

Developing a strategy for LNG powered transport corridors in the Baltic Sea Region

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Transport has its pros and cons...

clean clouds

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

ship tracks—

BUT

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

**International shipping
cannot be attributed to
any particular national
economy**



Slow?

**Multilateral collaborative
actions are required to
address and combat
pollution from shipping**

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

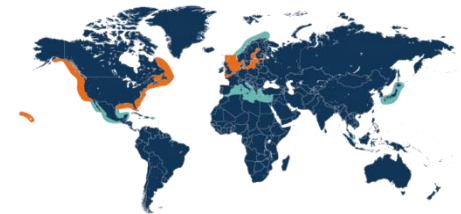
Adopts instruments* (legislation) and *guidelines at the intergovernmental level

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





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



WHAT ABOUT THE BALTIC SEA REGION?



Chicken-and-egg problem



What comes first?!

European Commission's EU White Paper for Transport (2011)

GHG reduction goal of at least 40% by 2050 (compared to 2005) in absolute terms for the shipping sector, taking into account the expected traffic increase during that period

Directive 2014/94/EU

framework of measures for the **deployment of alternative fuels infrastructure** in EU

setting out **minimum requirements** for e.g. recharging points for electric vehicles and refuelling points for natural gas (LNG and CNG) and hydrogen

to be implemented by means of Member States' national policy frameworks

The obligation to comply with EU infrastructure policy

	Coverage	Timings
LNG at maritime ports	Ports of the TEN-T core network	by end 2025
LNG at inland ports	Ports of the TEN-T core network	by end 2030
LNG for heavy-duty vehicles	Appropriate number of points along the TEN-T core network	by end 2025

...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...



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20 main partners and 50 associated partners

2016-2019



EUROPEAN UNION
European Regional
Development Fund





BSR LNG
Business
Cluster



BSR Blue
Corridor
Strategy



BSR LNG
Competence
center



LBG in BSR



LNG bunkering
map



BSR Blue Corridor Strategy ...

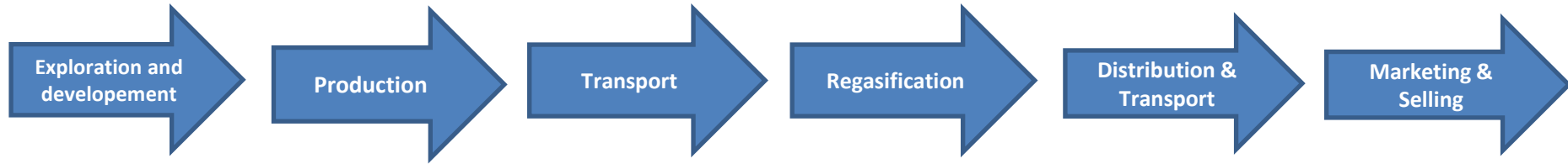


... links transport flows, LNG infrastructure development, and business models into an **efficient LNG distribution strategy for the BSR**

... maps **development patterns** of LNG-related activities and capabilities

Online: Toolbox with **regulations and guidelines**
 LNG **bunkering map**

*Points out the missing links and suggests the ways forward that
will have a positive effect on both business and technical
development in the region*



Widening the LNG VALUE CHAIN → sharing the costs and having more than one user

- Visualizes the existing LNG value chain
- Describes the possibility for a wider value chain:
 - incorporating other modalities and industries
 - incorporating biogas into the gas grids

Collection of data...

LNG research, training and consulting

LNG infrastructure, technology and related services

Economy and business

Challenges!

Standards and regulations

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Baltic
LNG Cluster



BSR Blue
Corridor Strategy



BSR LNG
Competence Center



LBG in BSR



LNG
Bunkering Map



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BSR BLUE CORRIDOR STRATEGY

LNG infrastructure development and mobilization the critical mass of technology, business partnerships, and regulative implement LNG powered transport networks in BALTIC SEA REGION.

Thank you very much for your attention!

