CF 10/6/2/2

Standardized Bunker Supplier Accreditation Scheme to Enhance Marine Environmental Protection in SOMS

10th Cooperation Forum

Kota Kinabalu, Malaysia

Curriculum Vitae

TRI BUANA GALAXY, M.Sc

Surveyor in Statutory Division
Biro Klasifikasi Indonesia (BKI)

NTNU
Norwegian University of Science and Technology

Marine Technology Department

Project Experience :

- **Developing EEDI appraisal tools namely GP-EEDI**

-**Developing Data Collection System (DCS) generator tools namely GP-DCS**

BKI in numbers

Ship Register
11500

Clients
4800

Surveyor
207

Inspector
237

Engineer
117

Survey calls
35000

Rules & Reg.
45

Branch offices
18/21

New building
2996

Abstract

The General Overview of the Presentation

Abstract

*MEPC 71/5/1," Sulphur monitoring for 2016

Problems

- Global 0.5% Sulphur Cap eif. 1 Jan 2020
- Average Sulphur Content of Residual Fuel for 2016 =2.45%m/m*
- Quality Control of bunkers delivered to ships
- There are no regional data for Availability of Compliant Fuels Data in SOMS

Description

- The Global 0.50% Sulphur Limit Requires Practical Implementation Measures
- The yearly average S content of the tested residual fuel oils has increased since 2015 by 0.13 percentage
- In some cases fuels delivered do not meet the specification requirements, including S content

Goal

- Cleaner SOMS through Reduction of S Emissions
- Certify that the fuel used on board ships complies with IMO requirements
- Regional bunker suppliers have procedures to confirm that fuel supplied to vessels is in compliance with IMO requirements
- Regional FO availability data

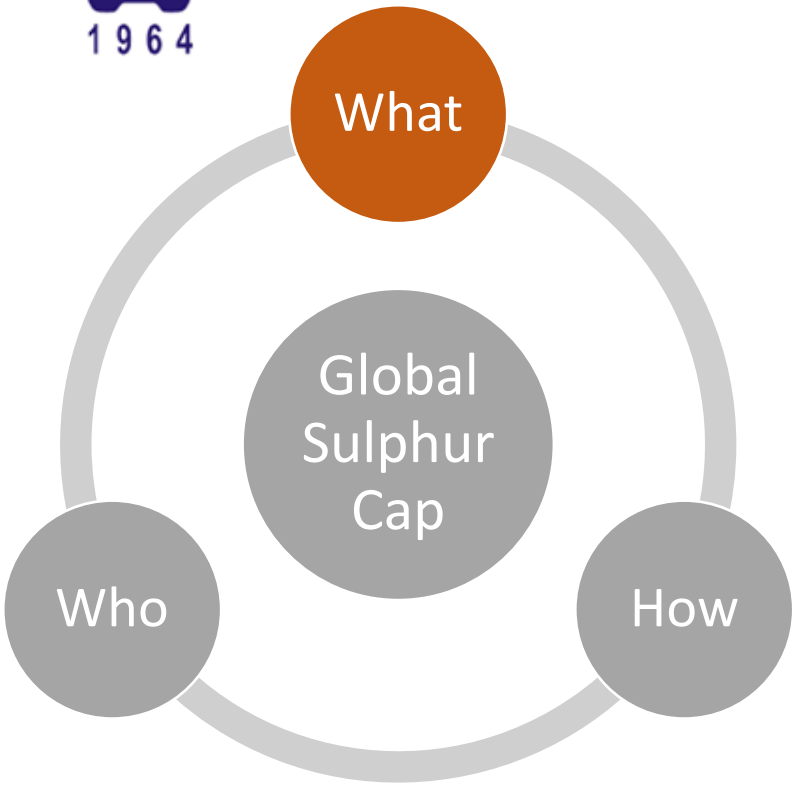
Success Indicator

- Consistent Implementation of the 0.50% Global Sulphur Limit in SOMS, by using compliant fuels
- There are registries of the SOMS regionally accredited bunker suppliers

Fuel Quality and Emission Regulation

MARPOL Annex VI

Regulation

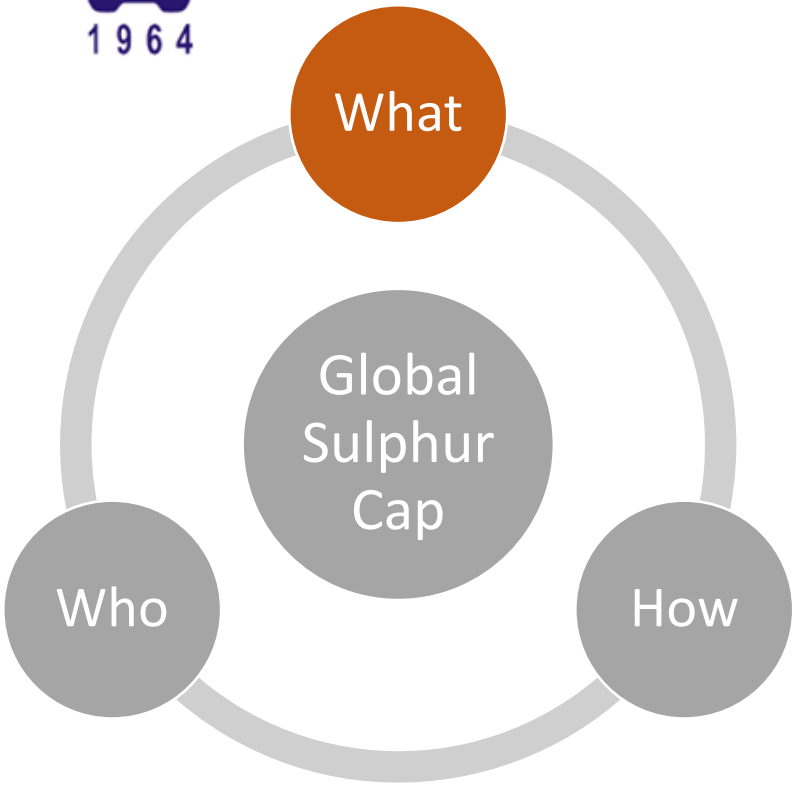


IMO Global Sulphur Cap

- MARPOL Annex VI Regulation 14
- EIF 1 January 2020
- Limit for Sulphur in fuel oil used on board ships of 0.50% m/m

*Current limit is is 3.50% m/m

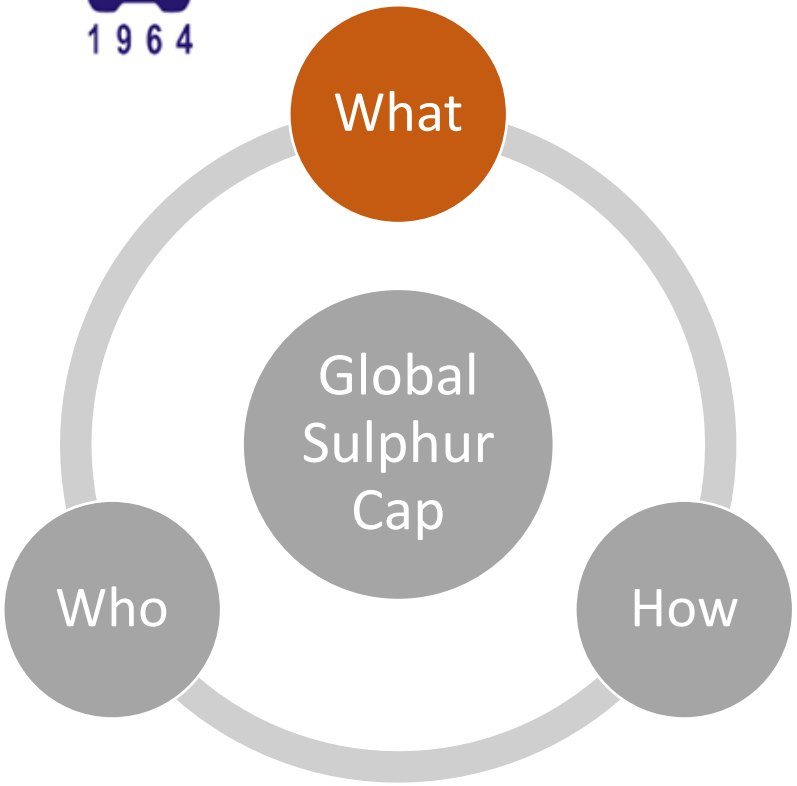
Regulation



Emission Control areas (ECAS)

- MARPOL Annex VI Regulation 14
- EIF 1 January 2015
- Limit for Sulphur in fuel oil used on board ships of 0.10% m/m

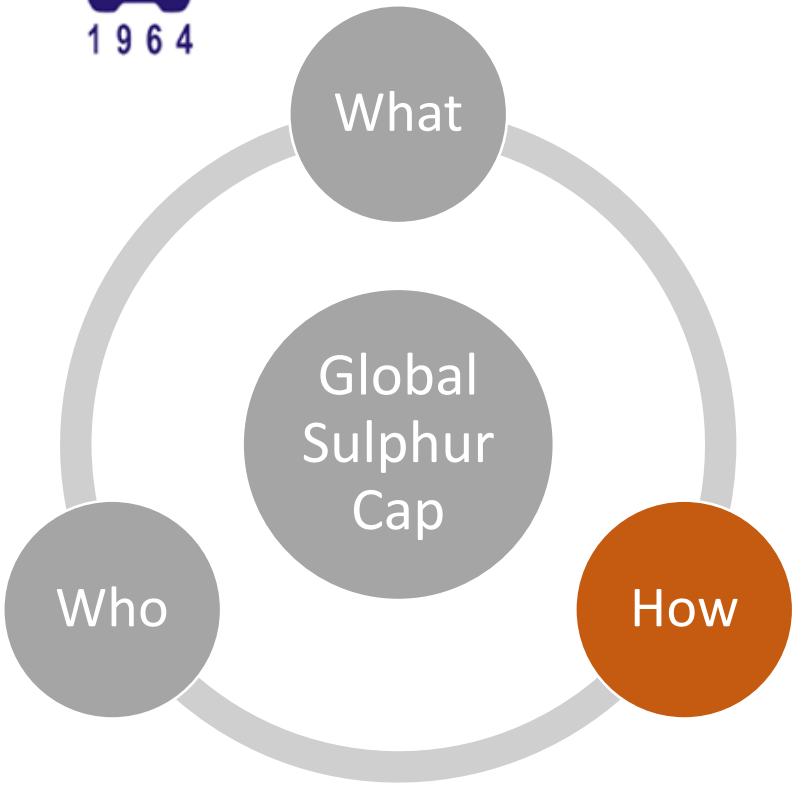
Regulation



Fuel Oil Availability & Quality

- MARPOL Annex VI Regulation 18
- In term of Availability, it is required to notify IMO when a ship has presented evidence of the non availability of compliant fuel oil
- In terms of Quality, its required that fuel oil for combustion purposes delivered to and used on board ships compy with IMO specification

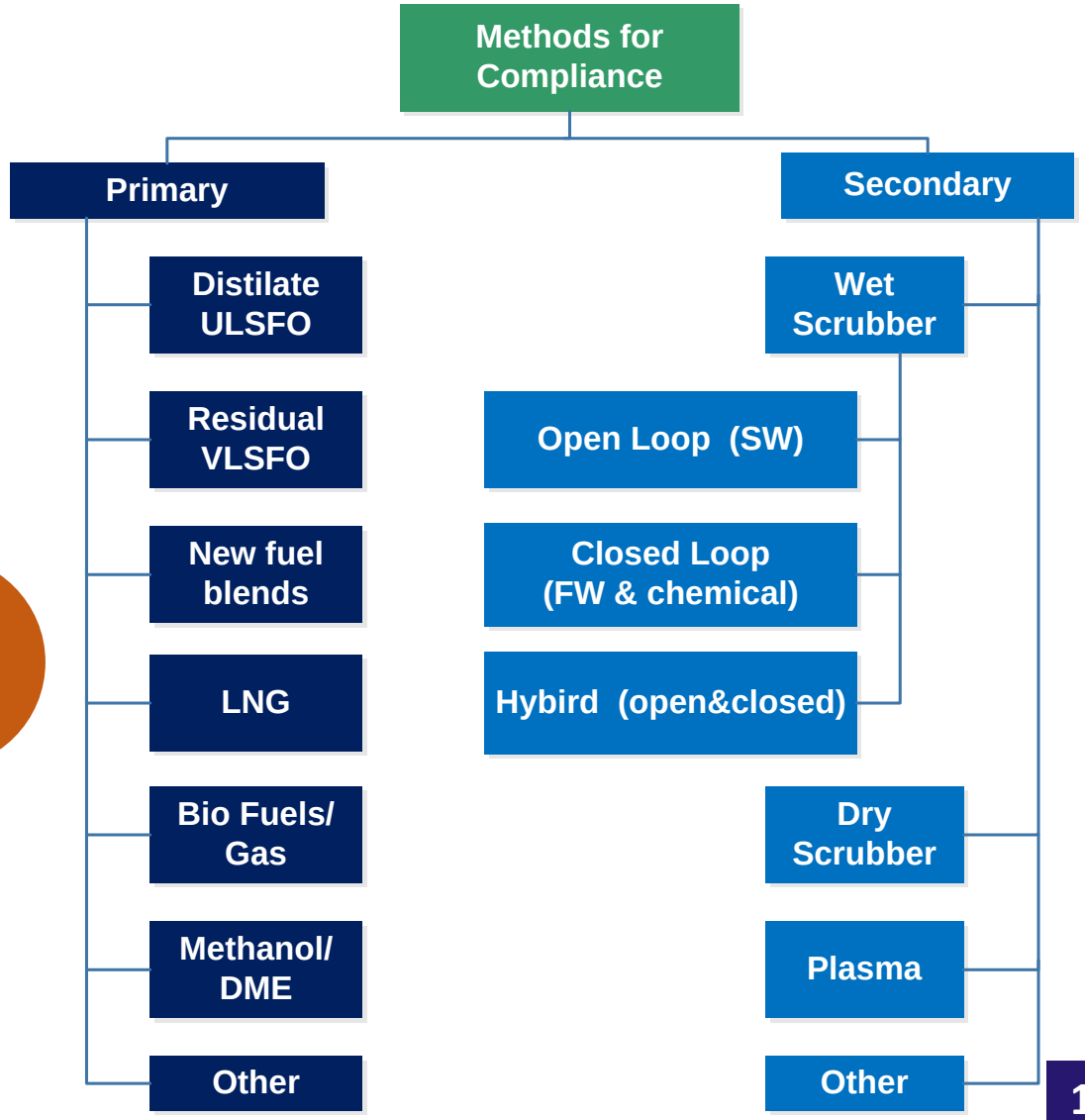
Methods for Compliance



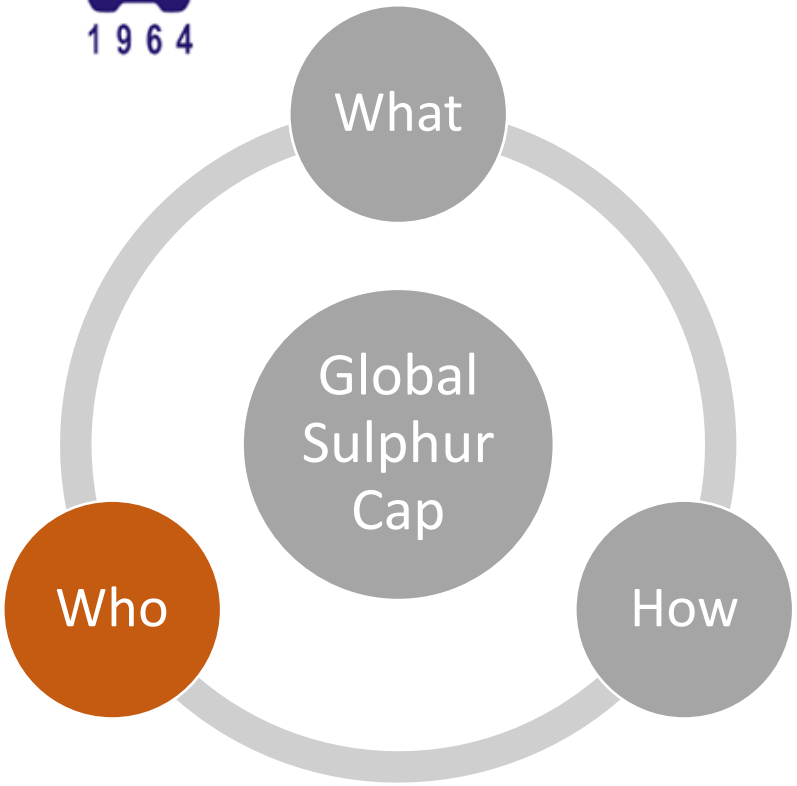
How to Comply the Regulation:

- **Primary** : by using **low Sulphur** compliant **fuel oil**
- **Secondary**: by using **approved** equivalent **methods**

Methods for Compliance



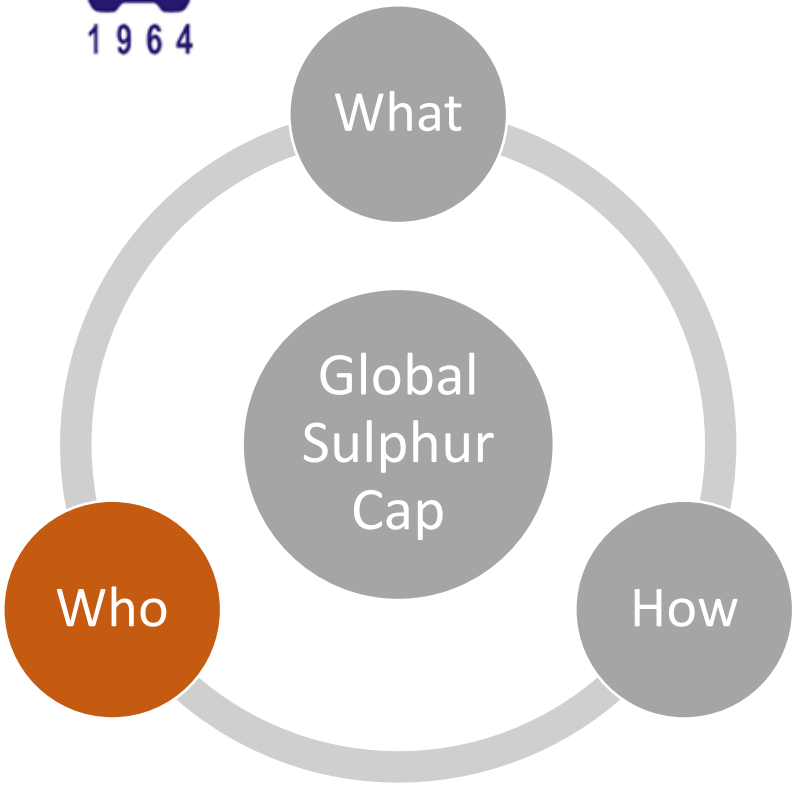
Who



The Parties involved

- Regulator (IMO)
- Refiners
- Bunker Supplier
- Ship owner / operator

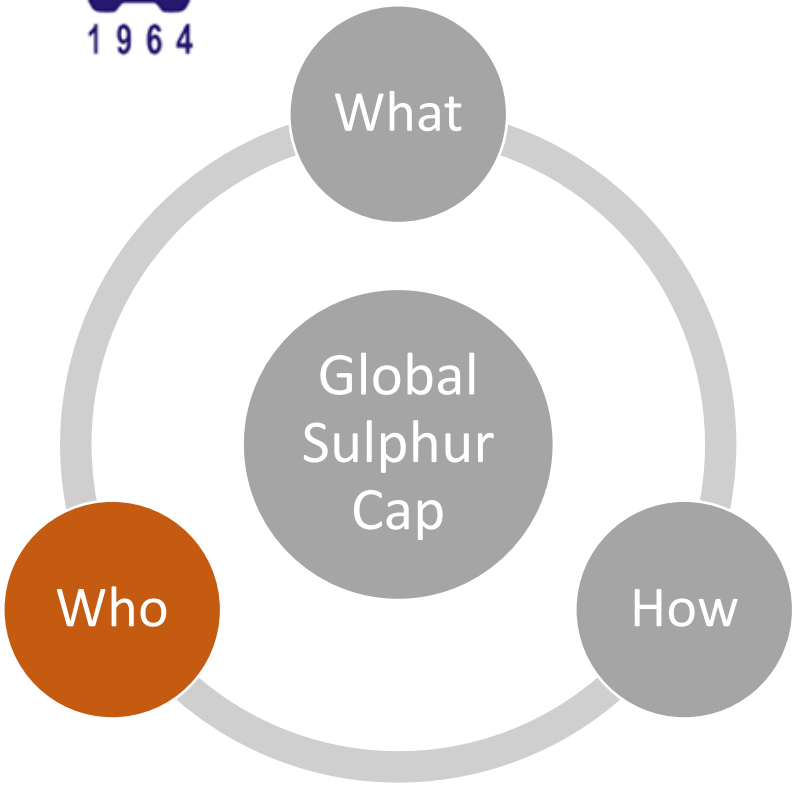
Who



Regulator (IMO)

- Adopt the Global 0.5%m/m Sulphur
- In order to ensure fuel quality, IMO is developing Guidance on best practice for fuel oil purchasers/users
- However, there are no regulation to control quality of bunkers delivered to ships

Who



Refiners

- Increasing pressures on supply
- Develop new variant of low sulphur fuel with take in account price and quality
- Global Demand results to High trade for both Export and Import

Who

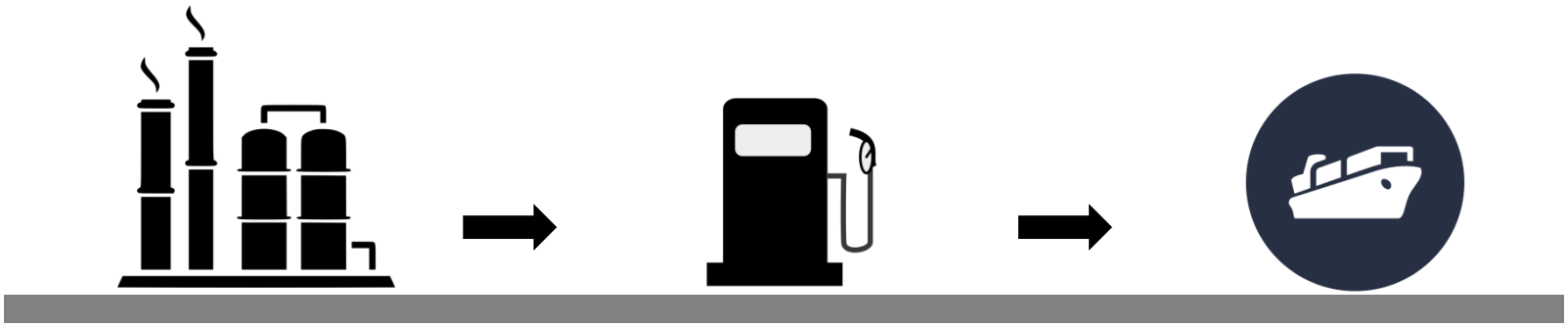
Suppliers

- High Demand on low/zero sulphur compliant fuel will leads to the high competition on providing fuel supplies
- New types of Fuels provided by bunker supplier needs standardized quality / accreditation
- New types of fuels may lead to the possibility of malpractice in industries

Bunker and Fuel Quality

Supply Chain and Sulphur Content

Bunker Supply Chain



	Refiners	Bunker Supplier	Ships
Activity	• Fuels are produced	• Fuels are distributed • Fuels are delivered to ships	• Fuels are consummed
Fuel Quality Regulation	-	SOx and PM MARPOL Annex VI Reg.14&18 **NO QC of FO**	Data Collection System MARPOL Annex VI Reg.22A Guidance on best practice for fuel oil purchasers/users (under developmnet)

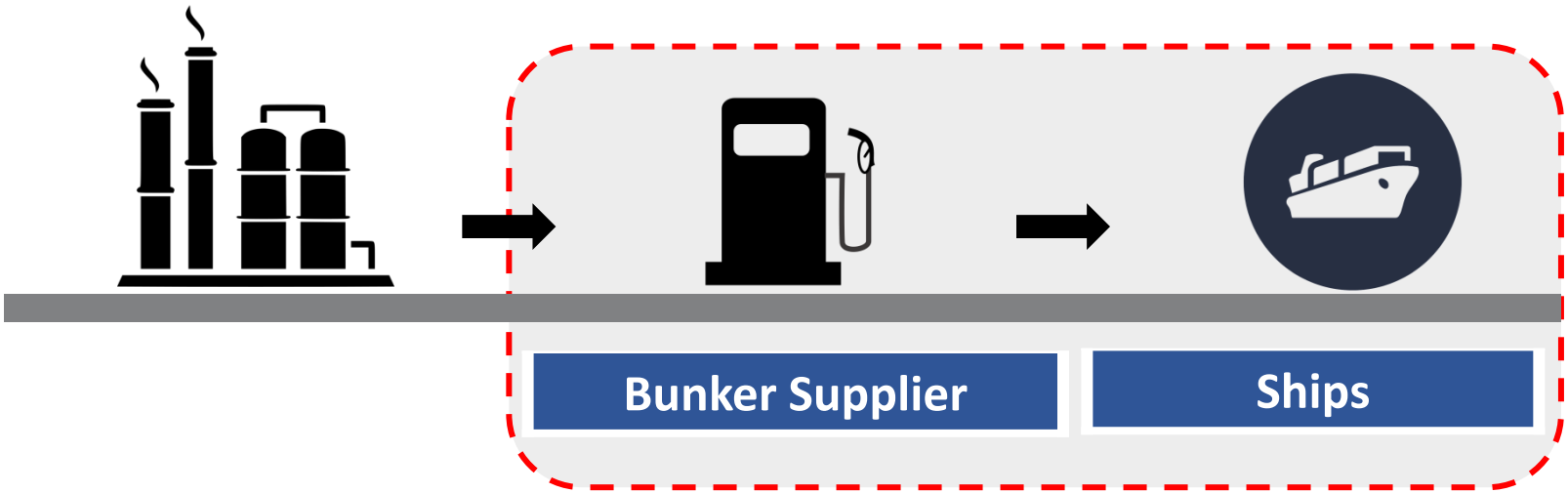
Bunker Supply Chain

Refiners	Bunker Supplier	Ships
Total Production	**Total Distribution**	
Include the quantity of exported fuels	Represent the Quantity of available fuel ready to deliver on-board ships	

Bunker Quality Problem:

In many cases fuels delivered do not meet the specification requirements, including S content

Bunker Quality

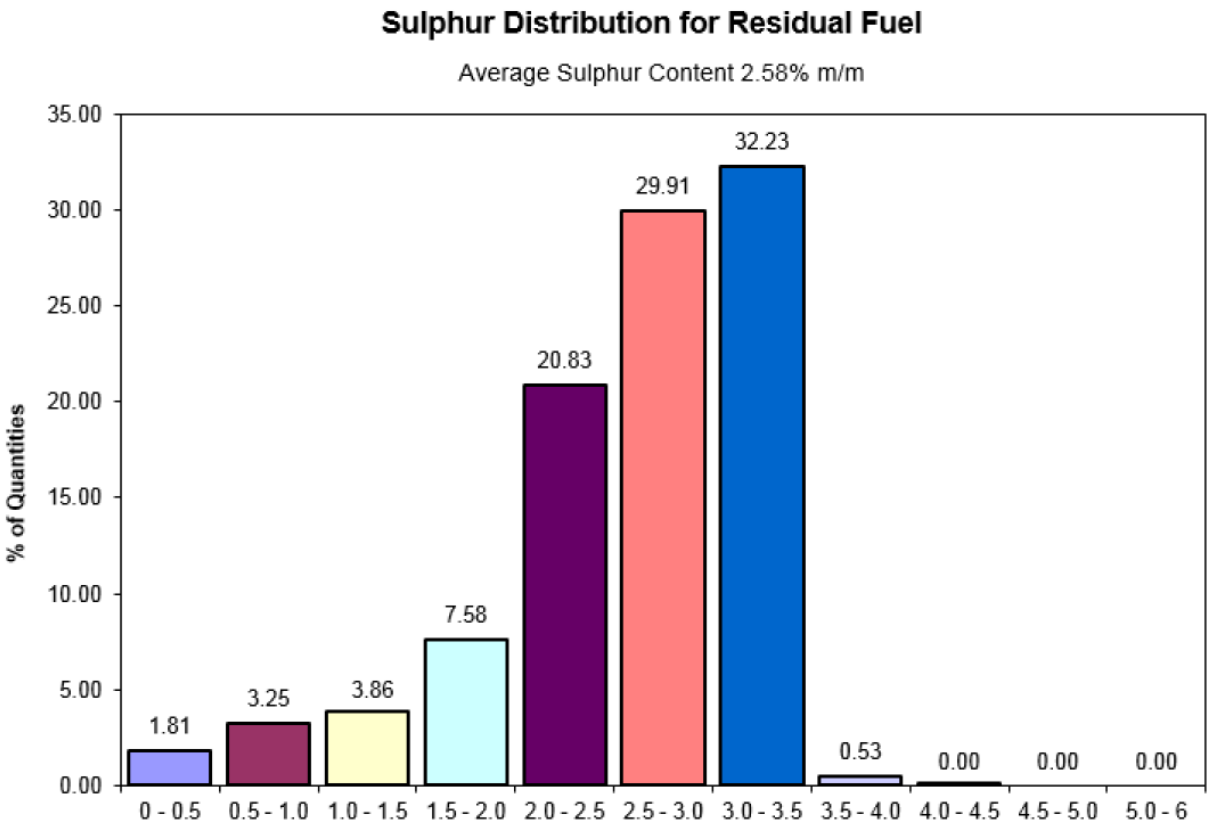


- MARPOL Annex VI Regulation 14 and 18 stated the requierements for fuel used on-board ships
- Any non-compliance with regulation of the fuel quality used on-board, will be consequence impossed to the ship and ship operator
- At this point, there are no requirements on the bunker supplier to ensure they provide the ship with fuel that meets the Annex VI requirements

Sulphur Content of Distillate Fuel Oil

- Increased in total quantity
- Sulphur content has increased since 2015 by **0.05 percentage points** from 2.45% to 2.50%

Year	Average sulphur content
2015	2.45%
2016	2.58%



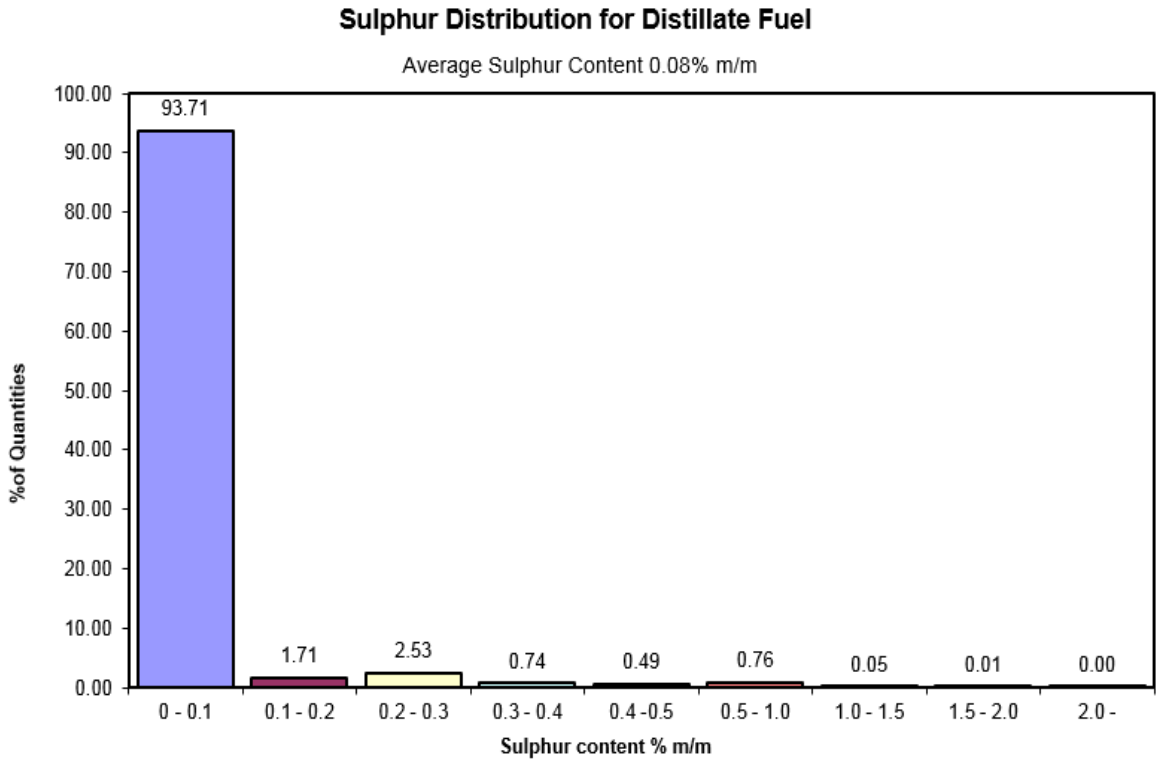
Corresponding quantity of residual fuel oil:
123,171,609 tonnes in 2016
114,344,642 tonnes in 2015

*MEPC 71/5/1," Sulphur monitoring for 2016

Sulphur Content of Distillate Fuel Oil

- Decreased in total quantity
- Sulphur content has remained **unchanged** since 2015

Year	Average sulphur content
2015	0.08%
2016	



Corresponding quantity of residual fuel oil:
11,362,954 tonnes in 2016
11,387,079 tonnes in 2015

*MEPC 71/5/1," Sulphur monitoring for 2016

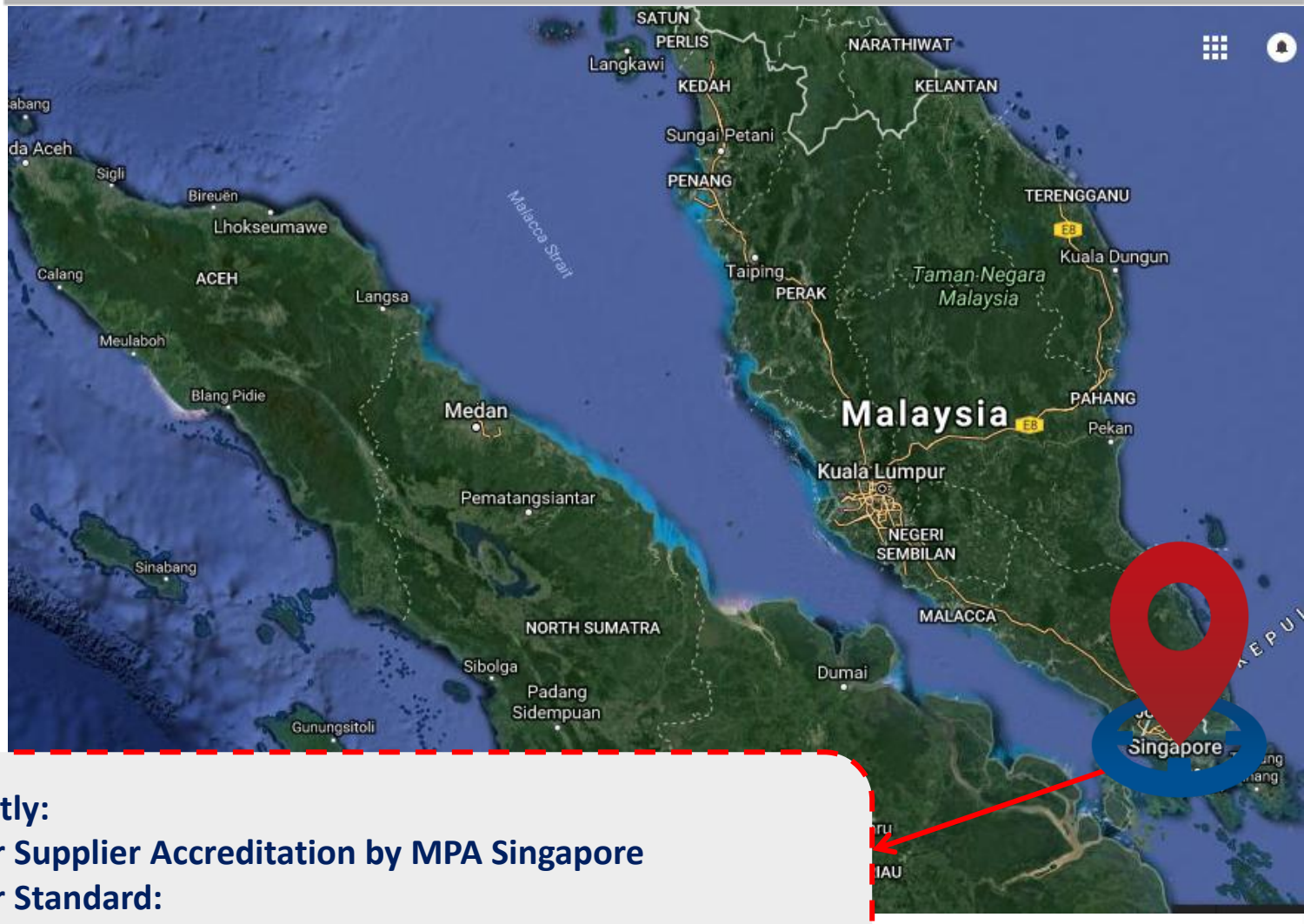
Remarks

- The Sulphur Monitoring Report Conducted by IMO Secretariat Represents the Global Marine Bunker Condition
- The Data was Globally Sampled and did not Represents the Availability and Quality in the Certain Area such as Countries
- The Availability and Quality are Dynamic Parameters
- Bunker Supplier Represent the Quantity of Available Fuel Ready to Deliver on-board Ships. Therefore, assesing the Volume of Bunker Supplier will Estimate the availability of the Compliant Fuels
- There are no Scheme for the Bunker Supplier to Ensure they Provide the Ship with Fuel that Meets the Annex VI Requirements

Bunker Supplier Accreditation Scheme

in SOMS

Bunker Supplier Accreditation



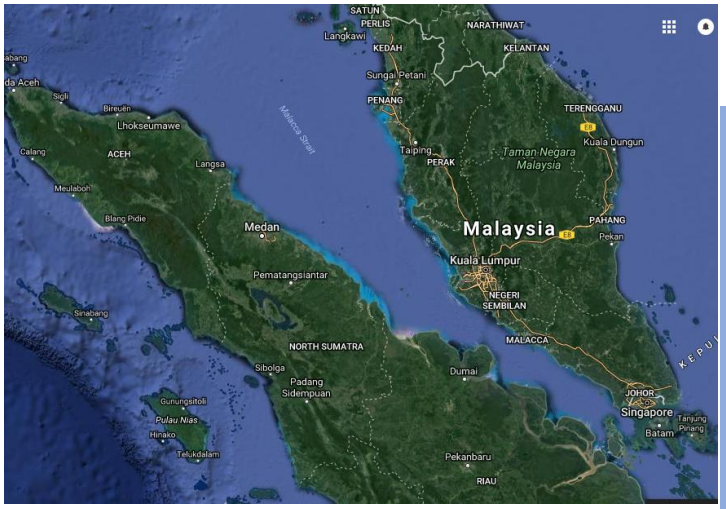
Currently:

- **Bunker Supplier Accreditation by MPA Singapore**

Bunker Standard:

- **Singapore Standard SS600**
- **QMBS SS524**

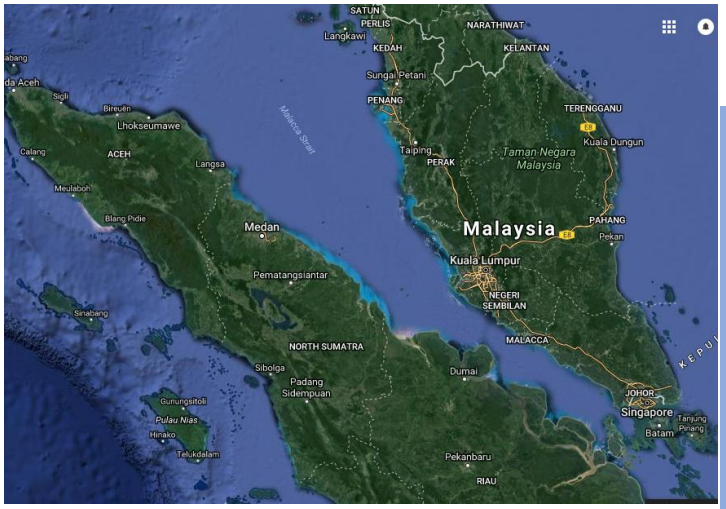
Bunker Supplier Acc in Regional SOMS



Goal :

- Cleaner SOMS through Reduction of Sulphur Emissions
- Certify that the fuel used on board ships complies with IMO requirements
- Regional bunker suppliers have procedures to confirm that fuel supplied to vessels is in compliance with IMO requirements

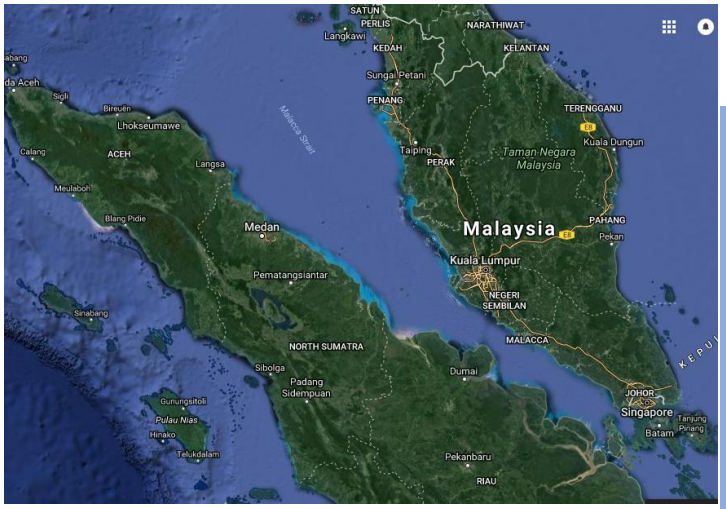
Bunker Supplier Acc in Regional SOMS



Proposed Efforts :

- Identify the Availability of Fuel Oil Quality Regionally in SOMS
- Develop Scheme Plan for Bunker Supplier Accreditation among countries in SOMS
- Develop Bunkering Standard among countriesin SOMS

Bunker Supplier Acc in Regional SOMS



Success Indicator :

- Consistent Implementation of the 0.50% Global Sulphur Limit in SOMS, by using compliant fuels
- There are registries of the SOMS regionally accredited bunker suppliers

Conclusion

The Goal to Protect Marine Environment in SOMS can be Achieved through Developing a Unified Regional Standards, particularly on the Bunker Accreditation Scheme

BKI, as part of industry, is eager to collaborate with other interested parties to respond the dynamic of regulation, including in marine environmental issue such as Global 0.5% Sulphur Cap in SOMS

THANK YOU

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