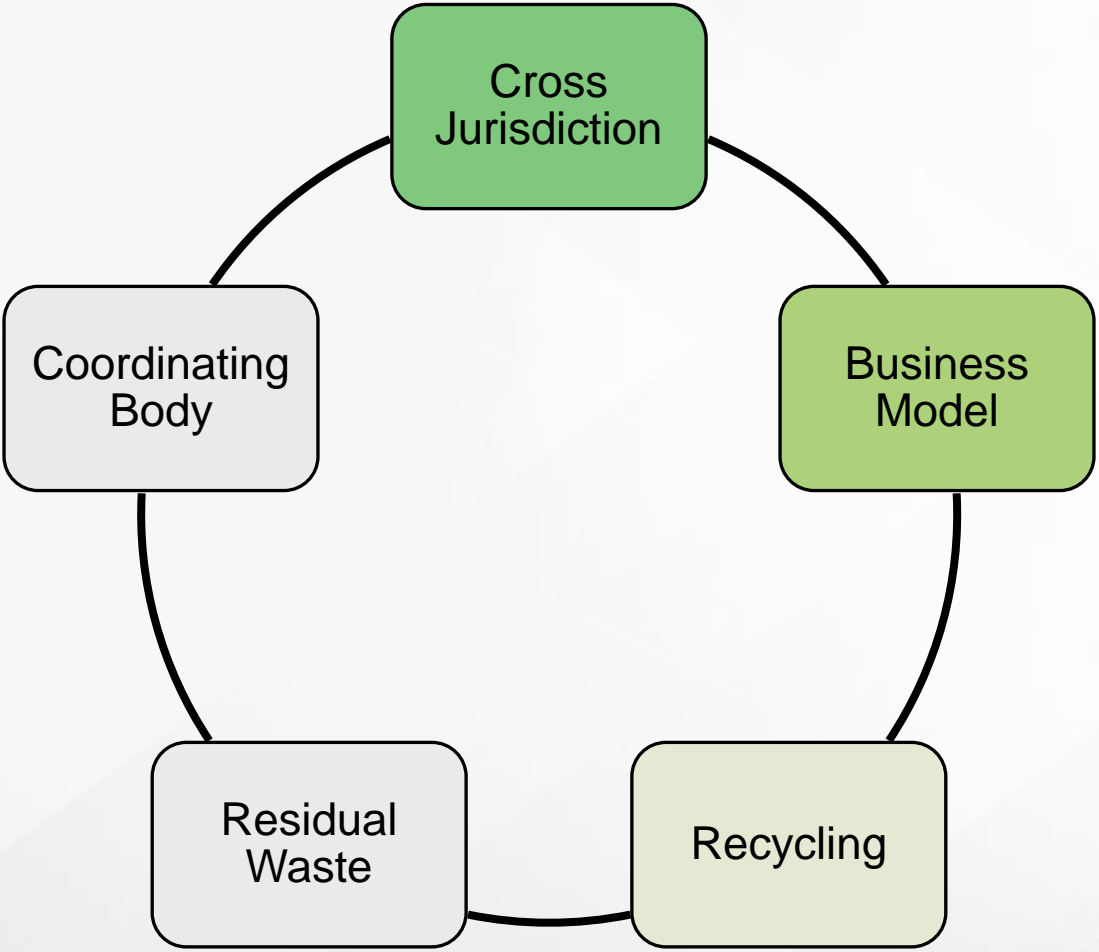


TOTAL TONNAGE 2017 (As at June)
8,561 Mt

Operational Challenges



Other Challenges



Summary

- Interception at the drains and river network is successful
- The impact on diversion from ocean is direct
- The potential for replication is high
- Further study is required for economic viability and sustainability

THANK YOU

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Questions & Answers

Dato' Mizan Yahya

Co-chair Special Projects

Waste Management Association of Malaysia

Dato' Mizan is alumni of both Macquarie University (Australia) and Harvard. He currently serves as the Co-chair for Special Projects in the Waste Management Association (WMAM) and Vice President of the Malaysian Biomass Industry Confederation (MBIC).

He was a member of the National Labs for both the Iskandar Malaysia Corridor as well as for Solid Waste. He was also selected to be part of the Malaysian Industry-Government Group for High Technology (MiGHT) Waste Task Force assigned to address the management of waste for Melaka Smart Communities and was instrumental in developing the Waste Eco Park concept and securing the incentives from Malaysian Investment Development Authority (MIDA) for the same. He is a founding member of the Waste Innovation Council, an advisory council focusing on innovative Business Models and National Strategies in Solid Waste Management and is currently promoting the development of a waste analytic application to leverage on waste big data in order to transform the management of waste in the country.

Passionate about resolving Malaysia's waste problem and contributing towards an integrated and holistic resolution specifically for the organic fraction of Municipal Solid Waste (MSW), one of his companies has been awarded the contract to be the operator for the first of its kind organic waste treatment facility approved under the EPP9 NKEA GKL/KV showcasing an innovative Blue Ocean approach to waste management adopted under the Green Technology and Climate Change Council.

He is also on the Industrial Advisory Board for UCSI University for the Department of Chemical and Petroleum Engineering and was a moderator for the Sustainable Consumption and Waste Management in Developing Countries session during the International Solid Waste Association (ISWA) World Congress held in Kuala Lumpur in October 2018. He has been invited to speak on various issues pertaining to waste including 'Transitioning From Waste Management To Resource Management' at the Asia Strategy and Leadership Institute (ASLI) National Waste Management Conference, 'Rewiring Consumerism' for the Malaysia Consumer Movement event on Sustainable Development Goals (SDGs) and recently on 'The Circularity Of Food Waste' at the International Conference & Exhibition on Waste Management organized by ENSEARCH.

