

# Expert Sub-group on Research, Technological Development and Innovation (EG R&I)

Sub-group rapporteur Luciano Manzon

From the Terms of reference:

- ✓ **Technology options and solutions**
- ✓ **Strategic Research and Innovation Agendas**
  - ✓ In support of the **Sustainable Waterborne Transport Toolbox.**
  
- ✓ **Final report by June 2015**

## Overview of the work done

*From first meeting:*

- Environmental performance goes together with Safety and Economic efficiency
- No overall technological solutions for all the segments/types of ships
- Entire supply-chain to be considered
- Clear long term road map is essential

## Overview of the work done

*From first meeting:*

*Wide array of topics presented and discussed:*

Scrubbers, LNG, methanol, bio-gas, hydrogen and fuel cells, hybrid propulsion, air lubrication, renewable energies, remote controlled vessels, batteries, regulatory challenges, ... regarding Intercontinental, Inland waterways transport and Short Sea Shipping.

Acknowledgement of Waterborne activities, the PPP initiative Vessels for the Future, TEN-T programme and H2020 workprogramme under Mobility for Growth.

## Overview of the work done

*From second meeting:*

12 themes presented:

Safety vs. Energy Efficiency ?

Success/incentives factors for pioneers/first movers (risk and cost sharing models?)

The role of infrastructure and ICT in R&D

Emission/efficiency measurement/monitoring

The Logistics Service Provider/cargo Owner / User perspective on shipping R&D

Short Sea Shipping vs. Intercontinental maritime transport – different research needs?

Methodology for identification of best technologies (vessel type, trade)

NO<sub>x</sub>, PM, CO reduction, methane slip (and other unburned fuels)

Research as competitive advantage?

Alternative fuel options – adequately addressed by R&D?

New ships vs. retrofitting

Assessment / optimisation of system complexity

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### *Premise*

*The sub-group is still in an orientation phase: there is need and opportunity for further discussion of the main topic areas of interest.*

### **Recommendations:**

Extend the scope of the subgroup to:

- include the overall supply chain logistics, including shippers, passenger and user perspective
- to work on holistic evaluation methods of new measures or new regulations aimed at the sustainability of shipping.

Ask the sub-group to look further into interdependencies between evolving vessels designs and the need to adapt infrastructure and procedures in order to accommodate these vessels.

Ask the subgroup to look further into the role/importance of R&D in business plans and the relation between investments in R&D and performance of companies in the maritime industry, taking into account the importance of R&D to remain competitive at a global scale.