



**AMBASSADE
DE FRANCE
À SINGAPOUR**

*Liberté
Égalité
Fraternité*



APEC 2022
THAILAND



Global Ports Safety IN SOUTH AND SOUTH EAST ASIA

**DANGEROUS GOODS MANAGEMENT IN GLOBAL PORTS
IN THE CONTEXTE OF ENERGY TRANSITION**

APEC 1st DEC 2022

Jean-michel.dumaz@ambafrance-sg.org



**AMBASSADE
DE FRANCE
À SINGAPOUR**

*Liberté
Égalité
Fraternité*

THE CONTEXT OF GLOBAL PORTS IN SOUTH and SOUTH-EAST ASIA



AMBASSADE DE FRANCE À SINGAPOUR

*Liberté
Égalité
Fraternité*

The main port of South and South East Asia are GLOBAL and part of the world 50 largest

- Huge investments in infrastructures
- Growth
- Interconnected and interdependent

GLOBAL PORTS IN SOUTH and SOUTH EAST ASIA

PORT	World Rank	COUNTRY
Colombo	24	Sri Lanka
Chittagong	58	Bangladesh
Port Klang (Kuala Lumpur)	12	Malaysia
Tanjung Pelepas	15	Malaysia
Singapore	2	<i>Singapore</i>
Tanjung Priok (Jakarta)	23	Indonesia
Tanjung Perak (Surabaya)	48	Indonesia
Laem Chabang & Map Ta Phut	22	Thailand
Ho-Chi-Minh City	20	Vietnam
Hai Phong	31	Vietnam
Manila	32	The Philippines

GLOBAL PORTS IN SOUTH and SOUT EAST ASIA



AMBASSADE DE FRANCE À SINGAPOUR

*Liberté
Égalité
Fraternité*

Chittagong

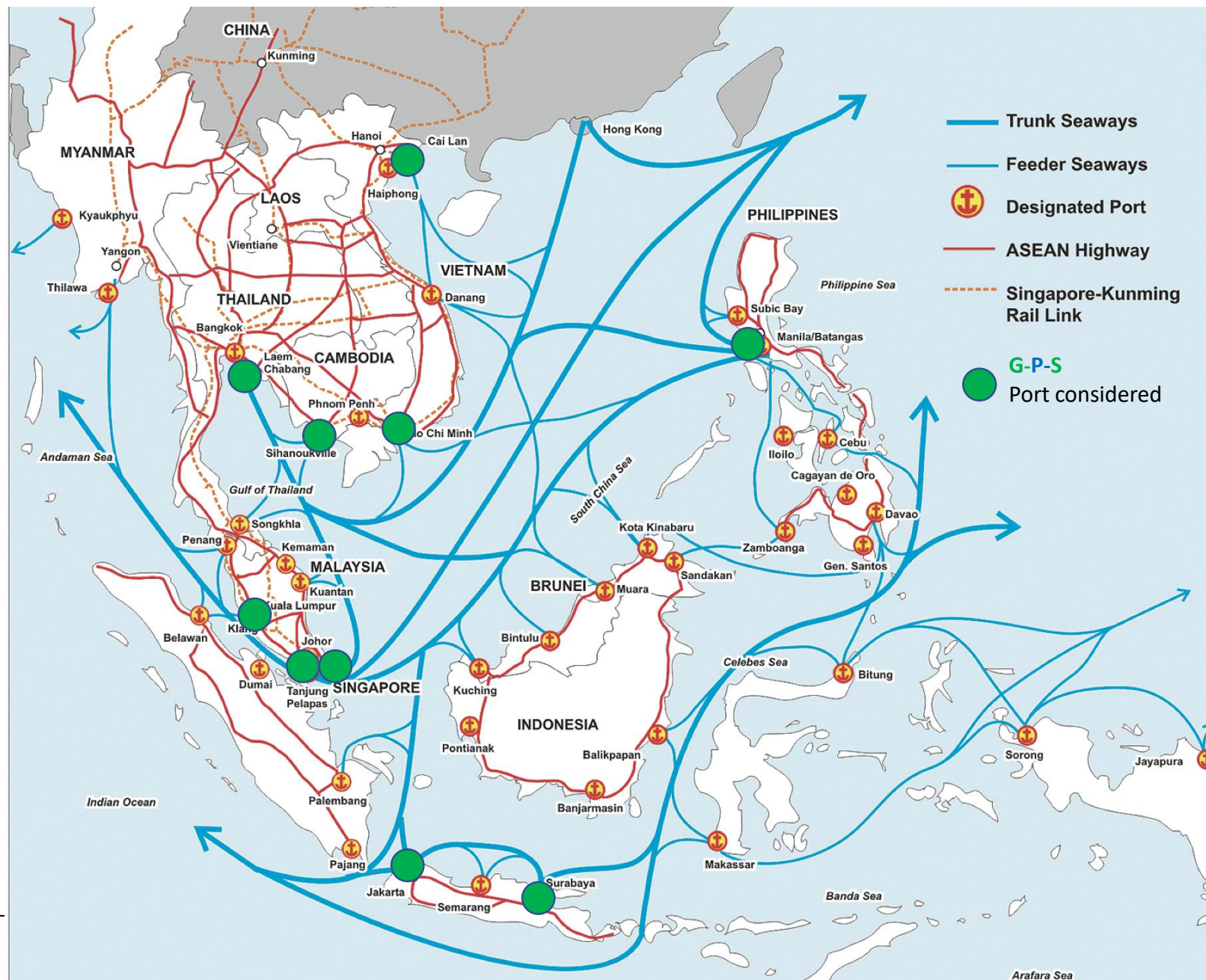


Colombo



The GLOBAL sea ports of southern Asia are interconnected and interdependent

The growing trade flow represent a huge challenge for the related countries



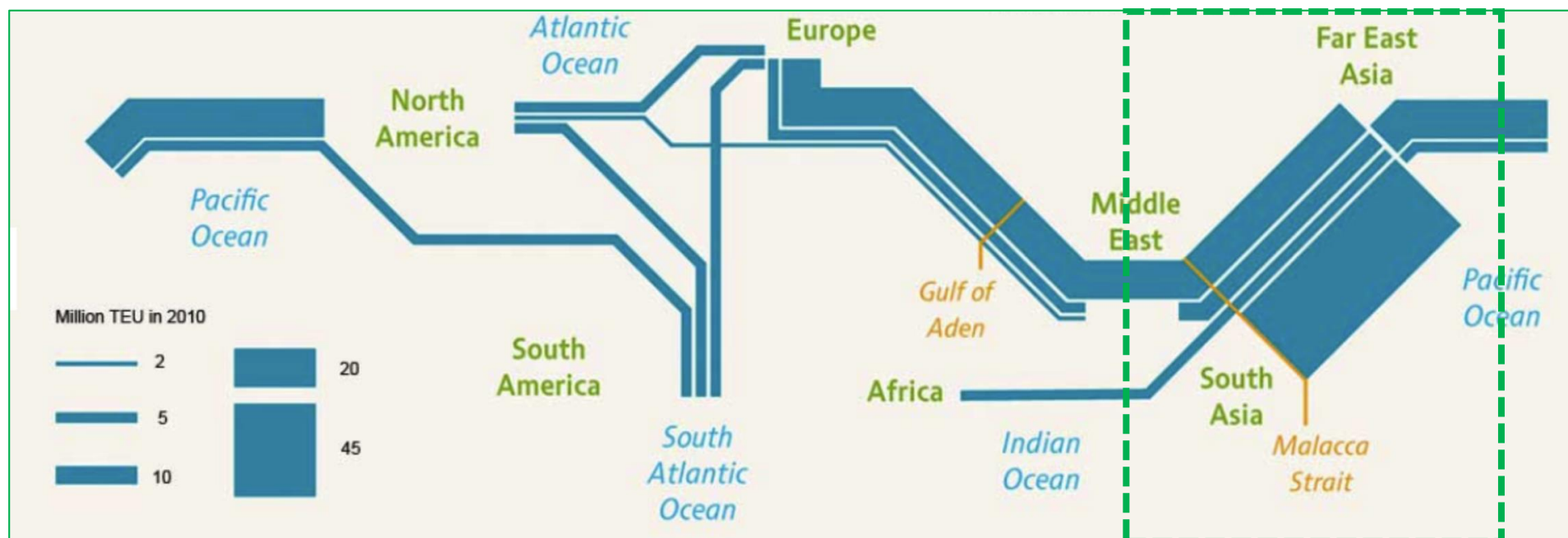


AMBASSADE DE FRANCE À SINGAPOUR

*Liberté
Égalité
Fraternité*

THE SOUTH AND SOUTH EAST ASIA GLOBAL PORTS ARE THE CORNER STONE OF THE GROW OF MARITIME TRADE

Container shipping main routes



THE SOUTH AND SOUTH EAST ASIA GLOBAL PORTS ARE THE CORNER STONE OF

THE GROW OF MARITIME TRADE



**AMBASSADE
DE FRANCE
À SINGAPOUR**

*Liberté
Égalité
Fraternité*

Almost 40% of LNG trade moves through South China Sea

The South China Sea is a major route for liquefied natural gas (LNG) trade, and in 2016, almost 40% of global LNG trade, or about 4.7 trillion cubic feet (Tcf), passed through the South China Sea

Major liquefied natural gas trade flows in the South China Sea (2016)
trillion cubic feet





**AMBASSADE
DE FRANCE
À SINGAPOUR**

*Liberté
Égalité
Fraternité*

**THE GROWING MARITIME TRADE FLOW IN SOUTH AND
SOUTH EAST ASIA, A HUGE CHALLENGE FOR SAFETY
MANAGEMENT**

MARITIME SAFETY IN SOUTH AND SOUTH EAST ASIA



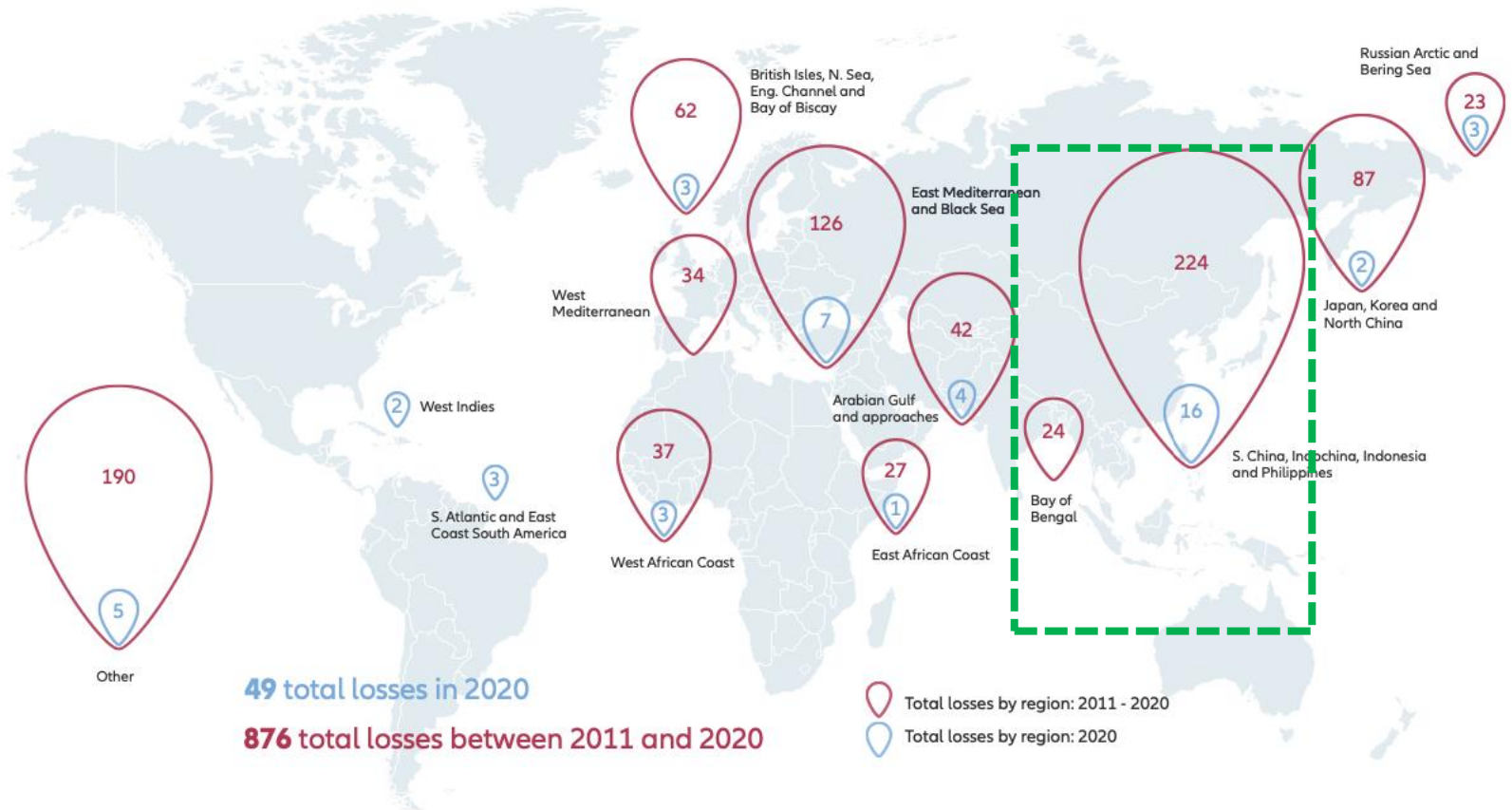
AMBASSADE DE FRANCE À SINGAPOUR

*Liberté
Égalité
Fraternité*

The port safety is not well monitored but some indicators on maritime shipping should be considered

South China, Indochina, Indonesia and Philippines remains the top loss hotspot of the past decade. This is driven by a number of factors including high levels of local and international trade, congested ports and busy shipping lanes, older fleets etc.

Total losses by top 10 regions 2011-2020 and 2020

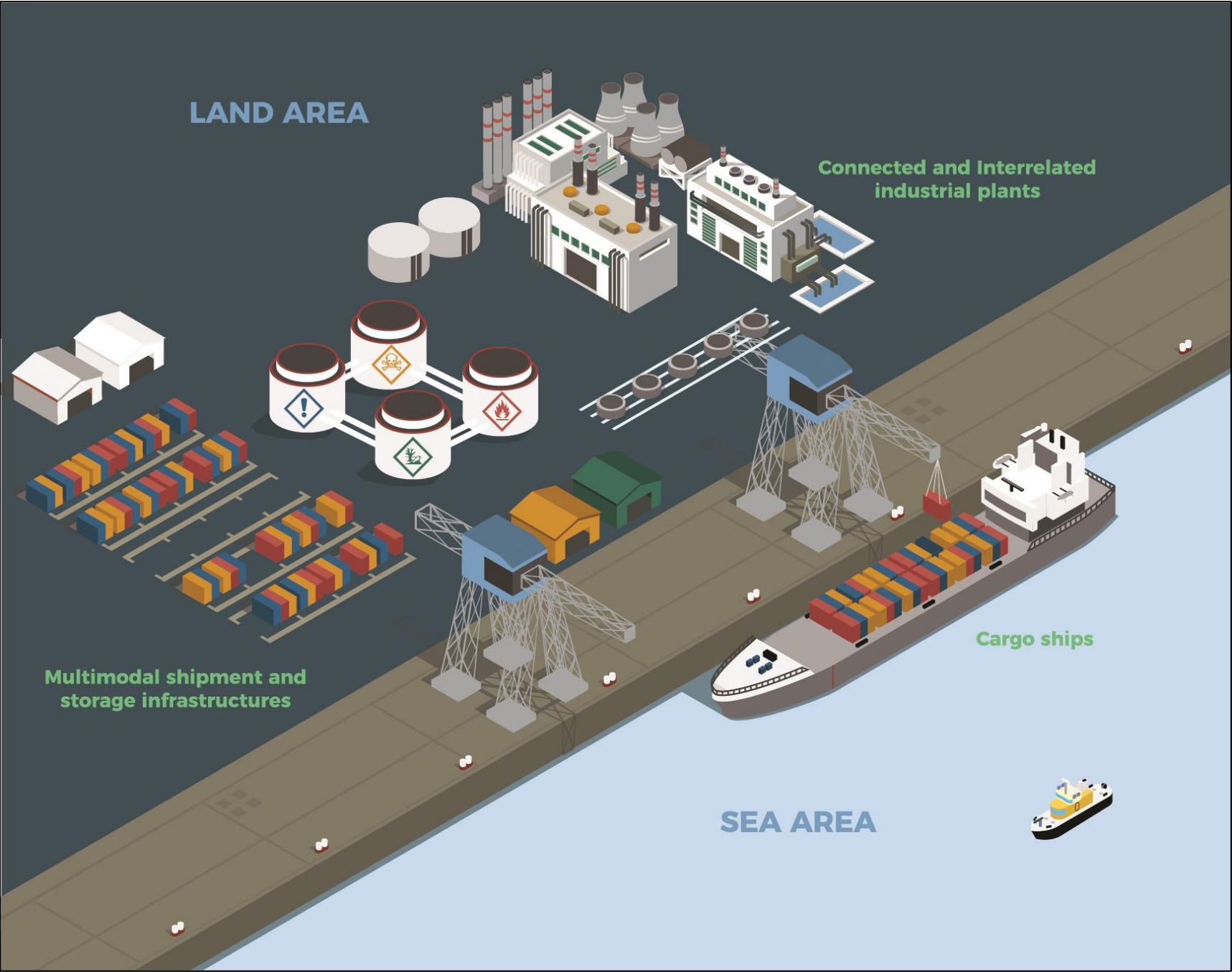




AMBASSADE
DE FRANCE
À SINGAPOUR

*Liberté
Égalité
Fraternité*

**GLOBAL PORTS : GATEWAYS
BETWEEN SEE AND LANDS**





**AMBASSADE
DE FRANCE
À SINGAPOUR**

*Liberté
Égalité
Fraternité*

Lessons learned for the past years



Dubai's Jebel Ali Port
22nd April 2020



Lessons learned for the past years



**AMBASSADE
DE FRANCE
À SINGAPOUR**

*Liberté
Égalité
Fraternité*



AQABA Port

27 June 2022

13 deads, 250 injured

ce – Civil Protection & Disaster Relief Service





AMBASSADE DE FRANCE À SINGAPOUR

*Liberté
Égalité
Fraternité*

Lessons learned for the past years



X-PRESS PEARL ship fire
May 2021 – Sri Lanka

From a small leak of Nitric Acid detected in Hamad Port (Qatar),
to a complete sinking of a modern ship off shore of Sri Lanka





AMBASSADE DE FRANCE À SINGAPOUR

*Liberté
Égalité
Fraternité*

Lessons learned for the past years



Tianjin Port City (China)
12th August 2015
173 dead and 800 injured



AMBASSADE DE FRANCE À SINGAPOUR

*Liberté
Égalité
Fraternité*

Lessons learned for the past years



LAEM CHABANG (THAILAND)
25th May 2019



AMBASSADE DE FRANCE À SINGAPOUR

*Liberté
Égalité
Fraternité*

ULSAN (ROK)
25th May 2019

Lessons learned for the past years





AMBASSADE DE FRANCE À SINGAPOUR

*Liberté
Égalité
Fraternité*

Lessons learned for the past years



Beirut port
4th August 2020
218 death – 7000+ injured

A similar event in any
large port of southern
Asia would have major
cascading effects on
world maritime shipping



**AMBASSADE
DE FRANCE
À SINGAPOUR**

*Liberté
Égalité
Fraternité*

DGs A GROWING CONCERN WITH ENERGY TRANSITION

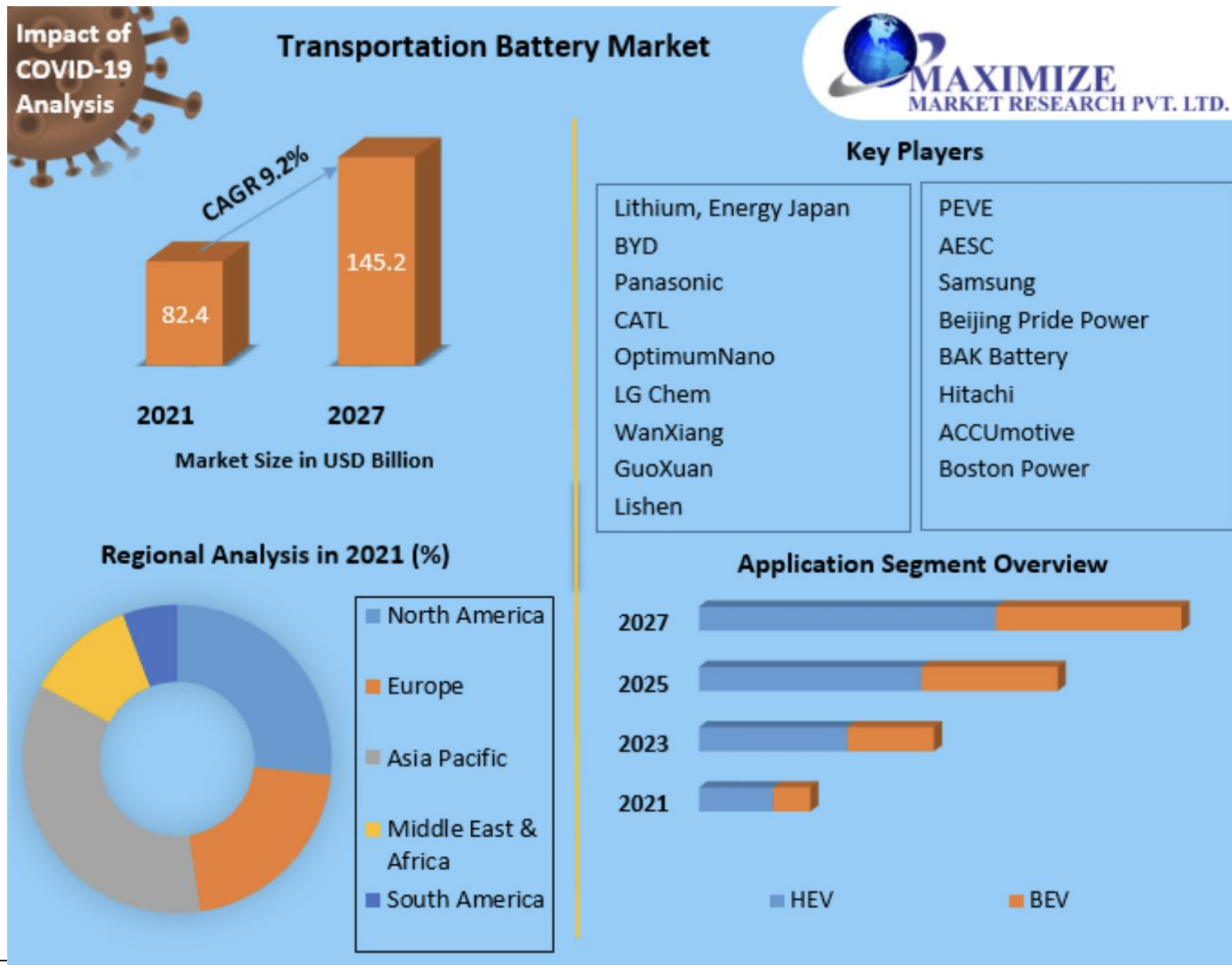


AMBASSADE DE FRANCE À SINGAPOUR

*Liberté
Égalité
Fraternité*

GROWING MARKET OF BATTERIES

INCREASE OF Lithium-Ion related
fires in container ships



GROWING LNG TRADE



AMBASSADE DE FRANCE À SINGAPOUR

*Liberté
Égalité
Fraternité*

Major liquefied natural gas trade flows in the South China Sea (2016)
trillion cubic feet





**AMBASSADE
DE FRANCE
À SINGAPOUR**

*Liberté
Égalité
Fraternité*

NEW MARITIME FUELS CHALLENGE

COP27

The IMO anticipates a possible doubling of transport flows on the seas by 2050 – and technical solutions for decarbonization have not yet emerged. Pollution from shipping currently accounts for 3% of global greenhouse gas emissions (GHG)

If the sector does not initiate changes, emissions could rise to 17% by 2050.

NEW MARITIME FUELS CHALLENGE



AMBASSADE
DE FRANCE
À SINGAPOUR

*Liberté
Égalité
Fraternité*

AMMONIA FUEL



the vessel
shipyard



MARITIME TRANSPORT OF HYDROGEN



AMBASSADE DE FRANCE À SINGAPOUR

*Liberté
Égalité
Fraternité*



MARITIME TRANSPORT OF HYDROGEN



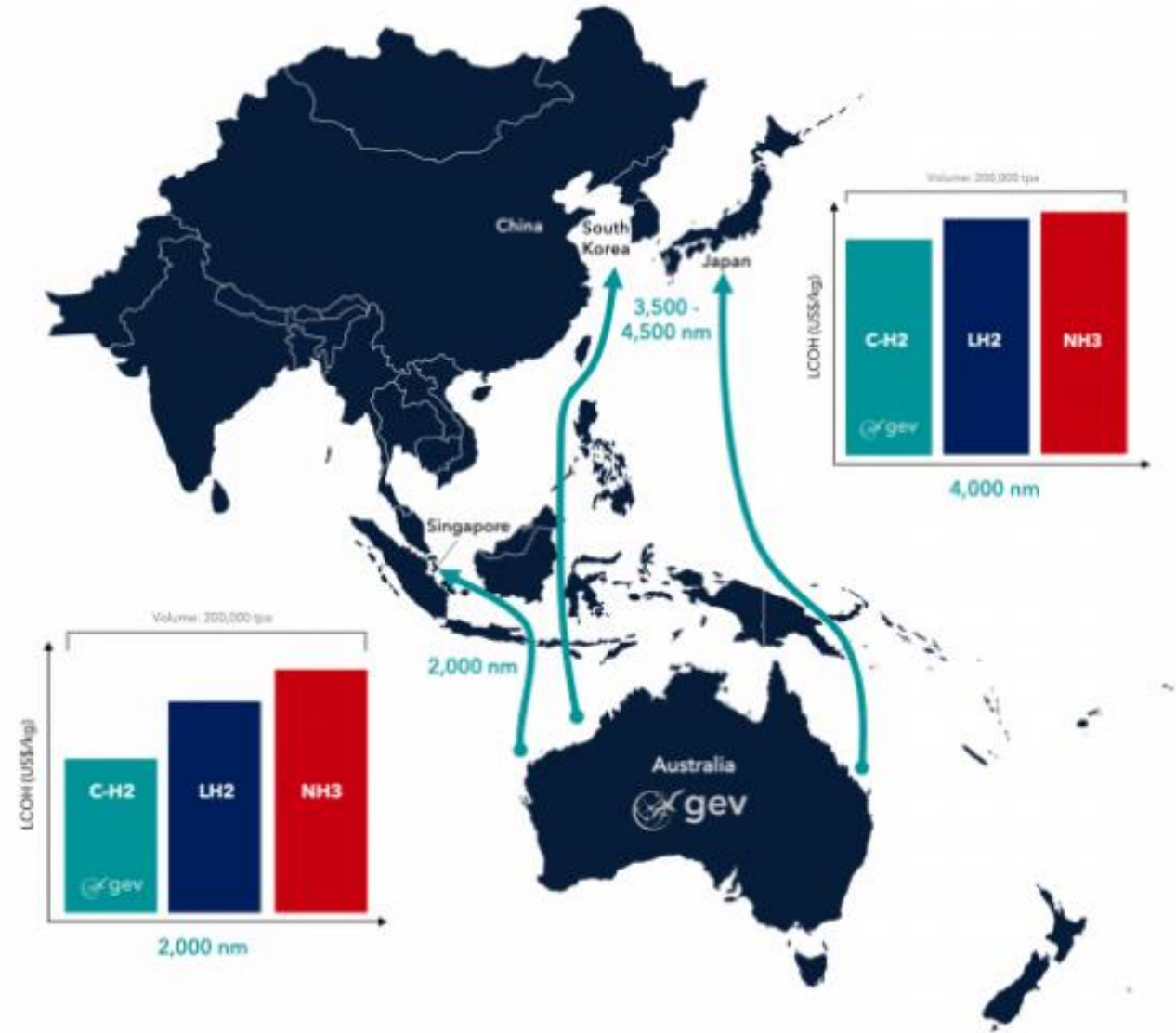
**AMBASSADE
DE FRANCE
À SINGAPOUR**

*Liberté
Égalité
Fraternité*

POTENTIAL ROUTES FOR GREEN
HYDROGEN TRANSPORT FROM
AUSTRALIA

EXPERIMENTS IN BRUNEI

Figure 3: Illustrative example of hydrogen customers within 2,000 to 4,500 nautical mile range of Australia





**AMBASSADE
DE FRANCE
À SINGAPOUR**

*Liberté
Égalité
Fraternité*

PROPOSED PROJECT : *GLOBAL PORTS SAFETY (GPS)*

G P S

Global Ports Safety

In the South - South-East Asia Maritime Corridor

PROPOSED PROJECT

AREAS OF ACTIVITIES

2 PILLARDS

#1 PREVENTION

1.1 INDUSTRIAL



1.2 LOGISTIC



1.3 SHIPS



#2 INCIDENTS MANAGEMENT



2.1 INDUSTRIAL & LOGISTIC



2.2 SHIPS



2 PILLARDS, 5 AREAS OF ACTIVITIES :
PORTS SAFETY CAPABILITIES DEVELOPMENT AS A WHOLE
IMPLEMENTATION BASED ON COUNTRIES' DEMAND

Four types of actions are proposed:

Part A : capability building, expertise development

- 1 - Prevention pillar: European and international regulation that apply to:
 - Transport of DGs by sea
 - Safety Management in port areas.

- 2 - Accident management pillar:
 - Response techniques for accidents involving hazardous material in port facilities and on ships ;
 - Major crisis management
 - Best practices through incident analysis and lessons learned

How ?

Regional Training of Trainers
(ToT) programs

Incident response training

Crisis management table top
exercises

Study tours and experts
exchanges

Part B - Regional network and equipment:

- 3 - The development of a network of practitioners and public and private stakeholders, aiming at facilitating trade and the sharing of knowledge and best practices, at the level of the Indo-Pacific:
 - Events
 - Digital platform for sharing information and knowledge,

How ?

Regional Workshop and seminars involving beneficiary countries, public and private stakeholders

Digital platform to share lessons learned and best practices

G P S



Global Ports Safety

In the South - South-East Asia Maritime Corridor

PROJECT ACTION PLAN

Digital platform for sharing information and knowledge, lessons learned, accessible in the languages of the beneficiary countries, centralizing and facilitating the dissemination beyond the twelve ports identified as being priorities.

Example : [ARIA](#) industrial safety platform



La référence du retour d'expérience sur accidents technologiques

THE BARPI

IN CASE OF AN ACCIDENT

ACCIDENTOLOGY

1568 results for search "port"
[Home](#) » You searched for port

ADVANCED SEARCH

Guidelines ?

port ?

☐ Combine search terms with OR instead of AND

Apply filtersClear all filters

General criterias

Activity area

Thematic

Publication type ?

Publication date ?
Start DateEnd Date

Accident specific criterias ?

Basic criterias

ARIA Number ?

Occurrence ?
Start DateEnd Date

English translation available

Country

Region

Départements

City

NAF Code ?

Accident description

Event type ?

Hazardous phenomena

Physical matter involved ?

CLP Classification ?

Equipments ?

EISH

Consequences and causes

Consequences

European scale of accidents ?
Dangerous substances released
06
Human and social consequences
06
Environmental Impacts
06
Economic consequences
06
Disturbances ?

Root causes ?

PROJECT ACTION PLAN



Regional Workshop on

Management of Risks and Incident Response for Port and Maritime Disaster - Seminar

4 – 5 October 2022


**MINISTÈRE
DE L'EUROPE
ET DES AFFAIRES
ÉTRANGÈRES**
*Liberté
Égalité
Fraternité*



Example of seminar:

Two days event organized by the French Embassy, EU ESIWA Project and Singapore civil Defence Force for 90 participants from 18 Indo pacific countries



AMBASSADE DE FRANCE À SINGAPOUR

*Liberté
Égalité
Fraternité*

G-P-S PROPOSED ACTIVITIES

GPS

Enhanced safety for maritime
transport of dangerous goods
Toward maritime energy
transition safely

WHERE ?

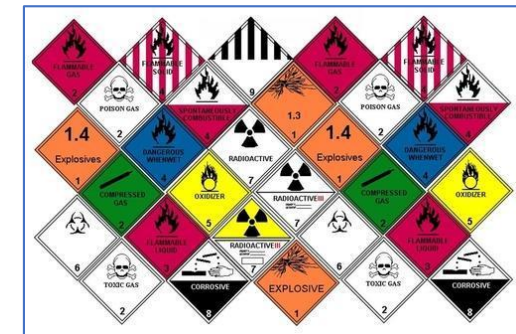
GLOBAL PORTS IN SOUTH & SOUTH EAST ASIA

WHICH ISSUES ?

DANGEROUS GOODS SAFETY

WHO ?

TRANSPORT & PORT AUTHORITIES, FIRE AND RESCUE SERVICES





AMBASSADE DE FRANCE À SINGAPOUR

*Liberté
Égalité
Fraternité*

PROJECT DEVELOPMENT AND IMPLEMENTATION

GPS

Enhanced safety for maritime
transport of dangerous goods
Toward maritime energy
transition safely

APEC members are invited to express their interest for
GPS project development by contacting the French
Embassy

Jean-michel.dumaz@ambafrance-sg.org

