3-6-2017

# Bridging the LNG knowledge gap in the Baltic Sea region: the Go LNG initiative and the establishment of a competence centre

Dimitrios Dalaklis
*World Maritime University*

Aykut Ölcer
*World Maritime University*

Josefin A. Madjidian
*World Maritime University*

Fabio Ballini
*World Maritime University*

Momoko Kitada
*World Maritime University*

# World Maritime University

## A Specialized UN Institution in Sweden


IMO INTERNATIONAL MARITIME ORGANIZATION

WMU WORLD MARITIME UNIVERSITY

# BRIDGING THE LNG KNOWLEDGE GAP IN THE BALTIC SEA REGION: THE Go LNG INITIATIVE AND THE ESTABLISHMENT OF A COMPETENCE CENTRE

Dimitrios Dalaklis, Aykut Ölcer,
Josefin A. Madjidian, Fabio Ballini, Momoko Kitada

WORLD MARITIME UNIVERSITY

WMU's mission is to be the World Centre of excellence in postgraduate maritime and oceans education, professional training, and research, while building global capacity and promoting sustainable development.

WORLD MARITIME UNIVERSITY


# Transport has its pros and cons...

**Shipping is one of the most environmentally friendly modes of transport referring to emissions per tonnes of cargo**

**BUT**

**increase in global shipping makes it a significant source of air pollution**

http://www.flickr.com/people/68824345@N0

INTERNATIONAL MARITIME ORGANIZATION

**Develops *global regulations*** - maintain *safety* and *security* of *international* shipping and to *prevent marine pollution* from ships

***Adopts instruments*** *(legislation)* and *guidelines* at the intergovernmental level

**Member Governments are responsible** for *implementing and enforcing* the adopted regulatory framework

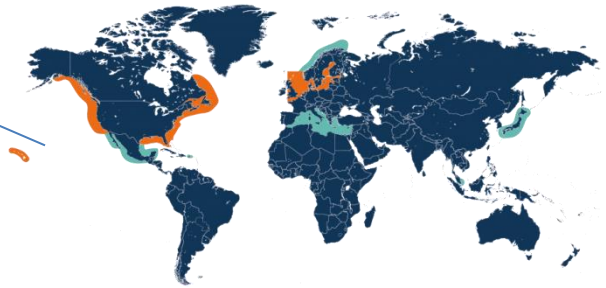
# International Convention on Prevention of Pollution by Ships , **MARPOL 73/78**

**Annex VI** represents the regulatory framework tackling exhaust gas emissions from ships

- prohibits deliberate emissions of ozone depleting substances
- sets progressive reductions (tiers) in emissions of sulphur oxides ($SO_x$), nitrogen oxides ($NO_x$) and particulate matter (PM)
- also introduces designated emission control areas with more stringent standards for above emissions
- ensures an energy efficiency standard for ships: (1) the Energy Efficiency Design Index (EEDI), for new ships, and (2) the Ship Energy Efficiency Management Plan (SEEMP) for all ships

# The EMISSION CONTROL AREAS

## SECA / NECA



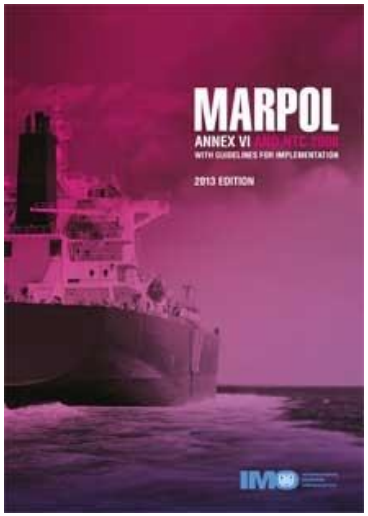
**Baltic Sea** ($SO_X$ only)

North Sea ($SO_X$ only)

North American area ($SO_X$, $NO_X$ and PM)

United States Caribbean Sea area ($SO_X$, $NO_X$ and PM)

In November 2016 IMO designated the North Sea and the Baltic Sea as NECAs, starting 1 January 2021




**These regulations have and will continue to change the shipping industry's demand for alternative fuels!**

**….which in turn affects the fuel prices and the cost effective available technology and infrastructure**

# Liquefied Natural Gas

**LNG is the most promising alternative shipping fuel technology in the short to medium term, specially for Short Sea Shipping and inland waterway transport**

https://en.wikipedia.org/wiki/Storage_tank

# WHAT ABOUT THE BALTIC SEA REGION?

*…for the maritime industry the question is no longer if LNG could be a solution to adhering to international regulations, but rather how much of the market will be replaced by LNG, and, importantly, how to best introduce LNG as the preferred fuel and make advancements…*

# GoLNG

www.golng.eu

20 main partners and 50 associated partners

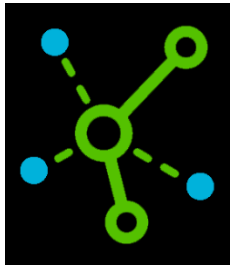
2016-2019

EUROPEAN UNION
European Regional
Development Fund

WORLD MARITIME UNIVERSITY

Interreg
Baltic Sea Region

GoLNG



BSR LNG Business Cluster

BSR Blue Corridor Strategy

BSR LNG Competence center

LBG in BSR

LNG bunkering map

# BSR LNG Competence Center…

… In order to facilitate a fast and safe deployment of LNG in the shipping sector, not only regulations and respective responses from the industry must be on track, but also sufficient education and capacity building of people that in various and different ways will be operating LNG.

This center will revolve around the partnership of the Go LNG project and the stakeholders connected to it, with the Maritime University of Szczecin, Poland, being the responsible partner. The partnership consists of 20 main partners and 50 associated partners spread across the Baltic Sea Region (BSR). The aim of the center is to offer LNG expertise through specialized and competitive training courses to the maritime industry on a global level. To enable a joint service the center will gather BSR-based LNG competence, knowledge, and specialized training facilities and research infrastructure in a well-functioning network that provides collaboration and management models.

# WMU's Previous Experience…


# www.golng.eu


You can follow the advancements of the project on www.golng.eu

# Thank you very much for your attention!