



WATERBORNE

European Parliament Intergroup
Seas, Rivers, Islands and Coastal Areas

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A green future for blue water

The challenge

**The Waterborne
response**

**Feasible strategy
for RDI**

NOW

FUTURE

The Green challenge

European Union

2018 A Clean Planet for all

- Aiming at a **carbon-neutral economy**
- For maritime: **40% reduction of emissions** in shipping by **2050** compared to 1990 levels (e.g. 2011 targets of the White paper on transport)

International Maritime Organization

2018 Initial Strategy on the reduction of **Green House Gas** emissions by 2050

- Aiming at **50% reduction of emissions** by **2050** compared to 2008

Industry is moving based on existing technologies

Energy saving and reduction of carbon dioxide emissions (CO₂)

Regulatory constraint

- Increasingly more energy efficient equipment and engines (e.g. EEDI index)



Technical solutions

- hydrodynamic and propulsive efficiency; increasing efficiency of energy recovering systems

Reduction of harmful air emissions (e. g. SO_x, NO_x)

Regulatory constraint

- MARPOL requires progressive reduction; ECA areas



Technical solutions

- NO_x reduction (catalytic muffler)
- SO_x reduction ("Scrubber")
- Fuel switch (e.g. LNG), Batteries, Fuel Cells

Waste treatment

Regulatory constraint

- MARPOL (Annexes I, IV, V)



Technical solutions

- Onboard management of solid/liquid wastes

Relevance for Waterborne

Waterborne structure is based on 3 pillars:

- Ships and Shipping
- Blue Growth
- Ports and Logistics

Greening and **sustainability** are **transversal** issues impacting **society** and **environment**

This is one of the **main values** of the Waterborne community



Waterborne Green & Clean Vision

- To be the most **sustainable transport** mode
- No **emission, noise** and **waste**
- Exploiting **renewables**
- New logistic and mobility **paradigms**
- New **business models**

Waterborne Green & Clean Mission

- To strengthen the global **leading position** of the European sector
- To deliver and operate **competitive ships**
- To exceed:
 - IMO **GHG** reduction goals
 - EU strategic **long term vision**
 - EU inland **waterway action programme** (NAIADES-II)
- To have **no emissions** in air and water
- To have **no impact** on people, flora and fauna
- To create **new** highly qualified **skills and jobs**

Waterborne Green & Clean target for new built ships

Zero emission inland shipping
Halving emission in sea navigation

2030

Zero emission seaborne shipping

2050

It is therefore necessary to address:

- **Evolutionary** technologies (e.g. conventional fuels, filters) to have an impact on short terms
- **Revolutionary** technologies also based on new fuels (e.g. Fuel Cells) to make disruptive scenarios feasible on long terms

RDI-centred future

- **EU maritime sector** is world **leader** and a **strategic** asset for Europe
- **New challenges** ahead for the sector with greening as a **top priority**
- **Technological barriers** to be overcome
- Leveraging on **RDI** is the key factor of **success**
- Future competitiveness of the EU sector depends on
 - a focused RDI on **green** and **clean technologies**
 - a wider sectoral **cooperation** among **EU stakeholders**