



 PT. BIRO KLASIFIKASI INDONESIA (Persero)

The Roles of Classification Society to Enhance Marine Environmental Protection in SOMS

9th Cooperation Forum

Yogyakarta, Indonesia





Outline

- **BKI Scope of work**
- **BKI Performance**
- **Marine Environmental Protection in SOMS (BKI Perspective)**



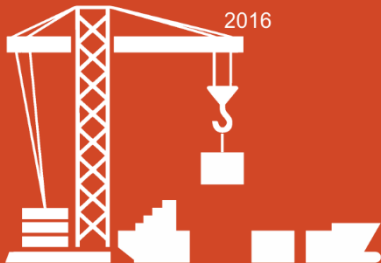
BKI Scope of Work



20.000

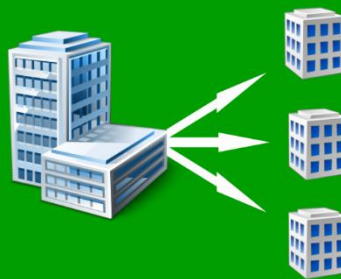


380



2016

133



21

Our Services

Classification

Material &
Component

Statutory

R&D



BKI Performance

PSC RO Performance



ACS Membership



ACS

ASSOCIATION OF ASIAN CLASSIFICATION SOCIETIES

BKI Projects : Rnd & Offshore Activities

R&D



IACS Application

IACS

INTERNATIONAL ASSOCIATION OF CLASSIFICATION SOCIETIES LTD.

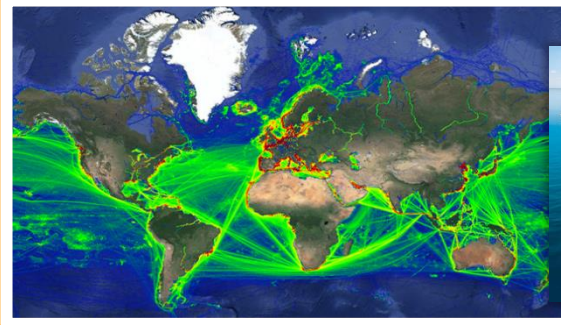


Marine Environmental Protection in SoMS

Ports & Harbors



Typical Ships



Emissions



Marine Biodiversity

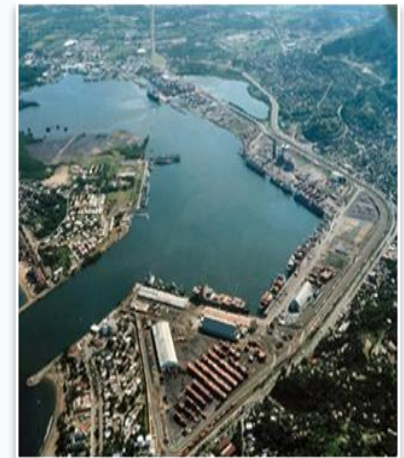




Marine Environmental Protection in SoMS

Data & Facts

- **SOMS has 24 ports and harbors in 3 countries** (*world port source*)
 - 16 ports and harbors in Indonesia
 - 7 ports and harbors in Malaysia
 - 1 port in Singapore



Ports & Harbors

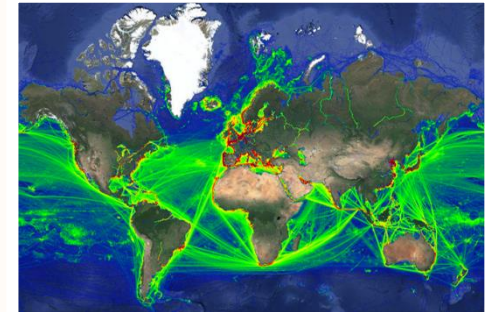


Marine Environmental Protection in SoMS

Typical Ships

- Container Vessel
- Tanker Vessel
- Cargo Vessel
- Bulk Carrier
- VLCC
- LPG/ LNG Carrier

Source : IALA



**Ships
In
SoMS**



Marine Environmental Protection in SoMS

Highlights (1)

Marine
Biodiversity

Goals

Challenges

Solution

***“Protection of
Marine Biodiversity
in SoMS”***



Marine Environmental Protection in SoMS

Highlights (1)

Marine
Biodiversity

Goals

- **EIF BWM Convention**
08 September 2017

Challenges

- **Not All countries, Parties to BWM Convention**

Solution

- **B/W Exchange**
possibilities in SoMS



Marine Environmental Protection in SoMS

Highlights (1)

Marine
Biodiversity

Goals

Challenges

Solution

Proposed Solutions :

- **Short Term**
“Study on Marine Biodiversity at Ports”
- **Long Term**
“Joint Risk Assessment of Marine Biodiversity and its Impact to coastal states”



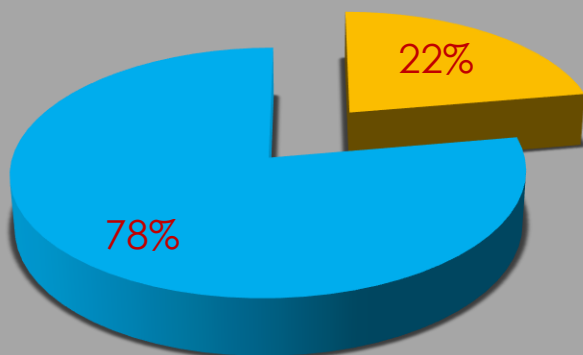
Marine Environmental Protection in SoMS

Highlights (2)

Emissions

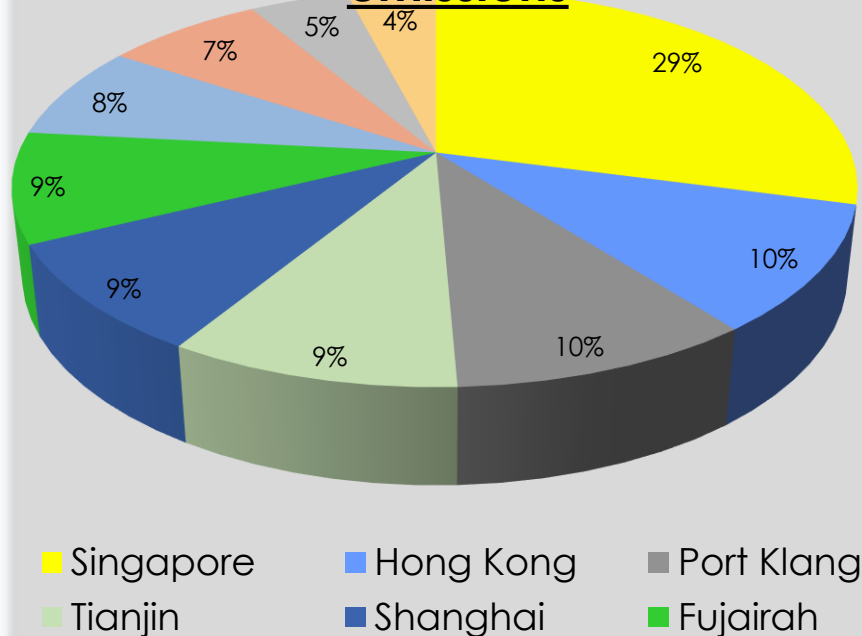
Data & Facts

SOx emission in Ports



■ Top 10 ports (SOx emissions)

Ports with the largest SOx emissions



■ Singapore

■ Hong Kong

■ Port Klang

■ Tianjin

■ Shanghai

■ Fujairah

Shipping Emissions in Ports

Olaf MERK, based on data from Lloyds Marine Intelligence Unit, OECD 2014



Marine Environmental Protection in SoMS

Highlights (2)

Emissions

Goals

Challenges

Solution

***“Cleaner SOMS
Through Reduction of
Emissions”***



Marine Environmental Protection in SoMS

Highlights (2)

Emissions

Goals

Challenges

Solution

- **Availability of low Sulphur fuel**

*“Average Sulphur Content Of Residual Fuel
For 2015 = 2.45% m/m”*

- **Lower Emission Fuel**

“LNG Fuel Infrastructure Availability”

- **Bunker Fuel & Bunker Suppliers Standard**



Marine Environmental Protection in SoMS

Highlights (2)

Emissions

Goals

Challenges

Solution

Proposed Solutions :

- Study the demand and availability of Low Sulphur fuel and LNG fuel in SOMS
- Study the demand of LNG infrastructure in SOMS
- Develop Bunker Fuel & Bunker suppliers standard in SOMS



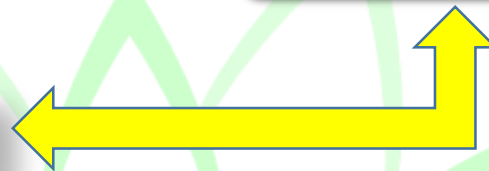
BKI Current Projects

Amendments
MARPOL Annex VI

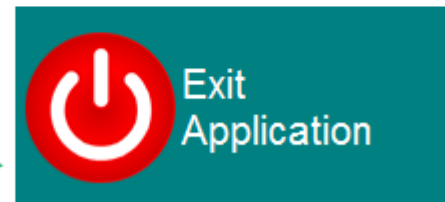
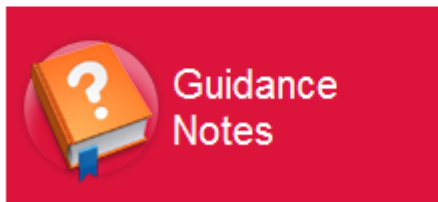
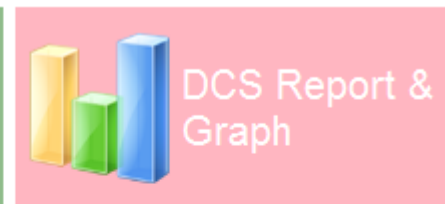
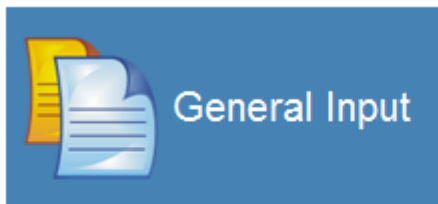


Data Collection
Systems

Green Padma - DCS1.0 Version



- Provide a standardized data reporting format for IMO-DCS
- Provide SEEMP Monitoring tools as well as its EEOI





BKI Green Padma-DCS

File Help

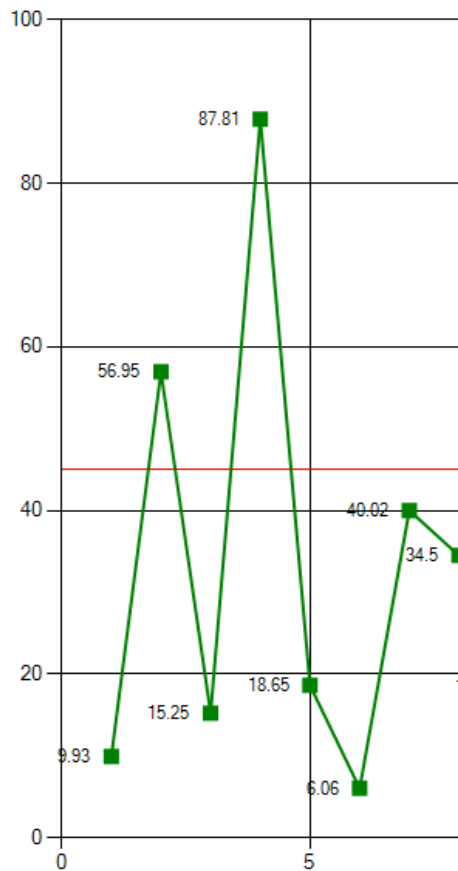
File Graphics Guidance N

IMO Number 9574121

Ship Name KOMODO

Tab Page 1

Voyage No	Voyage Date (MM/DD/YYYY)
1	01/05/2016
2	01/07/2016
3	01/10/2016
4	01/20/2016
5	02/04/2016
6	02/10/2016
7	03/01/2016
8	04/02/2016
9	04/05/2016
10	04/20/2016



Form 3

Find | Next

Calendar Year	2016	2016	2016	2016	2016	2016
IMO Number	1234567	7236121	7654321	8736245	9574121	9876121
Type Ship	TANKER	BULK CARRIER	CONTAINER SHIP	BULK CARRIER	GENERAL CARGO SHIP	BULK CARRIER
GT	27,517.00	38,000.00	15,175.00	48,000.00	35,000.00	18,000.00
NT	20,000.00	34,000.00	14,000.00	45,000.00	30,000.00	15,000.00
DWT	39,517.00	50,000.00	27,175.00	60,000.00	40,000.00	20,000.00
EEDI (if applicable)	11.00	0.00	0.00	0.00	0.00	0.00
Ice Class (if applicable)	0.00	0.00	0.00	0.00	0.00	0.00
Construction Year	2001	1995	1999	1994	2000	2000
Power output (rated power) of M.E. and A.E. (kW)						
Main Engine(s)	20,960.00	20,000.00	19,000.00	25,000.00	15,000.00	10,000.00
Auxiliary Engine(s)	5,061.00	1,000.00	555.00	2,000.00	700.00	534.00
Distance Travelled from berth to berth (nm)	6,744.00	6,608.00	6,169.00	6,141.00	5,283.00	5,527.00
Hours not at berth (h)	22.00	22.00	22.00	22.00	22.00	22.00
Diesel / Gas Oil (CF: 3.206)	2.40	5.00	55.00	5.00	4.40	4.90
LFO (CF: 3.151)	0.00	0.00	0.00	0.00	0.00	0.00
HFO (CF: 3.114)	350.00	1,254.00	770.00	1,414.00	529.00	372.00
LPG (Propane) (CF: 3.000)	0.00	0.00	0.00	0.00	0.00	0.00
LPG (Butane) (CF: 3.030)	0.00	0.00	0.00	0.00	0.00	0.00
LNG (CF: 2.750)	0.00	0.00	0.00	0.00	0.00	0.00
Methanol (CF: 1.375)	0.00	0.00	0.00	0.00	0.00	0.00
Ethanol (CF: 1.913)	0.00	0.00	0.00	0.00	0.00	0.00
Method used to measure fuel consumption	FLOW METERS	BUNKER DELIVERY NOTES (BDN)	DIRECT CO2 EMISSION MEASUREMENT		FLOW METERS	
CO2 emissions	850.28	746.69	1,418.83	902.62	591.86	724.86



Conclusion

Challenges to protect marine environment in SOMS can be tackled through conducting scientific study and develop common standards

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 BWM and Shipping Emission in SOMS



THANK YOU



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