



- **This presentation is provided for informational purposes and should not be distributed without permission from OSCT Indonesia.**
- **The names of actual companies and products mention here in may be the trademarks of their respective owner.**



# Latest Offshore Oil Spill Combat Near Border Lessons Learnt in Indonesia

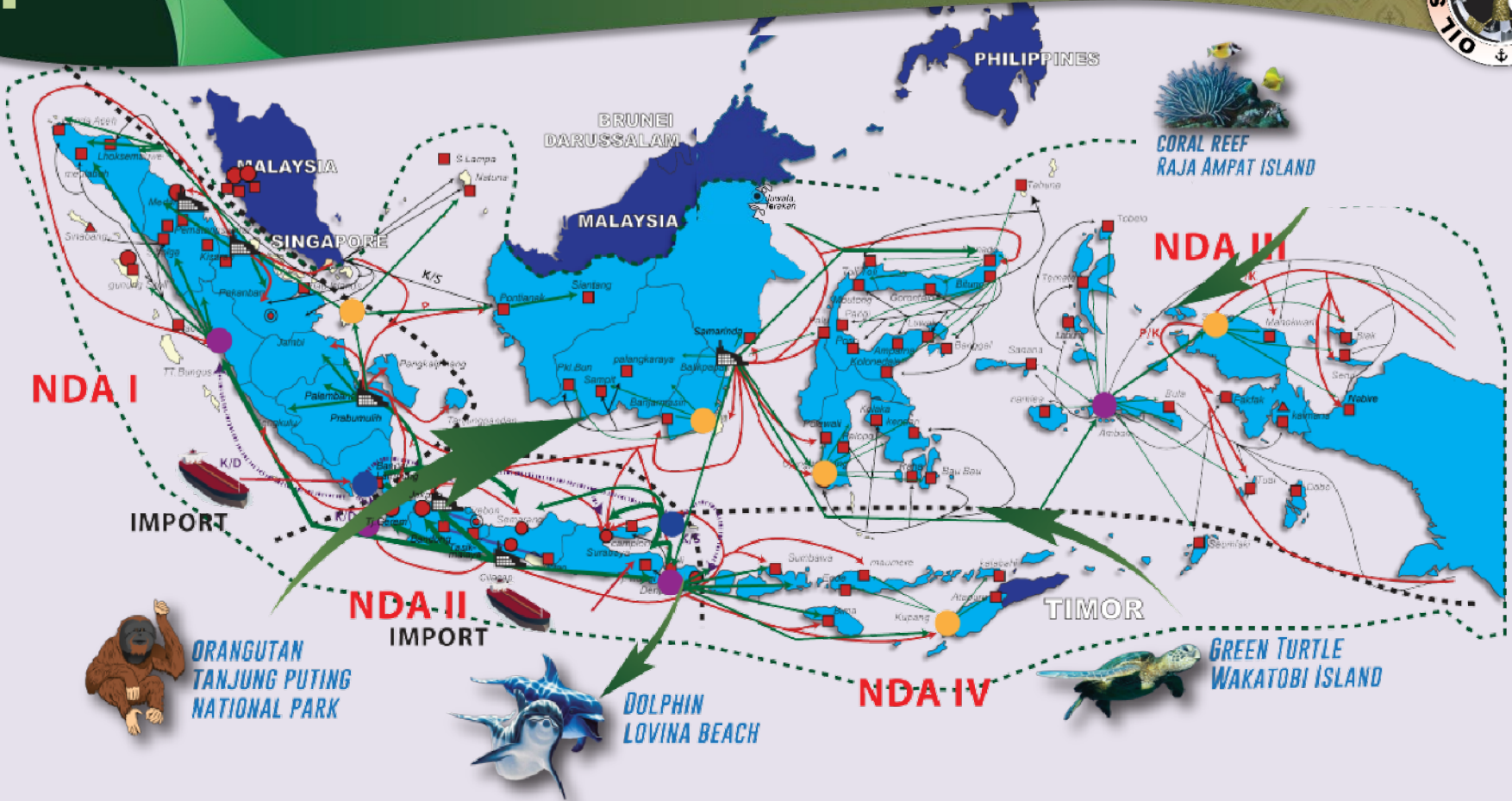


PETROLEUM  
ASSOCIATION  
OF JAPAN

February 2023 - Oil Spill Workshop





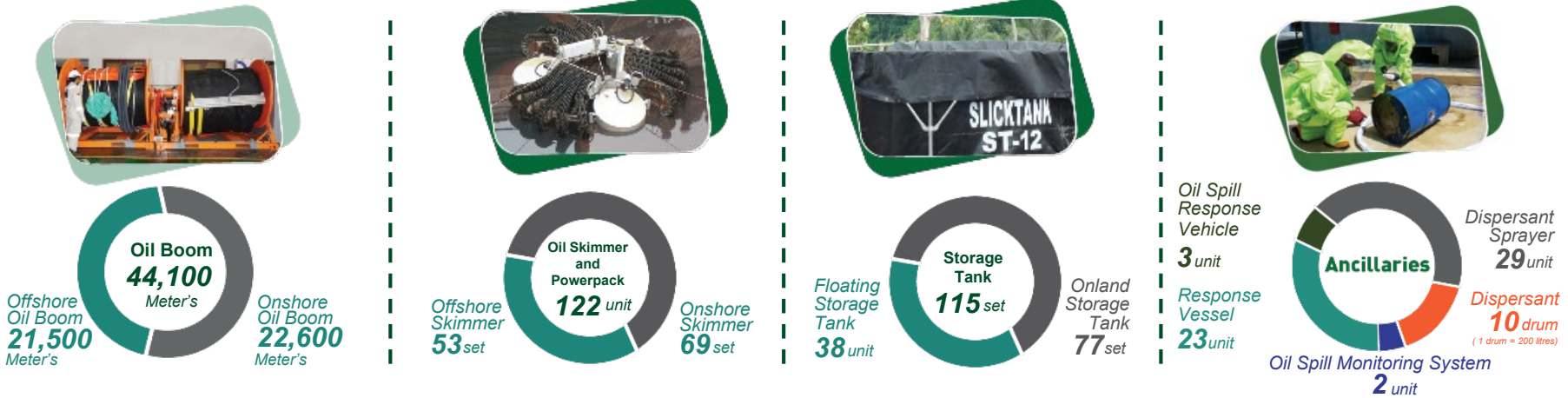


Map Legend					
<span style="color: red;">■</span> = FUEL DEPOT	= REFINERY UNIT	<span style="color: green;">→</span> = CRUDE OIL DISTRIBUTION CHANNELS	<span style="color: red;">▲</span> = JOBBER	<span style="border-bottom: 1px dashed black; width: 20px; display: inline-block;"></span> = Indonesia Border	NDA = NATIONAL DISTRIBUTION AREA
<span style="color: red;">●</span> = TT/INSTALLATION	<span style="color: blue;">●</span> = FLOATING STORAGE	<span style="color: red;">→</span> = REFINED OIL PRODUCT DISTRIBUTION CHANNELS	<span style="color: purple;">●</span> = TRANSIT TERMINAL	<span style="color: orange;">●</span> = BACKLOADING TERMINAL	P: PETROL K: KEROSENE D: DIESEL

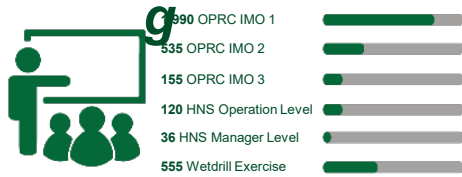
To support the Indonesian Government target towards oil production 1 million barrel per day, our mission is to protect Indonesia's & World's natural environment as Indonesia's largest spill combat center & one of the largest in the world. With 85% of its territory is ocean, Indonesia has big risk of spill pollution from oil & gas operation which can pollute sensitive areas & world heritage sites.



## Oil & Chemical Spill Combat Equipment



### Trainin



### Experts



### Oil Spill Contingency Plan



### Clients and Members



### Certification



OSCT capability as National Oil Spill Response Center is approved by Ministry of Transportation, Ministry of Energy & Mineral Resources & Internationally Certified by Nautical Institute According to IMO Standards.

# Mutual Cooperation

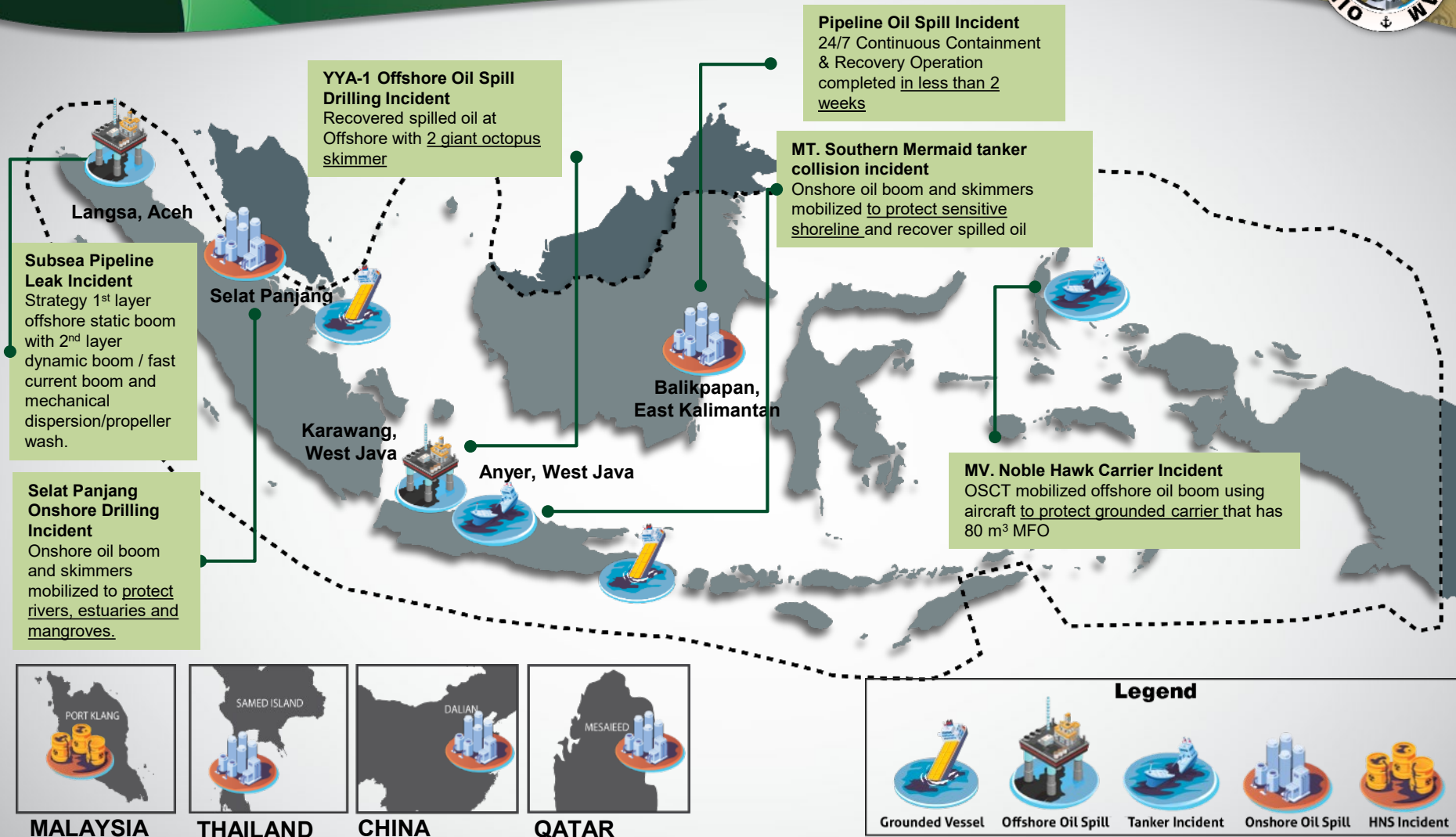


Currently OSCT Indonesia has signed International Cooperation MOU with international OSRO in 7 countries for mutual cooperation and assistance to deliver an effective and efficient response.

# Mutual Cooperation

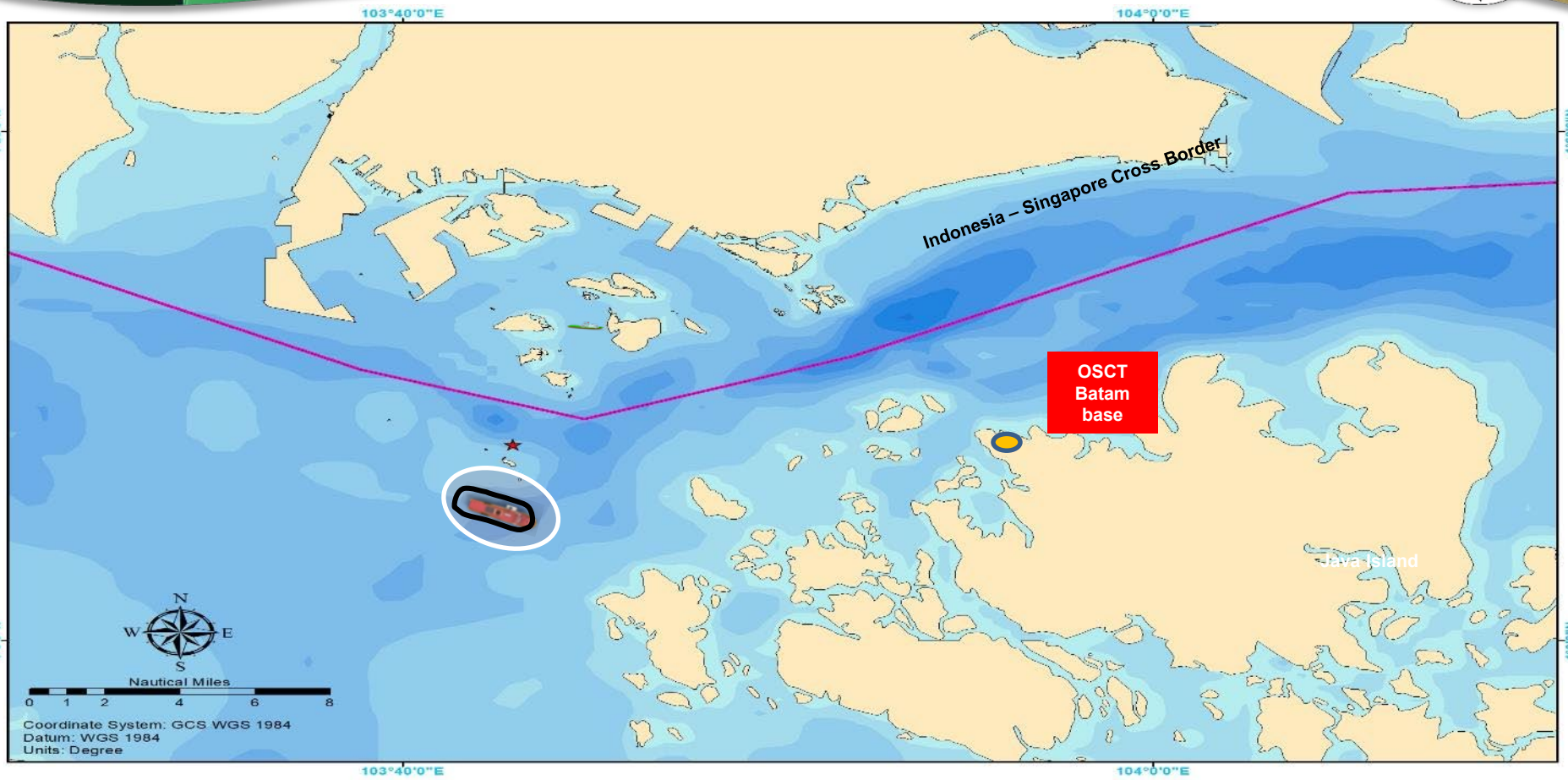


**OSCT Indonesia able to mobilize OSRE from Asia-Pacific region including Thailand, Vietnam, South Korea, Malaysia, Singapore, Hongkong, Japan and China in case of major international oil spill and to support our member who have drilling and production activity near country border.**



**OSCT experiences in combating oil spill incident related to oil and gas operation such as in Selat Panjang – Onshore Drilling Incident, Balikpapan – Pipeline Rupture Incident, Anyer – Tanker Collision Incident, and Bali – Carrier Grounding Incident, major oil spill is offshore spill at West Java near Jakarta, Aceh – Subsea Pipeline Leak, and recent oil spill due to grounded vessel in Batam Waters, Riau Archipelago.**





<b>Spill Source</b>	<b>Grounded Vessel</b>
<b>Location</b>	Batam Waters
<b>Time</b>	October 26, 2022
<b>Oil Characteristics</b>	Medium Crude Oil

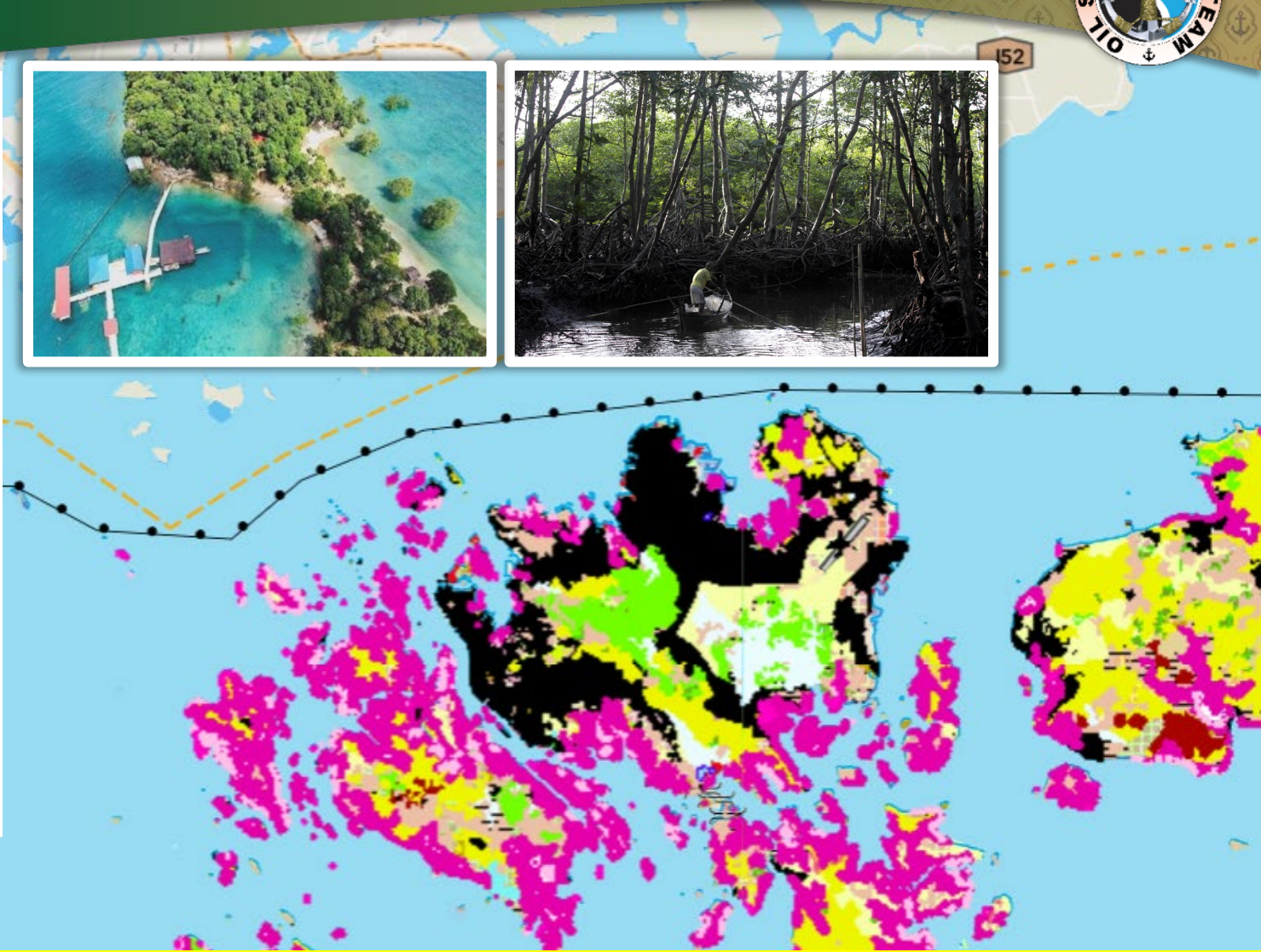
<b>Spill Source</b>	<b>Grounded Vessel</b>
<b>Location</b>	Batam Waters
<b>Time</b>	October 26, 2022
<b>Oil Characteristics</b>	Medium Crude Oil



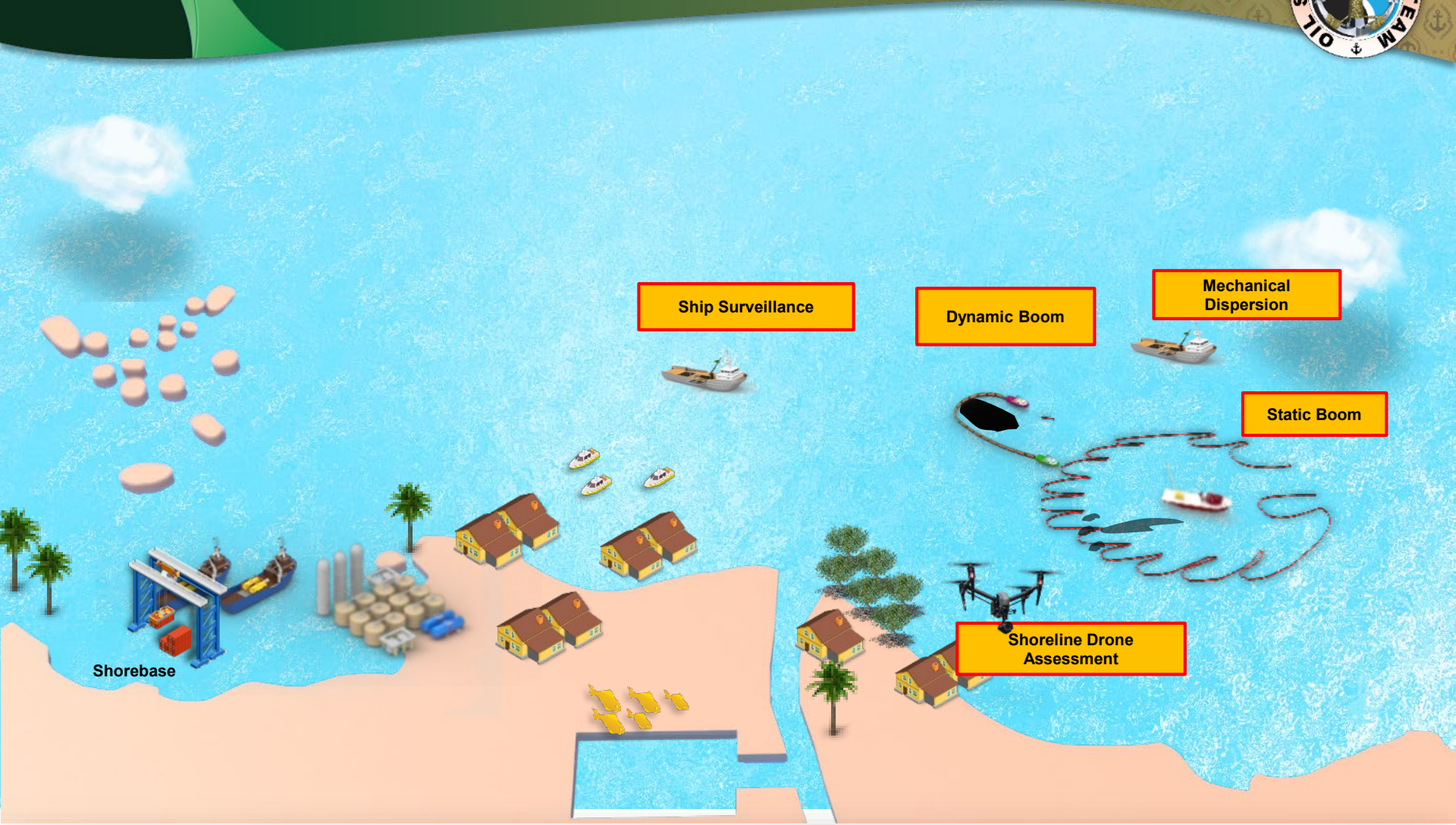
Source: Google Earth, 2023



- Hutan Lahan Kering Primer
- Hutan Lahan Kering Sekunder
- Hutan Rawa Primer
- Hutan Rawa Sekunder
- Hutan Mangrove Primer
- Hutan Mangrove Sekunder
- Semak/Belukar
- Semak/Belukar Rawa
- Savana
- Hutan Tanaman
- Perkebunan
- Pertanian Lahan Kering
- Pertanian Lahan Kering Bercampur dgn Semak
- Transmigrasi
- Sawah
- Tambak
- Tanah Terbuka
- Pertambangan
- Permukiman
- Tubuh Air
- Rawa
- Awan
- rawa
- Transmigrasi



The coastlines closest to the source of the spill are Tokong Besar, Tokong Kecil, Labun Besar, Labun Kecil, and Pemping Island with a profile of tourist beaches, settlements, and mangroves. Marsh beaches dominate the type of beach on the shoreline.



Ship Surveillance

Dynamic Boom

Mechanical Dispersion

Static Boom

Shoreline Drone Assessment

*Spill Assessment, Detection & Surveillance*

*Containment and Recovery*

*Shoreline Monitoring & Sensitive shoreline protection*

*Mechanical Dispersion / Propeller Wash*



© courtesy by Google Picture



© courtesy by OSCT Indonesia

26  
October

**MT Young Yong notified Tanjung Balai Coast Guard that vessel grounded at Batam Waters and concerned for potential oil spill would impact shoreline and cross border**

28  
October

**OSCT provided trajectory modelling to predict the oil spill movement and recommend response strategies before it impacted shorelines**



© courtesy by Portonews



1-3  
November

**Implementation of Protection Boom strategy, using the Nearshore Boom encircle vessel by considering the nearest sensitive area.**

4  
November

**The spill source closure strategy was successful**

**OSCT was activated on 28 October 2022 and carried out trajectory modeling to see oil movement and parallel support operations on site. Tanjung Balai Coast Guard participated to response, monitoring, and coordinate with other stakeholder. Incidents were handled properly and none reached sensitive areas.**



Offshore Boom	Offshore Skimmer	Onshore Boom	Onshore Skimmer	Dispersant
 <p>© courtesy by OSCT Indonesia</p> <p>21,500 Meters</p>	 <p>© courtesy by OSCT Indonesia</p> <p>53 Set (4 Giant Octopus)</p>	 <p>© courtesy by OSCT Indonesia</p> <p>22,600 Meters</p>	 <p>© courtesy by OSCT Indonesia</p> <p>69 Sets</p>	 <p>© courtesy by OSCT Indonesia</p> <p>14,800 Liters</p>

**There are 21 km offshore boom and 22 km shoreline boom available domestically for Tier-2/3 response. OSCT Indonesia resources can fulfill several oil spill incident response**



## OIL SPILL COMBAT PLAN & PREPAREDNESS



## OIL SPILL RESPONSE TRAINING



© courtesy by OSCT Indonesia

## LOGISTIC & STAGING AVAILABILITY MAPPING



## EFFECTIVE RESPONSE STRATEGY



© courtesy by OSCT Indonesia

