Prof. ZHANG Renping

Dalian Maritime University, China

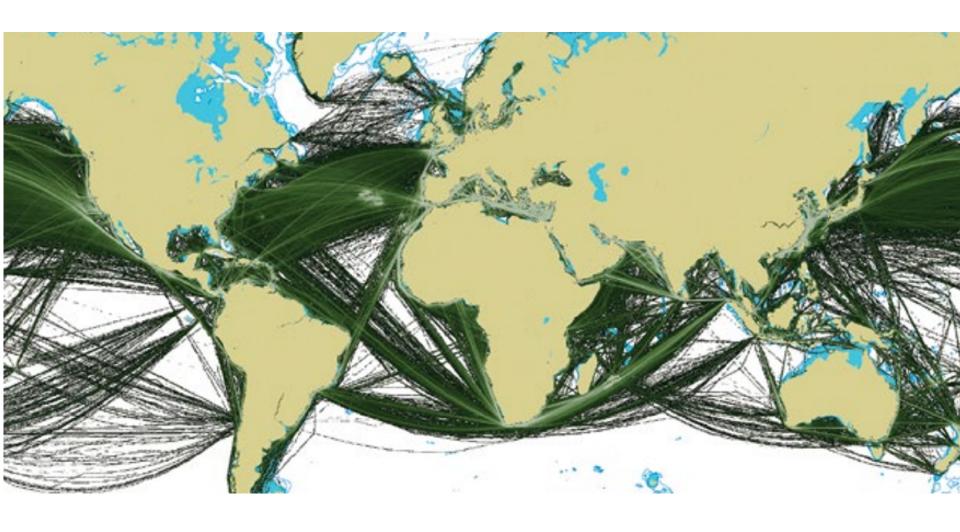
Ho Chi Minh City, Vietnam, 27-28 Nov. 2017

- Shipping in the SCS
- Marine Technology Trends
- Maritime Cooperation in SCS
- Conclusions

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Shipping in the SCS





Seaborne trade accounts for 80% of total world trade volume

(Source: UNCTAD 2017)



As of 1 January 2017, world commercial fleet consisted of  $\bf 93,161$  vessels, with a combined tonnage of  $\bf 1.86$  billion dwt.

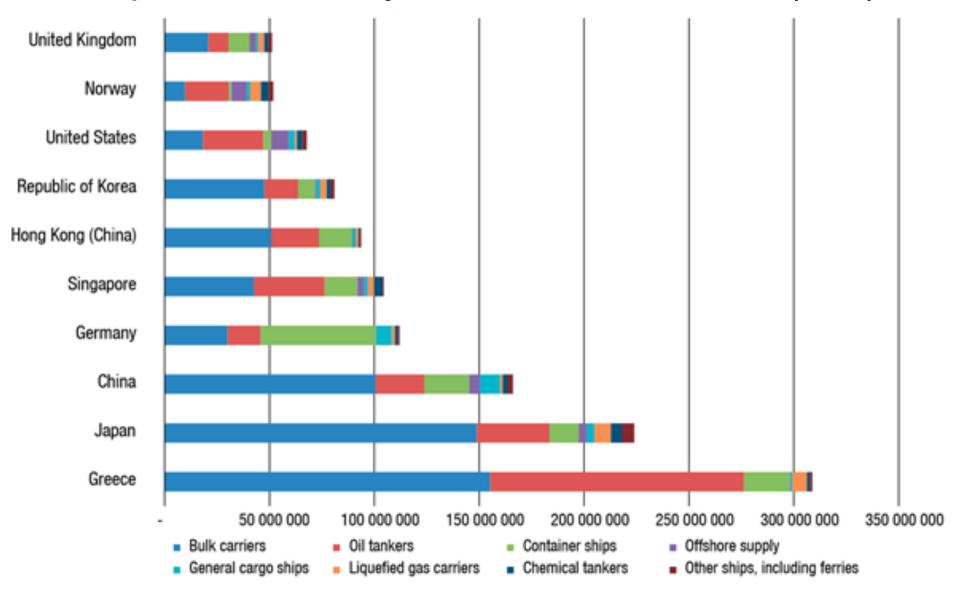
(Source: UNCTAD Review of Maritime Transport 2017)



#### LEADERS IN SHIP BUILDING



#### Top 10 nationally owned fleets, 2017 (dwt)



(Source: UNCTAD Review of Maritime Transport 2017)

# Shipping in the SCS

#### World Maritime Day 2017















(Source: IMO homepage)

# Shipping in the SCS

• The theme for this year will enable us to shine a

spotlight on the existing Cooperation
between ports and ships to maintain
and enhance a safe, secure and

efficient maritime transportation system.

(Source: IMO Secretary-General Mr. Ki-tack Lim)

## Shipping in the SCS

Shipping is the most international of all the world's great industries, and one of the most dangerous.



#### World Merchant Shipping

Registered by Country on 31 Dec 2016

Rank	Country	Gross Tonnage
1	Panama	220.827.125
2	Liberia	138.735.562
3	Marshall Islands	132.877.581
4	Singapore	82.435.023
5	Malta	67.315,297
6	Bahamas	59.182.139
7	United Kingdom	47.689.807
8	China	45.416.722
9	Greece	40.868.971
<sub>Імо)</sub> 10	Japan	24.579.000

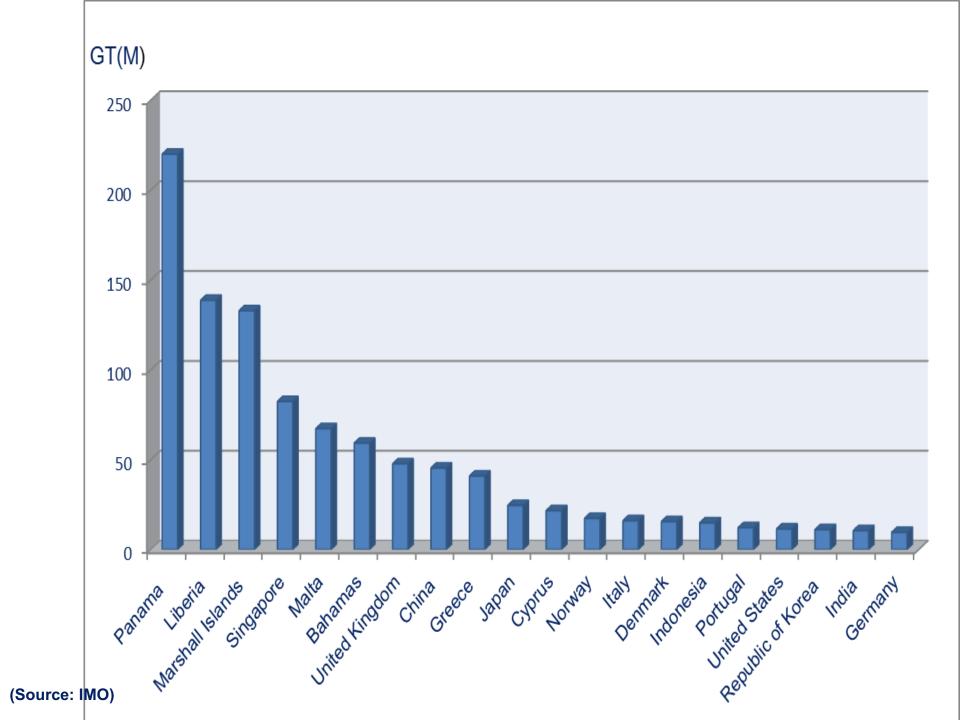
(Source:

#### World Merchant Shipping

Registered by Country on 31 Dec 2016

Rank	Country	Gross Tonnage
11	Cyprus	21.724.652
12	Norway	17.387.174
13	Italy	16.133.555
14	Denmark	15.644.432
15	Indonesia	14.948,699
16	Portugal	12.163.926
17	United States	11.474.034
18	Republic of Korea	11.083.043
19	India	10.635.701
: IMO) 20	Germany	9.618.863

(Source:



Top 10 Ports in 2017



















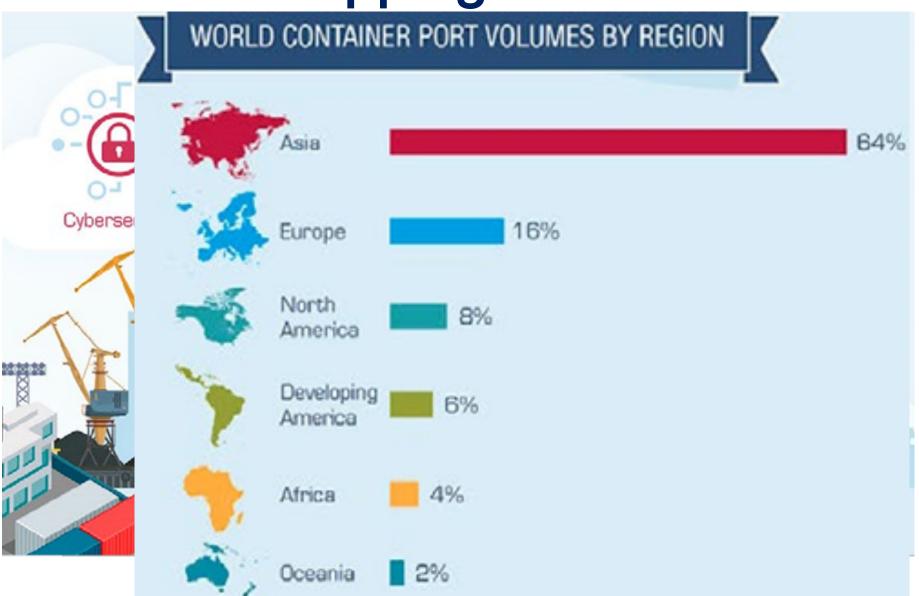
(Source: Lloyd's List)



Top 10:

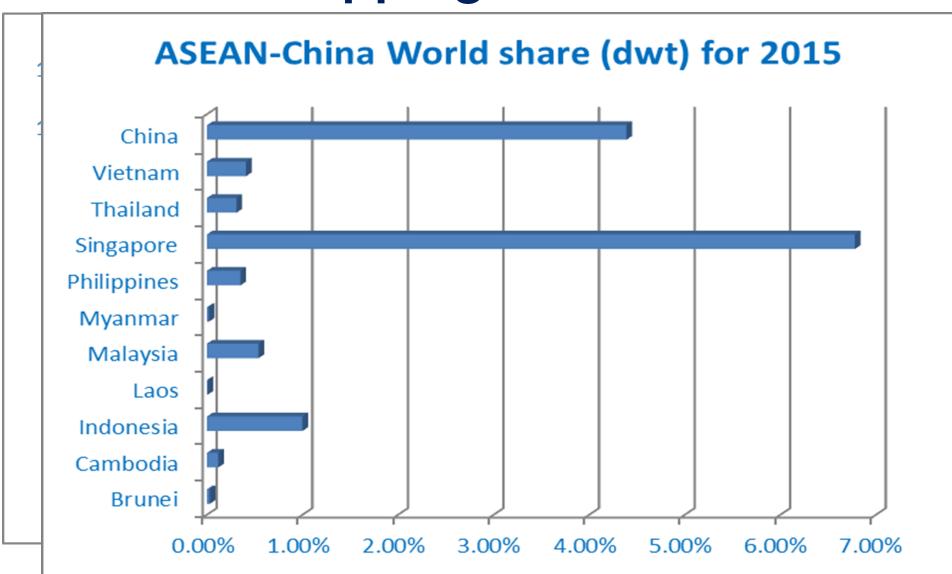
Shanghai Singapore Shenzhen Ningbo-Zhoushan Busan Hong Kong Guangzhou Qingdao Dubai **Tianjing** 

(Source: Strategic Maritime Passage)

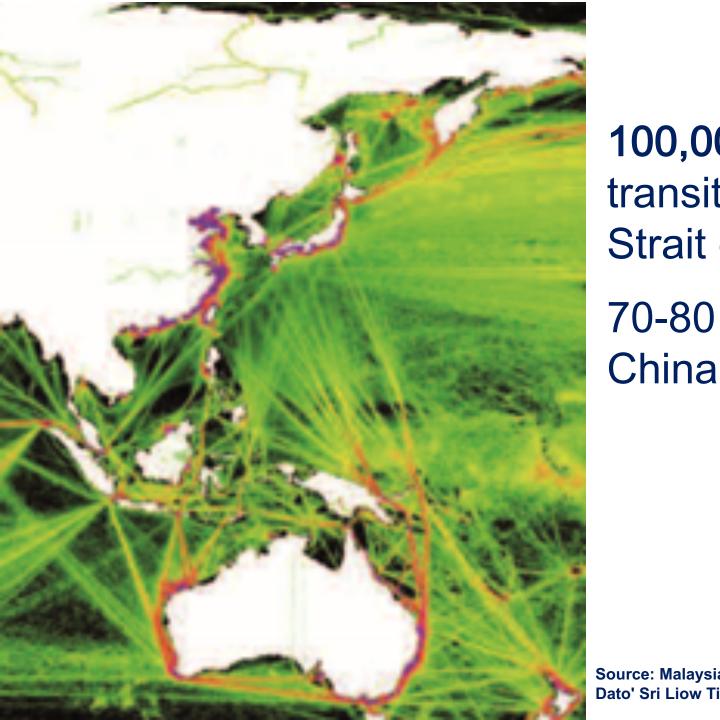


(Source: Review of Maritime Transport, 2017)

What are the scenarios of shipping and exports in Southeast Asia countries?



National Flag Fleet for 2015 (1000 dwt)



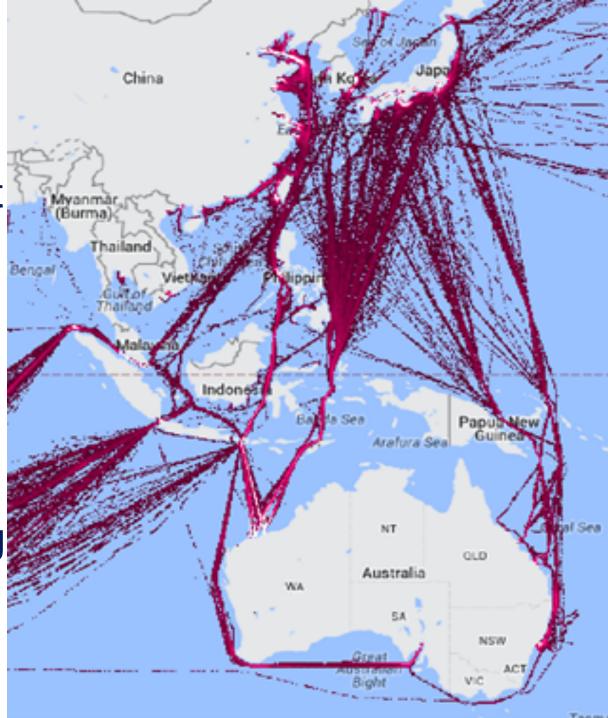
100,000 ships transit Malacca Strait every year, 70-80 % for

Source: Malaysian Transport Minister Mr. YB Dato' Sri Liow Tiong Lai, 19 October 2016

#### 2016 in SCS

- >96,660 ships
- >90% global fleet
- >50 countries

South China Sea remains highly shipping density and vital shipping route.



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Marine Technology Trends



Source: Rolls-Royce







**Source: IMO Homepage** 

## Key agenda Items at MSC 98

- Maritime Autonomous Surface Ship;
- Cyber risk management;

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• . . . . . ;
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# Maritime Autonomous Surface Ships (MASS) Scoping exercise

 IMO takes a proactive & leading role;

Scoping exercise is to touch on issues:

- human element,
- maritime safety & security,
- interactions with ports & pilotage,
- responses to incidents,
- protection of marine environment,

## Scoping exercise is to consider:

- legal aspects,
- responsibility in MASS accident,
- consequences to cargo,
- implications to shoreside,

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Maritime Cooperation in SCS



# Maritime Cooperation in SCS

## **Port Cooperation**

Kemaman Port Authority, Kuching Port Authority and Sabah Ports Authority would be joining the alliance from Malaysian side.

On China side, <u>Tianjin</u> Port and <u>Qingdao</u> Port would be added, bringing the total number of ports in the <u>alliance to 21</u>.

## Maritime Cooperation in SCS

China Emission Control Areas Implementation



Three ECAs within China are launched in 2015, and entered into force from 1 January 2016.

2016-2019 Fuel sulphur ≤ 0.5%

By 2020 Fuel sulphur ≤ 0.1%

(Source: China Classification Society, Sept 2017)

## Maritime Cooperation in SCS



rl River Delta ECA

(Source: China Classification Society, Sept 2017)

#### **PSSA** in Southeast Asia

#### **Philippines**

 Tubbataha Reefs Natural Park in Sulu Sea, as PSSA

#### Malaysia

 Pulau Kukup (Kukup Island) and Tanjung Piai (Cape Piai), as PSSA

#### **Vietnam**

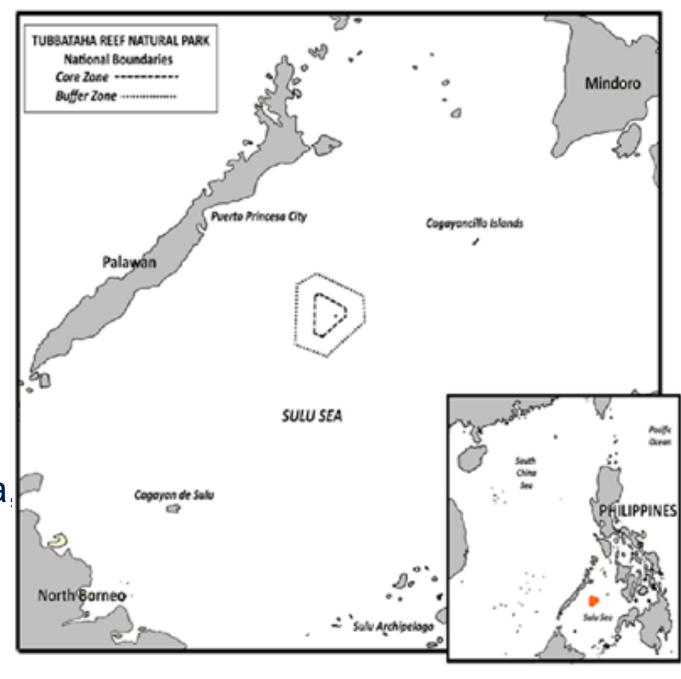
Ha Long Bay (Quang Ninh) – Cat Ba (Hai Phong)

#### Indonesia

Gili Islands and Nusa Penida Islands, as PSSA

#### Philippines, Tubbataha Reefs Natural Park as PSSA

MEPC 71
approved
Tubbataha
Reefs Natural
Park, situated
in the Sulu Sea
Philippines as
PSSA,

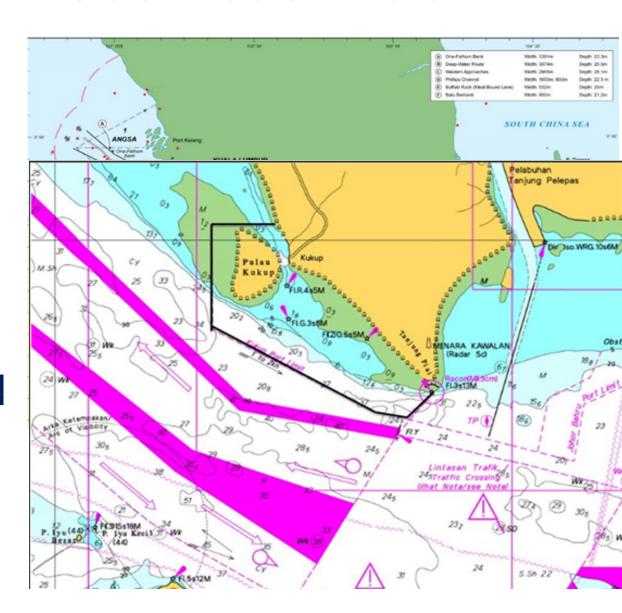


(Source: IMO MEPC 69, 2016)

## **PSSA** in Southeast Asia

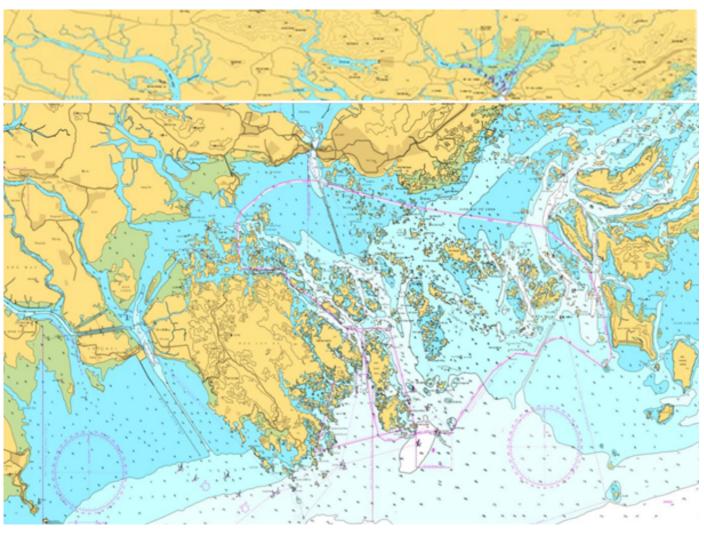
## Malaysia:

Protection of Pulau Kukup (Kukup Island) and Tanjung Piai (Cape Piai) coastal protected areas (Johore)



(Source: IMO MEPC 71, 2017)

## **PSSA** in Southeast Asia



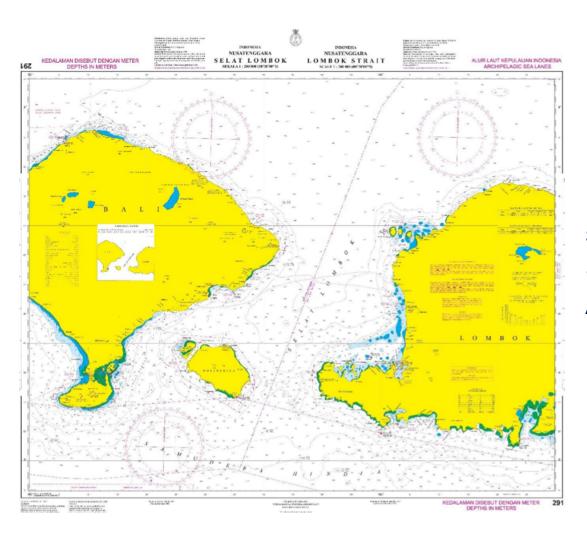
### Vietnam:

Ha Long Bay (Quang Ninh) – Cat Ba (Hai Phong), as PSSA

(Source: IMO MEPC 69, 2016)

#### **PSSA** in Southeast Asia

MAP DEPICTING THE LOMBOK STRAIT, INDONESIA



#### Indonesia

Gili Islands and Nusa
Penida Islands, in close
proximity to international
shipping routes in Lombok
Strait, Indonesian
Archipelagic Sea Lane
(IASL) II, between
Lombok and Bali Islands.

(Source: IMO MEPC 71, 2017)

# Maritime Cooperation in SCS

#### China-Asean Joint SAR Exercise



20 ships, 3 helicopters, 1000 people

Magic Vs Jupiter
29 overboard
328 to be rescued
8 injured
2 transferred by
helicopter

Brunei
China,
Cambodia
Lao
Myanmar
Philippines
Thailand

(Source: china.people.com.cn, 31 October. 2017)

# Maritime Cooperation in SCS

#### **Autonomous Ship**

- UNCLOS;
- SOLAS,
- MARPOL,
- COLREG,
- STCW,
- Liability,

— . . .



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## Conclusions



ASEAN - CHINA Summit

## For regional security in SCS:

- Confidence building
- Capacity building
- Cooperation
- Connectivity of facilities

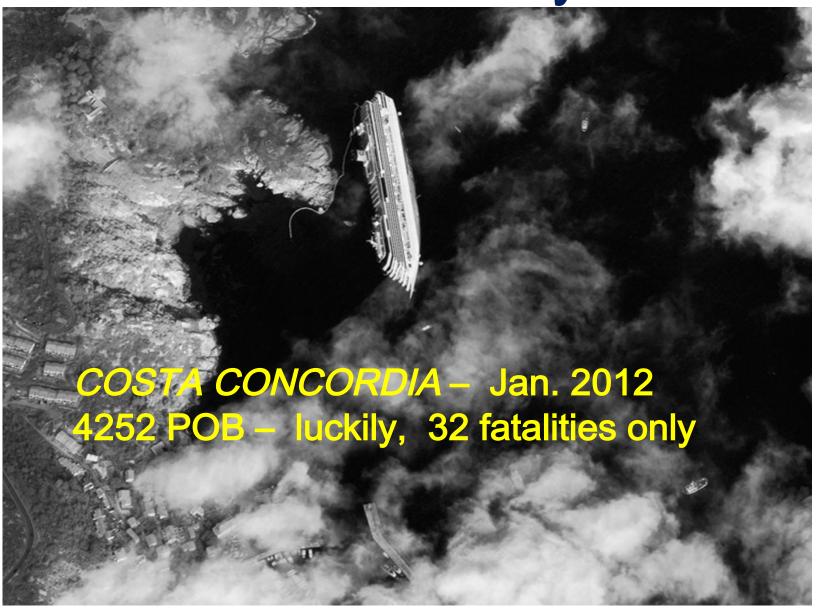
- joint vision,
- greater synergy
- political and security cooperation,
- bond of business cooperation,
- people-to-people exchange,
- e.g., cruise tourism, maritime search and rescue, marine environmental protection.



RMS Titanic, 15 April 1912, with 1,500 loss

Costa Concodia Jan.2012,

## **Cruiser Safety**



(Source: International Maritime Rescue, October. 2017)

## Safer, More Secure Voyage in SCS



China and Southeast Asian countries work together for regional security!

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