



# National & International Law on the Marine Pollution

1

Mohd Fairoz Rozali, Marine Department Malaysia  
22 March 2018

## WHO WE ARE 2



Mohd Fairoz Rozali

- Graduated with a Degree in Mechanical Engineering (Marine Technology) from UTM in 1998;
- Earned a Master Degree in Maritime Affairs specialization on Maritime Safety and Environmental Protection (MSEP) from World Maritime University (WMU) in 2006;
- Held various functions and responsibilities in the department, including as a Ship Surveyor, Port State Control Officers, Assistant Ship Registrar and certified auditor for ISM & ISPS Convention.
- Currently - Principal Assistant Director of the Marine Environment Protection Unit, Safety of Navigation Division

- Contributions includes members to the Delegation for Malaysia to the International Oil Pollution Compensation (IOPC) Fund Meetings, IMO Meetings, ASEAN Maritime Transport Working Group (MTWG) Meetings, Chairperson to the Marine Environment Protection Technical Working Group under the Tripartite Technical Experts Groups (TTEG) Meeting in the Straits of Malacca and Singapore (SOMS), and Series of the Cooperative Mechanism on Safety and Environmental Protection in the SOMS since its establishment in 2007;
- Part of the member to Malaysia's delegation towards the establishment of the Cooperative Mechanism between the Littoral States and User States on Safety of Navigation and Environmental Protection in the Straits of Malacca and Singapore in 2006 & 2007;
- Involved in oil spill incident – MV Nautica Maharani, MV Wan Hai vs APL Denver, MV Putri Sea, GT5, Sinica Greca vs Chemroad;

3

## Content



- Introduction;
- Marine Pollution;
- National Law;
- International Law / Convention;
- Conclusion

4

## Introduction



- About 70% of all marine pollution originates from land, 10% from maritime transportation and another 10% from dumping at sea.
- Pollution :-
  - Land based;
  - **Vessel based;**

### **Vessel-based pollution**

- Marine pollution from sea-based activities is an "attention grabber", especially when it involves oil spills.
- Some effects of pollution from sea activities particularly oil spills are highly visible – oil covered wildlife, oily coastline, ecosystems highly vulnerable to pollution, etc.
- Human costs i.e., loss of income and livelihood.

## Marine Pollution?



### ■ United Nation Convention on the Law of the Sea (UNCLOS) 1982

- "The introduction by man, directly, or indirectly, of substances or energy to the marine environment resulting in deleterious effects such as: hazards to human health, hindrance to marine activities, impairment of the quality of seawater for various uses and reduction of amenities"
- **Marine pollution** occurs when harmful, or potentially harmful, effects result from the entry into the ocean of chemicals, particles, industrial, agricultural and residential waste, noise, or the spread of invasive organisms BUT most sources of marine pollution are land based.

## Marine Pollution?



### ■ International Maritime Organization (IMO) Perspectives.....

- Accidental spills from ships carrying hazardous substances, oil, gas etc;
- Leaks from facilities such as marine terminal, harbors, offshore drilling platform, etc;
- Oily discharges from ballast water and bilge water during routine ship operations and illegal dumping of solid waste;
- Designated dumping grounds at sea (dredged spoil, old munitions, sewage sludge, fly ash, oil based drilling muds);

7

## National Law

### Akta Fungsi-Fungsi Menteri 1969



- Perintah Menteri-Menteri Kerajaan Persekutuan (P.U.A 184) bertarikh 26 Jun 2013 – JLSM, JL Sarawak dan JL Sabah



Keselamatan Kapal



Pendaftaran & perlesenan kapal-kapal



Pemeriksaan Kapal-kapal



Menyelaraskan operasi kargo berbahaya



Melaksanakan pelan kontigensi melawan tumpahan minyak dari kapal



Kerja pengerukan dan kerja pengukuran hidrografi



Program pembangunan dan pensijilan pelaut

8

## National Law

### Akta Fungsi-Fungsi Menteri 1969



- Perintah Menteri-Menteri Kerajaan Persekutuan (P.U.A 184) bertarikh 26 Jun 2013 – Jabatan Alam Sekitar



Melaksanakan fungsi dan kuasa di bawah Akta Kualiti Alam Sekeliling 1974



Melaksanakan fungsi dan kuasa di bawah Bahagian IV Akta Zon Ekonomi Eksklusif 1984



Pencegahan dan pengawalan pencemaran alam sekitar



Perlindungan dan pembaikan kualiti alam sekitar

9

## National Law



Reg 27 &amp; 29



Department of Environment  
• Environmental Quality Act, 1974 (Act 127);

IMO Reporting  
(MEPC .1/Cir 318)

Ship Statutory Certificate &  
Mandatory Plan specified as  
per MARPOL 73/78

### Marine Department Malaysia

- Part VA, Merchant Shipping Ordinance 1952
- Merchant Shipping (Oil Pollution) Act 1994
- Merchant Shipping (Amendment and Extension) Act 2011 – Act A1393



Port Authorities & Other  
Related Government  
Agencies

10

## National Law

### Part VA, MSO 1952



- Amendments Act A1393 which covers Malaysian waters, EEZ and atmosphere;
- Section 306B – Applicable to :-
  - Registered Malaysian ships;
  - Foreign ships while in Malaysian waters;
  - Fishing vessels; and
  - Such vessels or class of vessels as the Minister may prescribe (i.e floating structure, platforms, offshore structures);
- Ships of war, troopships & government vessels exempted;

11

## National Law

### Part VA, MSO 1952



#### ■ Section 306C (1) – Definition :-

- "discharge" means any release of oil or harmful substances from a ship includes any escape, disposal, spilling, leaking, pumping, emitting or emptying, but does not include :-
  - Release of harmful substances or chemicals for purposes of legitimate scientific research into pollution abatement or control;
  - Dumping within the meaning of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters 1972, or dumping with the consent of the Government; or
  - Release of harmful substances directly arising from the exploration, exploitation and associated offshore processing of seabed mineral resources;

12

## National Law

### Part VA, MSO 1952



#### ■ Section 306C (1) – Definition :-

- "oil" means any persistent or non persistent hydrocarbon mineral oil in any form, including any mixture with any oil content, whether carried on board a ship as a cargo in bulk or in bunkers of the ship;
- "oil mixture" means a mixture with any oil content;
- "owner" includes a charterer or operator of a ship;
- Section 306C (2) – Where oil or harmful substance has been, is being or is likely to be discharged, intentionally or otherwise, from a ship, the discharge or likely discharge of the oil or harmful substance from the ship shall, for the purpose of this Part, be deemed to be an escape or likely escape of oil or harmful substance from the ship;

13

## National Law

### Part VA, MSO 1952



- Section 306D (I) requires that .....
  - "where oil or harmful substance is escaping from, or where the Director of Marine is satisfied that **oil or harmful substances** is likely to escape from, a ship, then, for a purpose of preventing or reducing the extend of the pollution or likely pollution by the oil or harmful substance of any Malaysian waters, any part of Malaysian coast or any Malaysian reef, the Director of Marine with consultation of DG of the DOE, by notice in writing addressed to the owner of the ship and served in accordance with section 306E, do all or any of the following :-
    - Require such notice to be taken in relation to the ship or its cargo as is specified in the notice;
    - Prohibit the removal of the ship from a place specified in the notice except with his approval; and
    - Prohibit the removal of the ship or any cargo, or any cargo specified in the notice, except with his approval;

14

## National Law

### Part VA, MSO 1952



- Section 306J (I) requires that .....
  - "the master of a ship in Malaysian waters which experiences a maritime casualty as defined in the Section 306I or which has discharged any oil or harmful substances shall report incident to :
    - The Port Officer, within twenty-four hours or as soon as possible, where the ship is in port; or
    - The Director of Marine, as soon as possible, where the ship is outside a port;



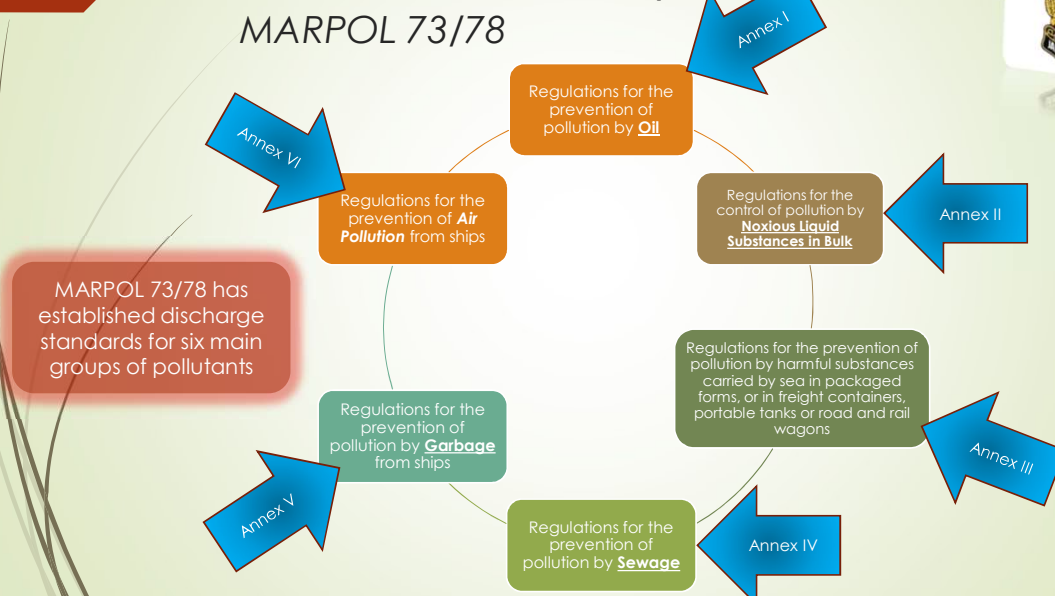
## International Law / Convention



No	International Convention	Enforcement Date
1	The Protocol on Preparedness, Response and Co-Operation To Pollution Incidents by Hazardous and Noxious Substances (OPRC HNS), 2000	21 <sup>st</sup> February 2014
2	International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL), Annex VI: Prevention of Air Pollution from Ships	27 <sup>th</sup> December 2010
3	International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL), Annex IV: Prevention of Pollution by Sewage from Ships	27 <sup>th</sup> December 2010
4	International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL), Annex III: Prevention of Pollution from harmful substances in Packaged Form	27 <sup>th</sup> December 2010
5	The International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001 (Bunkers Convention 2001)	12 <sup>th</sup> December 2009
6	The International Convention for the Limitation of Liability for Maritime Claims, 1976 as Amended by Protocol of 1996 (LLMC Convention 1996)	10 <sup>th</sup> February 2009
7	International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (FUND) Protocol 1992	9 <sup>th</sup> June 2005
8	International Convention on Civil Liability for Oil Pollution Damage (CLC) 1992	9 <sup>th</sup> June 2005
9	International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) 1990	13 <sup>th</sup> October 1997
10	Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships (MARPOL) 1973, as amended (Annexes I, II and V)	1 <sup>st</sup> May 1997

16

## International Law / Convention MARPOL 73/78





## International Law / Convention



Oil Pollution  
- MARPOL 73/78 Annex I

## International Law / Convention MARPOL 73/78 Annex I

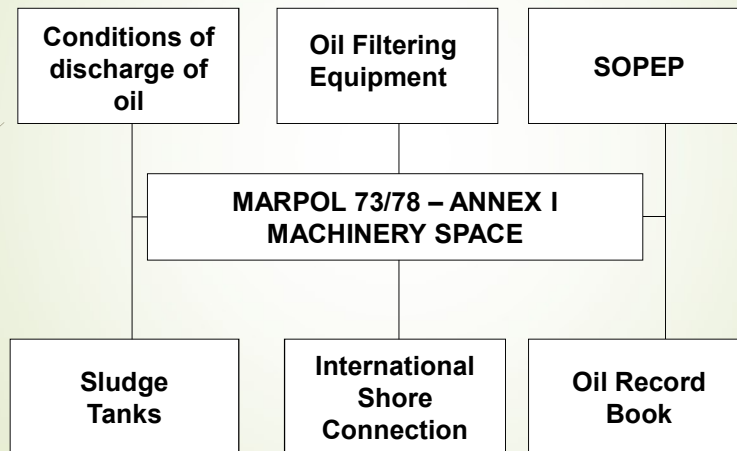


- **Oil Pollution** through Annex 1 - Regulations for the Prevention of Pollution by Oil :-
  - Allowable discharges of bilge water through the oily water separator (with the well-known 15ppm standard), or
  - Oily waters from the cargo tanks, through the oil discharge and monitoring system;



# International Law / Convention

## MARPOL 73/78 Annex I

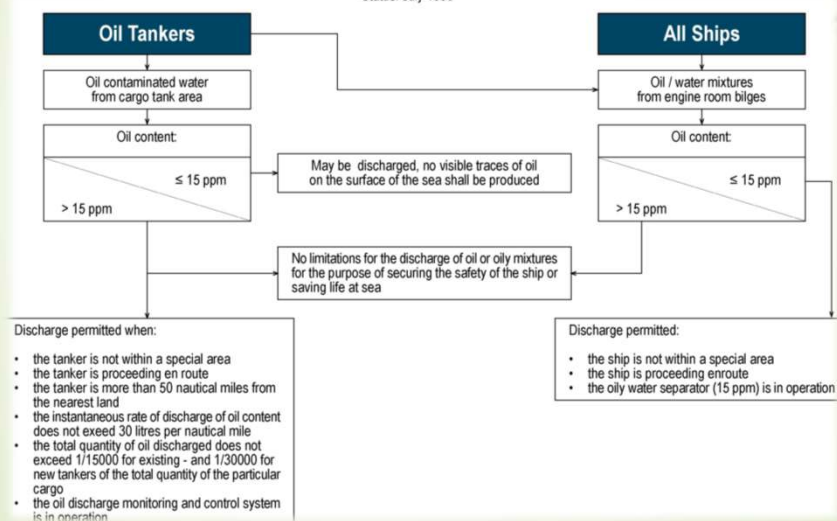


# International Law / Convention

## MARPOL 73/78 Annex I



Status: July 1998



## International Law / Convention



### Oil Pollution

-MARPOL 73/78 Annex I

### Chemical Pollution

- SOLAS 1974 Chapter VII  
- MARPOL 73/78 Annex II & III

## International Law / Convention *SOLAS 74 – Chapter VII*



- International Convention for the Safety of Life at Sea
  - Carriage of chemicals in bulk is covered by regulations in SOLAS Chapter VII - Carriage of dangerous goods;
  - Require chemical tankers built after 1 July 1986 to comply with the International Bulk Chemical Code (IBC Code), which sets out the international standards for the safe carriage, in bulk by sea, of dangerous chemicals and noxious liquid substances.
  - The IBC Code prescribes the design and a construction standard of ships involved in the transport of bulk liquid chemicals and identifies the equipment to be carried to minimize the risks to the ship, its crew and to the environment, with regard to the nature of the products carried.

## International Law / Convention MARPOL 73/78 Annex II & III



### ■ **Chemical Pollution** through

- Annex II - Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk;
- Annex III - Regulations for the Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form;

## International Law / Convention MARPOL 73/78 Annex II



- Annex II - Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk through four categories :-
  - Category X: Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment;
  - Category Y: Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment;

## International Law / Convention MARPOL 73/78 Annex II



- Annex II - Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk through four categories :-
  - Category Z: Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment; and
  - Other Substances: substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning or deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing these substances are not subject to any requirements of MARPOL Annex II.

## International Law / Convention MARPOL 73/78 Annex III



- Annex III - Regulations for the Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form;
  - Chemicals which are carried in packaged form, in solid form or in bulk are regulated by Part A of SOLAS Chapter VII - Carriage of dangerous goods, which includes provisions for the classification, packing, marking, labelling and placarding, documentation and stowage of dangerous goods.
  - Sets out regulations for the prevention of pollution by harmful substances in packaged form and includes general requirements for the issuing of detailed standards on packing, marking, labelling, documentation, stowage, quantity limitations, exceptions and notifications for preventing pollution by harmful substances.

## International Law / Convention

### MARPOL 73/78 Annex III



- Annex III - Regulations for the Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form;
- For the purpose of Annex III, "harmful substances" are those identified as "marine pollutants" in the IMDG Code.
- Both SOLAS and MARPOL refer to the International Maritime Dangerous Goods (IMDG) Code, which was developed by IMO as a uniform international code for the transport of dangerous goods by sea.

## International Law / Convention



**Oil Pollution**  
-MARPOL 73/78 Annex I

**Chemical Pollution**  
- SOLAS 1974 Chapter VII  
- MARPOL 73/78 Annex II & III

**Sewage Pollution**  
-MARPOL Annex IV

## International Law / Convention MARPOL 73/78 Annex IV



- Annex IV - Regulations for the Prevention of Pollution by Sewage from Ships;
  - Contains a set of regulations regarding the discharge of sewage into the sea from ships, including regulations regarding the ships' equipment and systems for the control of sewage discharge, the provision of port reception facilities for sewage, and requirements for survey and certification.
  - Generally considered that on the high seas, the oceans are capable of assimilating and dealing with raw sewage through natural bacterial action.
  - The regulations in Annex IV prohibit the discharge of sewage into the sea within a specified distance from the nearest land, unless otherwise provided.

## International Law / Convention MARPOL 73/78 Annex IV



- What is Sewage ?
  - Drainage and other wastes from any form of toilets, urinals, and WC scuppers;
  - Drainage from medical premises (dispensary, sick bay, etc.) via wash basins, wash tubs and scuppers located in such premises;
  - Drainage from spaces containing living animals; or
  - Other waste waters when mixed with the drainages defined above.



## International Law / Convention MARPOL 73/78 Annex IV



- Application
  - New ship :-
    - 400 tons gross tonnage and above;
    - Less than 400 tons gross tonnage which are certified to carry more than 10 persons;
    - New ships which do not have a measured gross tonnage and are certified to carry more than 15 persons;
  - Existing ships of 400 gross tonnage and above, five years after the date of entry into force of this Annex; and
  - Existing ships of less than 400 gross tonnage which are certified to carry more than 15 persons, five years after the date of entry into force of this Annex.

## International Law / Convention MARPOL 73/78 Annex IV



- Application
  - The Director of Marine shall ensure that existing ships, according to subparagraphs 1.3 and 1.4 of this regulation, the keels of which are laid or which are of a similar stage of construction before 2 October 1983 shall be equipped, as far as practicable, to discharge sewage in accordance with the requirements of regulation 11 of the Annex.

## International Law / Convention MARPOL 73/78 Annex IV



### ■ Discharge :-

- The discharge of sewage into the sea is **PROHIBITED**, except when:
  - The ship is discharging comminuted and disinfected sewage using a system approved by the Administration at a distance of more than 4 nautical miles from the nearest land; or
  - Sewage which is not comminuted or disinfected at a distance of more than 12 nautical miles from the nearest land, provided that in any case, the sewage that has been stored in holding tanks shall not be discharged instantaneously but at a moderate rate when the ship is en route and proceeding at not less than 4 knots;
  - The rate of discharge shall be approved by the Administration based upon standards developed by the Organization;

## International Law / Convention MARPOL 73/78 Annex IV



### ■ Reception Facilities :-

- The Government of each Party to the Convention undertakes to ensure the provision of facilities at ports and terminals for the reception of sewage, without causing undue delay to ships, adequate to meet the needs of the ships using them.
- The Government of each Party shall notify the Organization for transmission to the Contracting Governments concerned of all cases where the facilities provided under this regulation are alleged to be inadequate.

## International Law / Convention



### Oil Pollution

-MARPOL 73/78 Annex I

### Chemical Pollution

- SOLAS 1974 Chapter VII  
- MARPOL 73/78 Annex II & III

### Sewage Pollution

-MARPOL Annex IV

### Garbage Pollution

-MARPOL Annex V

## International Law / Convention


### MARPOL 73/78 Annex V



- Annex V - Regulations for the Prevention of Pollution by Garbage from Ships;
  - To eliminate and reduce the amount of garbage being discharged into the sea from ships;
  - Garbage from ships can be just as deadly to marine life as oil or chemicals.
  - The greatest danger comes from plastic, which can float for years. fish and marine mammals can in some cases mistake plastics for food and they can also become trapped in plastic ropes, nets, bags and other items;




## International Law / Convention



<u><b>Oil Pollution</b></u> - MARPOL 73/78 Annex I	<u><b>Chemical Pollution</b></u> - SOLAS 1974 Chapter VII - MARPOL 73/78 Annex II & III
<u><b>Sewage Pollution</b></u> - MARPOL Annex I	<u><b>Garbage Pollution</b></u> - MARPOL Annex V
<u><b>Air Pollution &amp; GHG</b></u> - MARPOL Annex VI	

## International Law / Convention

### MARPOL 73/78 Annex VI



- Annex VI - Regulations for the Prevention of Air Pollution from Ships
  - To minimize airborne emissions from ships (SO<sub>x</sub>, NO<sub>x</sub>, CO<sub>2</sub> shipboard incineration) and their contribution to local and global air pollution and environmental problems.
  - To increase energy efficiency and reduce GHG emissions from international shipping

## International Law / Convention



**Oil Pollution Preparedness,  
Response & Cooperation  
(OPRC) 1990**

## International Law / Convention OPRC 1990



- The International Convention on Oil Pollution Preparedness, Response and Co-operation 1990 (OPRC 90)
- The international instrument that provides a framework designed to facilitate international co-operation and mutual assistance in preparing for and responding to major oil pollution incidents and requires States to plan and prepare by developing national systems for pollution response in their respective countries, and by maintaining adequate capacity and resources to address oil pollution emergencies.




## International Law / Convention




**Oil Pollution Preparedness,  
Response & Cooperation  
(OPRC) 1990**

**OPRC HNS 2000**



## International Law / Convention

*OPRC HNS 2000*



- The Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances, 2000 (OPRC-HNS Protocol)
- Extends this regulatory framework to address pollution incidents involving hazardous and noxious substances, i.e. chemicals.

## International Law / Convention

### OPRC 1990 & OPRC HNS 2000



- States which are party to OPRC 90 and OPRC-HNS Protocol are required to establish a national system for responding to oil and HNS pollution incidents, including a designated national authority, a national operational contact point and a national contingency plan.
- This needs to be backstopped by a minimum level of response equipment, communications plans, regular training and exercises.

## WHERE DO WE STAND?



**Oil Pollution Preparedness,  
Response & Cooperation  
(OPRC) 1990**

**OPRC HNS 2000**

**Ballast Management Water  
Convention (BWM)2004**



## International Law / Convention BWM 2004



- Since 2014 Malaysia has established initial baseline data for seven ports - **Tok Bali Port**, **Kemaman Port**, Johor Port (**Pasir Gudang** and Port of Tanjung Pelepas), Klang Port, **Bintulu Port** and Penang Port;
- Latest will be Kuantan Port (on-going);
- Baselines data are important for assessing risk from ballasting activities at ports as detailed in the *Guidelines for risk assessment under regulation A-4 of the BWM Convention (G7)*;

## International Law / Convention BWM 2004



- Malaysia is also in the process of establishing a National Marine Repository in the effort to promote and facilitate scientific and technical research on ballast water management; and
- Monitor the effects of ballast water management in waters under Malaysia's jurisdiction as detailed in article 6 of BWM Convention.



## WHERE DO WE STAND?



Oil Pollution Preparedness,  
Response & Cooperation  
(OPRC) 1990

OPRC HNS 2000

Ballast Management Water  
Convention (BWM)2004

CLC & Fund Convention 1992

## International Law / Convention CLC 1992



- The aim of CLC is to ensure that adequate compensation is available to persons who suffer oil pollution damage resulting from maritime casualties involving oil carrying vessels;
- Applies to all ships carrying oil in bulk as cargo ;
- Strict liability;
- Definition of oil is persistent oil such as crude oil, fuel oil, heavy diesel oil, lubricating oil and whale oil whether carried on board a ship as a cargo;
- Applied to all seagoing vessels carrying oil in bulk as cargo (Tanker), but vessels carrying more than **2000** tons of oil required to maintain insurance in respect of oil pollution damage;
- Convention covers pollution damage resulting from spills of persistent oils suffered in the territory;

## International Law / Convention Fund 1992



- The purpose of Fund :-
  - To provide compensation for oil pollution damage to extend that the protection afforded by the '92 CLC is inadequate;
  - To give relief to shipowners in respect of the additional burden imposed on them by the 1969 CLC, such relief being subject to conditions designed to ensure compliance with safety at sea and other conventions;
  - To give effect to the related purposes set out in the Convention;

## International Law / Convention Fund 1992



### Summary of CLC & Fund Convention

1. Cover extended to pollution damage caused in the EEZ or equivalent area of the State Party
2. Protocols cover pollution damage as before but environmental damage compensation (other than for loss of profit from impairment of the environment) is limited to costs incurred for reasonable measures to reinstate the contaminated environment;
3. Expenses incurred for preventive measures are recoverable even when no spill of oils occurs, provided there was grave and imminent threat of pollution damage;
4. Protocols apply to spills from sea going vessels constructed or adapted to carry oil in bulk as cargo so apply to both laden and unladen tankers, including spills of bunker oil from such ships;
5. Under '92 CLC Protocol, shipowner cannot limit liability if it is proved that the pollution damage resulted from the shipowner's personal act or emission, committed with the intent to cause such damage, or recklessly and with knowledge that such damage would probably result;

## Conclusion



- Environmental management is a national, sub-regional and international issue.
- The sea will continue to be at risk from maritime transportation due to dependence on seaborne trade and the transportation of oil.
- Much has been done to address the problem through framework of international conventions, non-legal instruments as well as national actions. However the problem still persisted.
- **New areas should be explored.**

Thank you  
 Danke xie  
 Khawp khun  
 Yum botio  
 Mahalo  
 Salamet  
 Juspa  
 Spacibo  
 Arigato  
 Obrigada  
*Terima kasih*

