Clean shipping in the Horizon Europe

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14th Meeting of the international Steering Committee for the Policy Area on Clean Shipping of the EU Strategy for the Baltic Sea Region, 15th June 2020

Ambition !

Paris Agreement objective to limit global temperature increase to well below 2°C, try to limit increase to 1.5°C

Increase the EU's GHG reductions target for 2030 to at least 50% and towards 55% compared with 1990 levels in a responsible way.

Potential for net zero economy-wide emissions by 2050

INTERNATIONAL MARITIME ORGANIZATION

By 2050, Minimum 50% net GHG cut compared to 2008
objective zero-GHG by end of century

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EU financial support for green shipping

Concept → Market

EU R&I

- 2014-2020 **Horizon 2020**
- 2021-2027 **Horizon Europe**

CEF

- upgrade of maritime links
- innovations
- Ports

Innovation Fund (CLIMA)

Regional funds ESIF

Market Mechanisms ?

- EIB Green Shipping Guarantee
- To come ? ETS? Carbon border tax ?

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EU R&I– how it works?

Collaborative *R&I for consortia addressing* ***topics*** *defined in a published call (Multiannual work program revised annually) – Research, R&I, Innovation, Coordination and Support*

Up to ***100% or 70%*** *of direct R&I costs.*

A typical ***50% prepayment*** *at start of project*

International *cooperation (most less developed countries funded by EU same as an EU country, others at own cost)*

Can include demonstration *activities*

Innovation

Progress **beyond** the state of the art

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Horizon 2020 *(2014-2020)*

HORIZON 2020 BUDGET (in current prices)

EUR 80 bn (total)

Transport €6.339 Bn

Typically €50m/ year to waterborne transport

(≈400 m in total)

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Safe

- regulations,
- Fire,
- Evacuation,
- Human factors,
- Accidents…

Green

- decarbonisation,
- Electrification (batteries, hybrid),
- Fuel Cells
- Energy assistance,
- pollution reduction,
- retrofitting

Competitive/Smart

- moving more by water,
- manufacturing,
- Materials,
- digital,
- New concepts,
- autonomous...

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Commission proposal for

Horizon Europe

THE NEXT EU RESEARCH & INNOVATION PROGRAMME (2021 – 2027)

#HorizonEU

Beyond Horizon 2020

Research and Innovation

Horizon Europe – place of waterborne R&I

100€ billion
Proposed budget

- Open Science
- Global Challenges & Ind. Competitiveness
- Open Innovation

Pillar 1
Open Science

- European Research Council
- Marie Skłodowska-Curie Actions
- Research Infrastructures

Pillar 2
Global Challenges and Industrial Competitiveness

Clusters
- Health
- Inclusive and Secure Society
- Digital and Industry
- **Climate, Energy and Mobility**
- Food and natural resources

Joint Research Centre

Pillar 3
Open Innovation

- European Innovation Council
- European innovation ecosystems
- European Institute of Innovation and Technology

Strengthening the European Research Area

- Sharing excellence
- Reforming and Enhancing the European R&I system

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Boosting key technologies and solutions underpinning EU policies & Sustainable Development Goals

Clusters implemented through usual calls, **missions & partnerships**	Budget (€ billion)
Health	*€ 7.7*
Inclusive and Secure Societies	*€ 2.8*
Digital and Industry	*€ 15*
Climate, Energy and Mobility ← Waterborne transport R&I	*€ 15*
Food and Natural Resources	*€ 10*
Joint Research Centre supports European policies with independent scientific evidence & technical support throughout the policy cycle	€ 2.2

Result of strategic planning: portfolio of candidate European Partnerships (49)

HEALTH

EU-Africa Global Health
Innovative Health Initiative
Large-scale innovation and transformation of health systems in a digital and ageing society
Personalised Medicine
Chemicals Risk Assessment
Fostering an ERA for Health research
Rare Diseases
One Health AMR

DIGITAL, INDUSTRY AND SPACE

High Performance Computing
Key Digital Technologies
Smart Networks and Services
AI, data and robotics
Photonics Europe
Clean Steel - Low Carbon Steelmaking
European Metrology
Made in Europe
Carbon Neutral and Circular Industry
Global competitive space systems
European Geological Service

PILLAR III AND CROSS-PILLAR

EIT Climate KIC
EIT Health
EIT Manufacturing
EIT Food
EIT InnoEnergy
EIT Manufacturing
EIT Raw Materials
EIT Digital
EIT Urban Mobility

Innovative SMEs

European Open Science Cloud (EOSC)

CLIMATE, ENERGY AND MOBILITY

Transforming Europe's rail system
Integrated Air Traffic Management
Clean Aviation
Clean Hydrogen
Built environment and construction
Towards zero-emission road transport
Mobility and Safety for Automated Road Transport
Batteries
Zero-emission waterborne transport
Sustainable, Smart and Inclusive Cities and Communities
Clean Energy Transition

FOOD, BIOECONOMY, NATURAL RESOURCES, AGRICULTURE AND ENVIRONMENT

Circular bio-based Europe
Accelerating farming systems transition
Animal health: Fighting infectious diseases
Environmental Observations for a sustainable EU agriculture
Rescuing biodiversity to safeguard life on Earth
A climate neutral, sustainable and productive Blue Economy
Safe and Sustainable Food System for People, Planet & Climate
Water4All: Water security for the planet

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New approach to European partnerships: overview

New generation of objective-driven and more ambitious partnerships in support of agreed EU policy objectives

Key features

- **Simple architecture and toolbox**
- **Systematic and transparent approach to selection, implementation, monitoring…**
- **Strategic orientation**

➔The main differences are in the legal form and implementation

Co-programmed

Based on Memoranda of Understanding / contractual arrangements; implemented independently by the partners and by Horizon Europe

Co-funded

Based on a joint programme agreed by partners; commitment of partners for financial and in-kind contributions & financial contribution by Horizon Europe

Institutionalised

Based on long-term dimension and need for high integration; partnerships based on Articles 185 / 187 of TFEU and the EIT-Regulation supported by Horizon Europe

Candidate co-programmed partnership Zero-emission waterborne transport

Horizon Europe	EU R&I Framework Program 2021-2027
Candidate	24/10/2019 included on the list of candidate partnerships
co-programmed partnership	Sector + Member States +COM Work Program, open calls, additionality
Zero-emission	GHG, air and water pollution
waterborne transport	All ship types and services (inland and maritime)

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Patrnership
General objective

To provide and demonstrate zero-emission solutions for all main ship types and services by 2030 which will enable zero-emission waterborne transport by 2050.

Specific Operational Objectives

<u>Broken down:</u>

- GHG emissions
- Air pollution
- Water pollution

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Operational objectives – No GHG!

Elimination of GHG emissions

To develop and demonstrate solutions for the **use of climate-neutral, sustainable alternative fuels** applicable to **ships with high energy demand (e.g. long distance shipping) before 2030**;

To develop and demonstrate **before 2030** solutions for the **integration of high-capacity batteries** solutions as single energy source for **short-distance shipping (up to 150 to 200 nautical miles)**, as an additional energy source for all main ship types in environmentally sensitive areas, and to increase operational efficiency;

To develop and demonstrate solutions to be able to **reduce the (alternative) fuel consumption** of waterborne transport, including by the use of renewable energy, by **at least 55 % before 2030, compared to 2008**;

To develop and demonstrate **solutions for port based supply infrastructure** (i.e. infrastructure for bunkering of alternative fuels and electricity) **needed to enable zero-emission waterborne transport**, to be implemented **by 2030 at the latest**;

To develop solutions for clean and climate-neutral, climate-resilient **inland waterway vessels before 2030**.

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Operational objectives – air and water pollution!

Elimination of air pollution

To develop and demonstrate solutions to cut **coastal and inland pollution to air** from inland waterway transport and maritime shipping by at least 50% by 2030, compared to current levels.

Elimination of water pollution

To develop and demonstrate solutions to **eliminate pollution to water** (including harmful underwater noise) from ships, by 2030.

Where are we now?

Waterborne Technology Platform

WATERBORNE

End of May 2020: Final draft proposal

June – draft Strategic Research and Innovation Agenda

End of June 2020: Public Consultation of Strategic Research and Innovation Agenda (SRIA)

End of August 2020: Final SRIA

2021: launch of the Partnership (1st call)

2022: Update of SRIA

2022: Launch of 2nd call

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Waterborne TP Association

More info?

participate in consultation?

www.waterborne.eu

Members:

- industry
- research
- academia
- associations

Useful links:

Horizon Europe: https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme_en

Proposal for a Zero-emission Waterborne Transport Partnership: https://ec.europa.eu/info/sites/info/files/research_and_innovation/funding/documents/european_partnership_for_zero-emission_waterborne_transport.pdf

Research – Waterborne website: http://ec.europa.eu/research/transport/index.cfm?pg=transport&lib=water

Funding and Tender portal:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/h2020

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Thank you!

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