Greening of the Straits of Malacca

9th Cooperation Forum
Co-operative Mechanism on Safety of Navigation and Environmental Protection in the Straits of Malacca and Singapore

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MARPOL – “Special Areas”

Special Areas are defined as certain sea areas in which, for technical reasons relating to their oceanographically and ecological condition and to their sea traffic, the adoption of special mandatory methods for the prevention of sea pollution is required.

- MARPOL has defined certain sea areas as “Special Areas” in which aims to provide higher level of protection than other sea areas.

- None of these involve and covers the Straits of Malacca, ASEAN and ASIA waters.
Recap

- A presentation on the ‘Greening of the SOMS’ was made at the 7\textsuperscript{th} Cooperative Forum under the CF7/6 in 2014 at Langkawi, Malaysia.
Line of Presentation

• SoM in Nature
• Economic Values
• Increasing Traffic in SoM
• Past Incidences
• Existing Measures
• Proposal
SOMs provide the shortest and most valuable shipping lane for tankers trading between Europe, Africa, Middle East and Far East Asia.
SOMS in Nature

- 500 miles long and width varies from 200 to 11 miles with irregular depth from 70 – 10 meters- connecting South China Sea to the Indian Ocean.

- Narrow waterway, irregular shallow depth and the seasonal rains with low visibility.

- The width at its narrowest navigable is about 1.5 km.

- The risk of collision and grounding of ships in the area is always of concern.
The Economic Value
Shipping Industries

In a year:

>70,000 ships passes the strait

30% Serving the world trade

3 out of 20 Busiest port in the world are located in the straits (Singapore, Port Klang and Tg. Pelepas)

200 Average ships pass daily

50% Of world oil supplies mainly to Japan, China and Korea

Source: Marine Department Malaysia, Sea trade, UNCTAD
In 2011:

The Straits produce 742,263 t of fish per year at a value of over 1.3 million tonnes.

The Straits produce 752,840 t of fish per year at a value of over 5.7 million tonnes (Aceh, Riau and Sumatera Utara).

Total marine fish landing in Malaysia: 1.3 million tonnes

Total marine fish landing in Indonesia: 5.7 million tonnes

Source: Department of Fisheries Malaysia
Ministry of Marine Affairs and Fisheries Indonesia
The Economic Value
Tourism Industries

30%  
Out from tourism industry is marine tourism related

2nd  
Most important foreign exchange earner for Malaysia

35%  
Out from tourism industry is marine tourism related

In 2014:

The tourism arrival per annum to **Malaysia** is

**27 mil**  
With tourist receipts of about US$ 21,820 mil

The tourism arrival per annum to **Indonesia** is

**9.4 mil**  
With tourist receipts of about US$ 9,848 mil

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Source: Ministry of Tourism & Culture Malaysia, Ministry of Tourism Republic of Indonesia
Increasing Traffic Volume

- The Straits will be stressed by the increasing number of ships but also the increase in vessel size and depth.
- The ever increasing traffic adds to the challenge in navigating this waterway which features a width of only just over one kilometer at its narrowest navigable point.

Examples of traffic volume of ships transiting SOMS
Forecast of Volume of Ships navigating SOMs

<table>
<thead>
<tr>
<th></th>
<th>Ships</th>
<th>DWT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past: 2004</td>
<td>94,000</td>
<td>3,990 mil</td>
</tr>
<tr>
<td>2012</td>
<td>127,000</td>
<td>6,940 mil</td>
</tr>
<tr>
<td>Future: 2030 (est.)</td>
<td>226,500</td>
<td>18,000 mil</td>
</tr>
</tbody>
</table>

- 78% up
- 260% up

High growths in size and volume of vessels are expected to continue.

Source: ‘New Study for the Safety of Navigation in the SOMS’, *8th MIMA International Conference on the Straits of Malacca 2016*, Malacca Straits Council of Japan
Past Incidences: Degradation of SOMS

- Over the years, several incidents have occurred in the Straits involving, accident, spillage oil and ships releasing oil and hazardous and noxious substances into the water.

A study has shown in 2000 the vessels plying the Straits:

888,000mt of sewage
720,000mt of oily bilge sludge
150,000mt of solid waste
18mt

Waste generated in the Straits (equal to 4,906 blue whales!)

- Waters in Port Dickson found to contain nitrogen rich suspended organic particles, which is suggestive a man-made pollution.

- Several fish caught off the Gold Coast (Selangor) have residual of copper, zinc and lead exceeding permissible levels due to heavy metal pollution of seawater.

Source: ‘The Strategic Importance of the Straits of Malacca for World Trade and Regional Development Gunalan. N. Help to lighten Straits burden. News Straits Times.'
Past Incidences: Degradation of SOMS

- Between 1975 – 1995, there were 496 maritime casualties of all types of ships in the SOMs which resulted in the loss of lives and pollution damage.

131 ships  
Collision and contact accidents

136 ships  
Wrecked and stranded

130 ships  
Sprang leak and engine trouble

83 ships  
Fire and explosion

- Between 1975 to 2000, there were 5 major pollution incidents occurred resulting in the spillage of almost 400,000 barrels of crude oil

Source: ‘7th Cooperative Forum under the CF7/6 in 2014 at Langkawi, Malaysia
Rising Threats of Marine Environment Degradation

- The increase in vessel traffic and sizes raises the threats of pollution through the increase risk of:
  - Vessel accidents.
  - Pollution from oil and grease, hazardous and noxious substances, solid waste, anti-fouling paints and invasion of species through ballast discharges.
  - Coastal erosion and degradation of coastal zone habitats including mangroves, coral, reef and seagrass along the sealine.
  - Noise pollution and physical damage to sea animals and plants due to physical contact with ship’s hull and propellers.
  - Carbon and noxious gases emission.
  - On average until 1990, 57% of Malaysia total fish production came from SOM. After 1999, it has dropped to 45% from the total.
Marine Pollution Affects Marine Lives

- Some started to Mutate
Marine Pollution Affects Marine Lives

- The end of their life
Marine Pollution Affects Marine Lives

- Some of them lost their natural form
Existing Measures

- Malaysia formed a maritime enforcement agency in 2005 known as Malaysia Maritime Enforcement Agency (MMEA).

- MALSINDO, a coordinated patrol scheme involving the navies of Malaysia, Singapore and Indonesia.

- New Traffic Separation Scheme (TSS) was adopted in 1998 under IMO.

- The ‘Eye in the Sky’ initiative.

- Manage the Revolving Fund to provide funds in advance to combat oil pollution from the ships in the straits.
Existing Measures

- Malaysia, Indonesia and Singapore maintain resources to deal with oil pollution in the Straits. In Malaysia, the Petroleum Industry Malaysia Mutual Aid Group (PINMAG) provide OSR equipment and personnel to respond to oil spill within Malaysia.

- Major oil companies have also set up East Asia Response Limited (EARL), which have bases in Singapore and Port Dickson.

- The Petroleum Association of Japan maintains a stockpile of anti-pollution equipment in Singapore and Port Klang.
Conclusion

- Increasing shipping traffic will have serious implication to the safety of the ships and quality of marine environment.

- Littoral states will have to bear the consequences of the degraded marine environment reflected in reduced economic activities from fishing and tourism industries and the possible extinction of marine creatures.

- There is a strong sense of need to take action to mitigate the increase threat of ship-base pollution from the rising traffics in the SOM as the current and existing measures has a vast room for improvement.
Proposals

• To look into the study for Straits of Malacca being declared as "Special Areas" under MARPOL Convention (Annex I – V), that includes total prohibition of discharge of any kind of materials into the Straits while on transit or at ports in the region.

• A comprehensive management plan to be produced outlining initiatives to determine the max carrying capacity of the Straits, a protocol on the enforcement of various laws against pollution and increased cooperation among the stakeholders.

• Setting up of a regional authority or a “management commission’ among littoral sustainable states to monitor, manage, protect, enhance and ensure development of SOM.
Thank you