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2018 World Maritime Day Observance

Bulk Shipping Mexico

Navigating Change: What Owners Believe

November 14th, 2018 – Cozumel, Quintana Roo, Mexico

 Bulk Shipping de Mexico is an specialized company working as a consultant in Maritime Goods Carriage, established since 1990 in Mexico City. We're a group of companies committed in providing logistic solutions, always contributing to the supply chain of our clients and striving to convert logistic challenges in competitive advantages.

 BSM Group works in different market segments through the below companies always giving an specific service to the needs of our clients:

- **BSM Dry Cargo** (Bulk Carriers transporting minerals, grains, fertilizers, etc.)
- **BSM Tankers** (Liquid Tankers transporting CPP's, DPPs', Petrochemicals, Gas, Oils, Acids, etc.)
- **BSM Forwarding** (Containers, providing services door-to-door, multimodal and consolidated, etc.)
- **BSM Shipmanagement** (Crewing Services, Technical Management, Maritime Training, etc.)
- **Terminales del Tamesi** (Storage Terminals in Mexico)

Issues Facing Shipping

IMO Ballast Water Management

2020 Fuel Oil Sulphur Cap

Greenhouse Gas Emission

Autonomous Ships

Maritime Security

1. Ballast Water Management

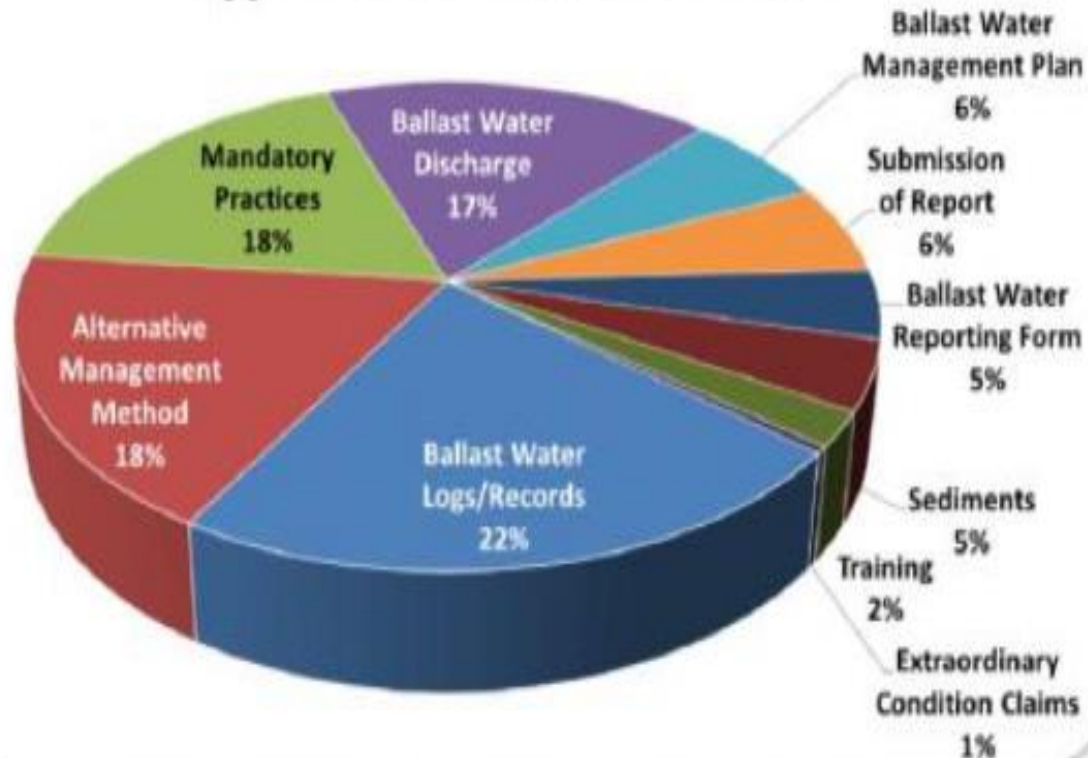


- Adopted in 2004 and ratified by 73 countries (representing 75.53%, needed a 75% to be put into force), came into effect on September 8th, 2017
- Main concerns were BWMS guidelines (or lack thereof) and schedule implementation to install corresponding systems on board the vessels.
- At the Beginning of 2018, Owners had issues due to poor standardization within USCG, one US port had one procedure to evaluate the way vessel performed the Ballast Water Treatment but it was not the same evaluation procedure in another one, therefore different requirements arose in each port.
- USCG has granted extensions for implementing the BWMS (depending in each case) and standardization has took place throughout the country. Still, USCG is evaluating some specific Systems for Ballast Water Treatment and some have been not approved as of this date. This of course creates a financial issue for Owners if those systems are not approved they will have to take emergency measures (chemical treatment, change the system, etc.) that could be more expensive in the long run

BWM Non Compliance

Ballast Water Management (BWM) Compliance in the United States

Types of BWM Deficiencies



2. 2020 Fuel Oil Sulphur Cap



- As per agreement made during the IMO's Marine Environment Protection Committee (MEPC 70) meeting held in October 2016, all vessel operating outside Emission Control Areas (ECA's) have to use fuel oil with a maximum Sulphur content of 0.5%, while vessels operating within ECA's will be restricted to a Maximum Sulphur Content of 0.1%
- The agreement comes into effect on January 1st, 2020
- This agreement is arguably one of the industry's most defining moments because it represents a global shift in Vessel Economics that will affect a big part of the Logistic Chain for Global Industries
- Some questions arise:
 - ✓ Will Owners have enough new bunkers supply around the world or will some countries develop Bunkering Hubs affecting Trading Routes?
 - ✓ Will other type of bunkers will take the place of MGO, MDO, HFO, etc.?
 - ✓ Is there any alternative system that can be used instead of changing the Fuel that owners are using at this moment?
 - ✓ What will be the cost for the industry as a whole?

IMO 2020 Compliance Options

DISTILLATE or BLENDED FUELS

- MGO 0.1% S
- MDO 0.5% S

Owners are exploring the possibility to change the fuel blends that will be used in order to have a sulfur content of less than 0.5 %

Pros:
Compliance with IMO 2020 at a Possible Lower Cost than other options

Cons:
Wide range of Blends that may not be available worldwide.

Not all refiners are working in I&Ding new fuel blends

New fuel blends could potentially harm vessel's engines and equipment.

HIGH SULHUR FUELS

- With EGCS

Exhaust Gas Cleaning System's that can clean current emmissions to comply with the IMO content

Pros:
Can be installed at many types of vessels without essentially affecting engines and vessel's systems

Cons:
High cost (specially for large-fleet owners)
USCG has not approved many EGCS so it could be a gamble on the long run
Choosing the correct system that will be cost-effective

ALTERNATIVE FUELS

- LNG
- Methanol
- LPG
- Ethane

Alternative Fuels that are being considered instead of the bunkers used at this moment

Pros:
Can be a cheaper option in the long rung as some of these fuels have been growing due to Shale Gas Exploration

Cons:
Vessels have to be adapted to use this kind of fuels
There is not enough infrastructure and facilities to bunker with some of these fuels
Using more tanks to accomodate different fuels and blends

NEW FUELS

- New marine fuels
- 'Hybrid' - residual or distillate source
- Bio-fuels
- GTL

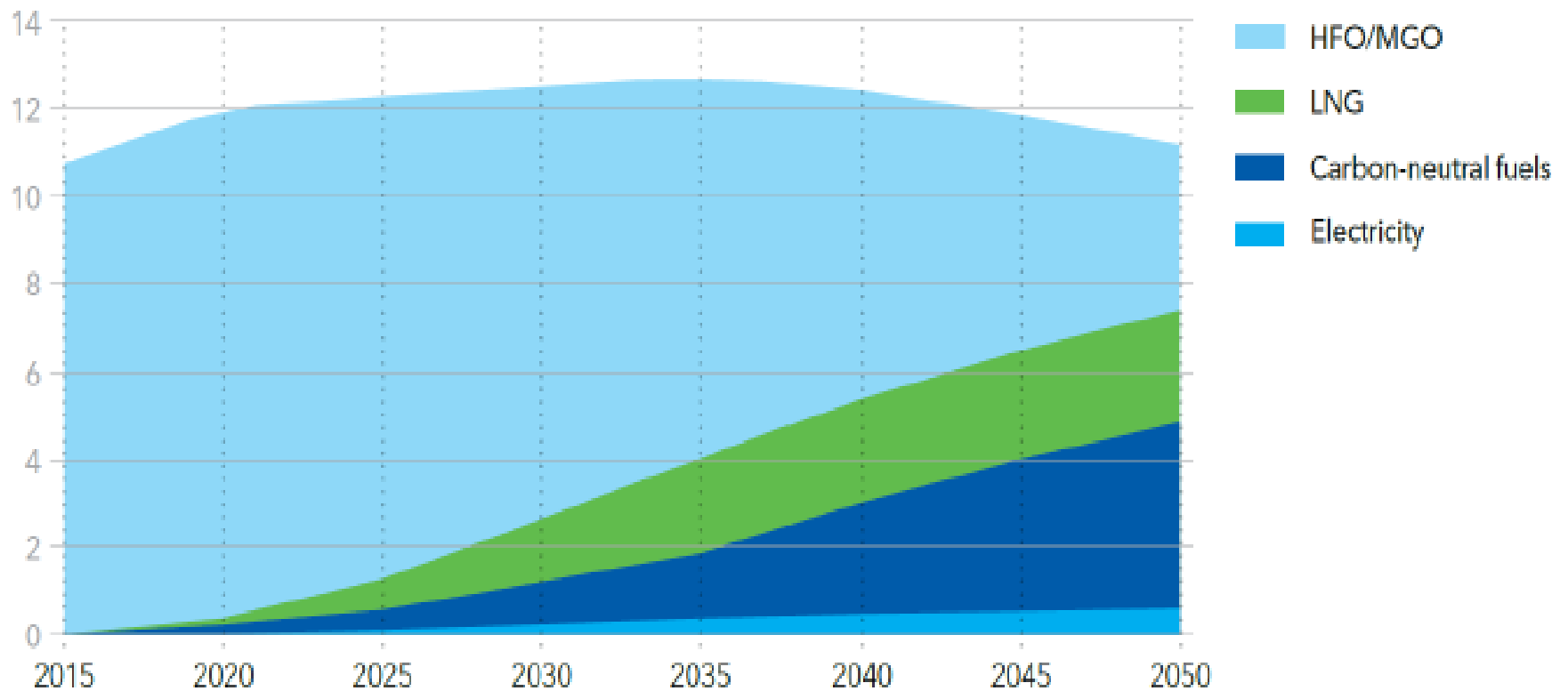
There are some new companies doing investigation to use New fuels, like Bio-Fuels or Gas-To-Liquid Fuels

Pros:
Eco-Friendly

Cons:
Still far away
They will have to be tested and vessels have to be adapted for using this new fuels

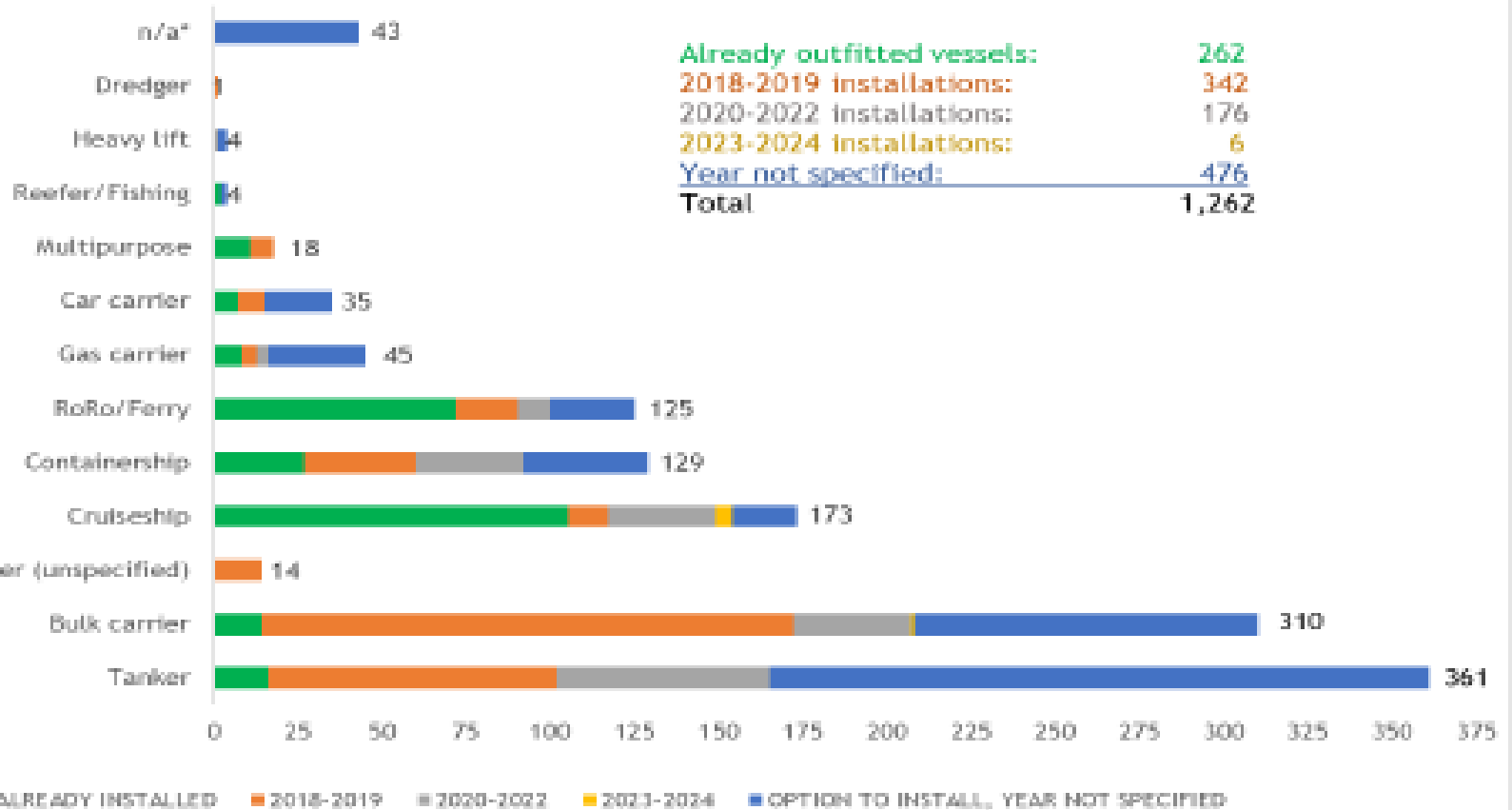
Future Use of Bunkers

Units: EJ/yr



Installation of Scrubbers

Global vessel scrubber installations (as of 26 September, 2018)



Source: Argus' proprietary marine fuel scrubber database, available to Argus Marine Fuels subscribers

* type of vessel not specified by the scrubber manufacturer

Future for the Shipping Industry



- The next year will be a period of Volatility as Owners will be deciding between several options to comply with IMO Regulations
- It could have an impact in Product transportation at a global level, considering owners could opt for Slow Steam (more transit days) in order to reduce costs/emissions and/or costs for installing Scrubbers or using an expensive fuel will be transferred to Freight and therefore to Charterers.
- Many owners will probably sell old vessels as the investment to install Scrubbers or use expensive not-as-accessible fuels will not yield profits
- Clean Shipping Alliance 2020 (Torm, Trafigura, Cargill, Navig8, Frontline among others)
- Petrobras - Transpetro

3. Greenhouse Gas Emission



MEPC 70 approved a Roadmap for Comprehensive IMO strategy to reduce GHG Emissions from international Shipping and an Initial Strategy was approved on MEPC 72 (April 2018)

The Initial Strategy includes.

- General Reduction of Carbon Intensity of Ships (CO₂/tonne-miles)
- By 2030, reduce CO₂ emissions per transport work by 40%, aiming at 70% compared to 2008
- By 2050, reduce total GHG emissions by at least 50% compared to 2008
- Review Energy Efficiency Design Index (EEDI) for new ships
- Review the Ship Efficiency Management Plan (SEEMP)
- Speed Optimization and Speed Reduction
- Establish an Existing Fleet Improvement Programme
- Develop New Low Carbon Fuels and Propulsion

4. Autonomous Ships



IMO Maritime Safety Committee (MSC 99) agreed on a Regulatory Scoping Exercise for Maritime Autonomous Surface Ships (MASS)

Determine how safe, secure and environmentally sound MASS operations can be

Degree of Autonomy:

- Ship with automated processes and decision Support
- Remotely controlled ships with seafarers on board
- Remotely controlled ships without seafarers on board
- Fully autonomous ships

Main Guidelines:

- Navigation (Radars, Instruments, Navigational Charts)
- Vessels (Sensors, Performance Measurement, Maintenance)
- Supply Chain (Better interaction between Producers / Distributors / Clients)

5. Maritime Security



Intertanko launch a new web site during 2018, dedicated to providing maritime security guidance to companies and mariners:

www.maritimeglobalsecurity.org

The website provides security-related guidance and new best practice guides regarding the following topics:

- Global Counter Piracy
- Best Management Practices to Deter Piracy
- Guidelines for protection against piracy and armed robbery in the Gulf of Guinea región
- Information regarding other risk áreas like South East Asia, the Mediterranean, Red Sea, Somali Basin, Arabian Sea
- Cyber Security Onboard Ships
- Principles applied to Migrants and Refugees
- Prevention and Suppression of Smuggling

ING. CARLOS ALFREDO RODRIGUEZ CARMONA
OPERATIONS MANAGER

Leibnitz 20 – 202
Col. Anzures
Mexico City, Mexico

Tel: +52 55 5262 9360
tankers@bsmmexico.com
crodriguez@bsmmexico.com



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