#EMD2024

EMD

EUROPEAN MARITIME DAY

Svendborg

30-31 May 2024

European Commission

Svendborg Kommune

Danish Maritime Authority

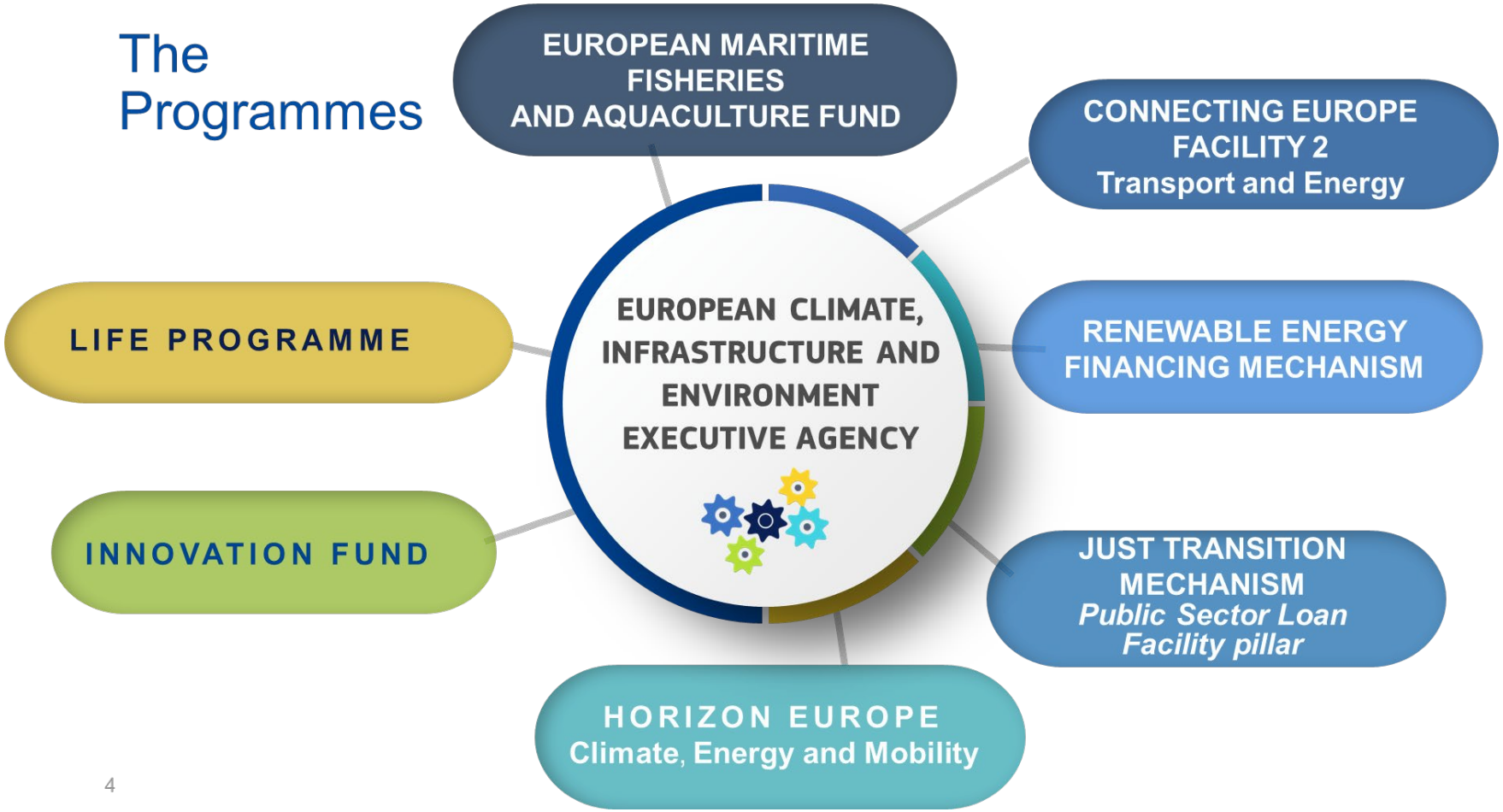
Synergies by design: Promoting cooperation to accelerate the energy transition in fisheries and aquaculture

13:30-13:35	Welcome and Introduction by the Chair **Vincent Favrel**
13:35-14:05	Presentations of EU funded projects: • **Fastwater,** Christian Norden, BALance Technology Consulting • **Aspiring Wingsails,** Elena Maneiro Franco, Bound4Blue • **SEAGLOW,** Hanne Bregendahl Pihl, EEN Denmark
14:05 – 14:40	Panel Discussion - Sharing experiences on promising solutions and challenges in decarbonising waterborne transport and infrastructure Panel Moderator: **Sven Langedijk** Panelists: **Jens Ole Hansen,** Vest & Öresund **Peter Castberg Knudsen,** POWERCON AS **Vikrant Venkataraman,** AVL LIST GMBH
14:40 – 14:45	Wrap-up and Closing Remarks by the Chair

Introduction

Vincent Favrel
Head of Unit,
Sustainable Blue Economy,
CINEA

About CINEA


The Programmes
EUROPEAN MARITIME FISHERIES AND AQUACULTURE FUND
CONNECTING EUROPE FACILITY 2
Transport and Energy
LIFE PROGRAMME
RENEWABLE ENERGY FINANCING MECHANISM
EUROPEAN CLIMATE, INFRASTRUCTURE AND ENVIRONMENT EXECUTIVE AGENCY
INNOVATION FUND
JUST TRANSITION MECHANISM
Public Sector Loan Facility pillar
HORIZON EUROPE
Climate, Energy and Mobility

About CINEA

Climate, Environment and Maritime

- Horizon Europe Climate
- PSLF-JTM
- Innovation Fund
- LIFE
- EMFAF

Speakers

Christian Norden

BALance Technology Consulting

Fastwater project

Elena Maneiro Franco

Bound4Blue

Aspiring Wingsails

Hanne Bregendahl Pihl

EEN Denmark

SEAGLOW

FASTWATER

Christian Norden
BALance Technology Consulting

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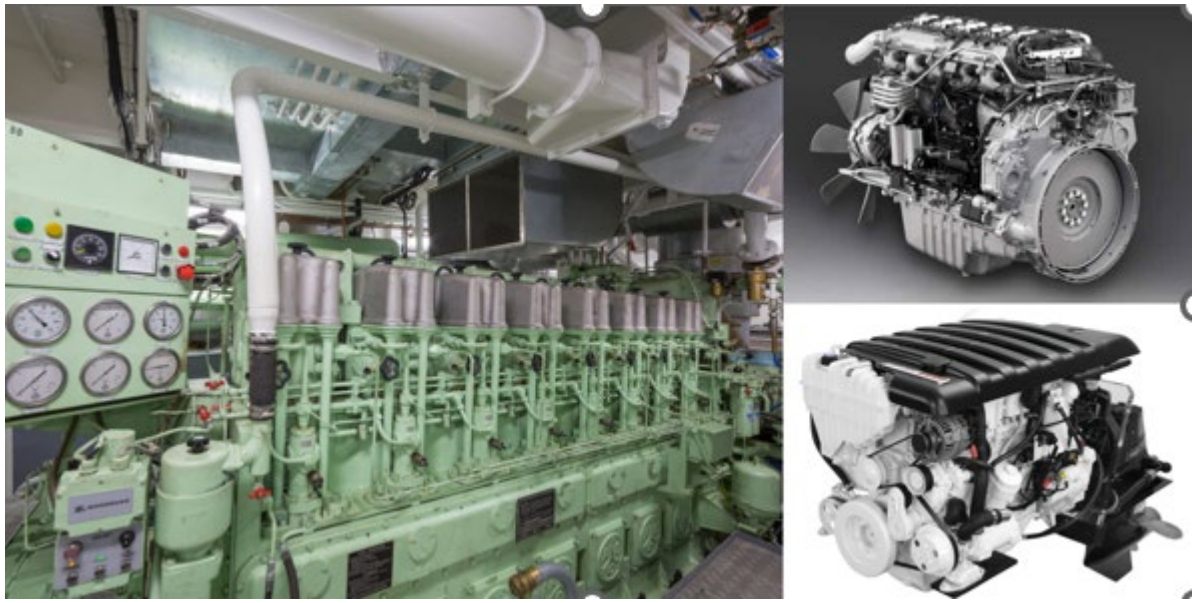
FASTWATER

FAST Track to Clean and Carbon-Neutral WATERborne Transport

June 2020 – May 2024
The project has received funding from the European's Horizon 2020 research and innovation programme (Contract No.:860251)

fastwater.eu



ANGLO BELGIAN CORPORATION
We power your future

HEINZMANN®

methanex
the power of agility

BALance®
Technology Consulting

SUPER TOYS
BOATS · ENGINES · PWC · ATV

MEYER WERFT
PAPENBURG 1795

SWEDISH MARITIME ADMINISTRATION

LUND UNIVERSITY

RI.SE

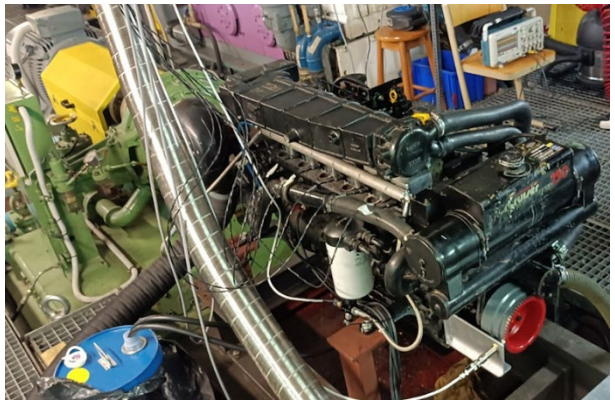
ScandiNAOS AB

Lloyd's Register

Port of Antwerp Bruges

So far…

- An MD97 high speed engine, already commercialized
- A methanol injector
- A medium speed dual fuel engine, already commercialized
- A high speed dual fuel engine, nearly ready
- A pilot boat in operation, with a dedicated bunker station



The world's first tug running on Methanol

- Officially launched on May 14th
- Methanol tank and drain tank
- Bunker station
- Fuel preparation room
- Engine conversion
  by ABC + DOC installation
- Fire protection system (NOVEC)
- Nitrogen generator + piping
- DW piping to the engines + leak detection
- Venting system
- Automation and monitoring system
- Electrical installation
- First aid components: emergency shower, eye wash
- Emission test campaign ongoing

Pilot boat: Lesson learned

- Over 350h of operation so far
  - Engine +100h (test bench)
- Bunkering station: needed extra preheating for ignition improver
- Inline blending not ideal but avoids transporting a “new” chemical!

Contact

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LinkedIn

FASTWATER

www.fastwater.eu

Aspiring Wingsails

Elena Maneiro Franco
Bound4Blue

ES

A SPANISH CLIMATE TECH COMPANY

USING WIND POWER AS A COMPLEMENTARY PROPULSION SYSTEM FOR VESSELS

- **Our vision**

  To power the maritime industry with wind.

- **Our mission and value proposition**

  To deliver automated wind-assisted propulsion systems (eSAIL®) as a turn-key solution for those shipowners and operators looking to decrease their fuel-related costs and pollutant emissions.

bound4blue's value proposition: the eSAIL®

The eSAIL®
WIND ASSISTED PROPULSION revisited

- ❑Up to 30% reduction of fuel consumption (main OPEX)
- ❑Up to 30% multipollutant & GHG emissions reduction
- ❑Enables regulatory compliance at the lowest costs

- ❑Best value-for-money wind propulsion system
- ❑Easy to install and operate (turn-key technology)
- ❑Attractive return-on-investment (payback of 3-4 yr)
- ❑More than 80% of existing fleet could use eSAILs ®

Worldwide **+67,000 vessels** (cargo+fishing) could use eSAILs ®

A global potential market of more than 187,000 units to be installed.

Current value of + EUR 74,000 million between 2021 – 2030.

NINE INSTALLATIONS CO-FUNDED BY THE EUROPEAN UNION

General Cargo
(La Fura dels Baus)

GREENing the BLUE
Co-funded by the European Union
EASME/EMFF/2017

Fishing Vessel
(OR.PA.GU.)

ASPIRING WINGSAILS
Co-funded by the European Union
EMFF-BlueEconomy-2018

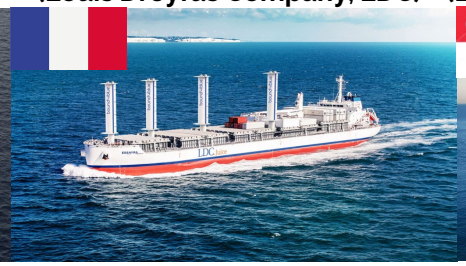
Ro-Ro & Ferry
(Louis Dreyfus Armateurs, LDA)

Bulker
(Marubeni)

bound4blue
Co-funded by the European Union
EIC Accelerator (June 2021 cut-off)
€10.3M EIC funding (grant and equity) + additional private matching funds

Chemical tanker
(Odfjell)

Juice Carrier
(Louis Dreyfus Company, LDC)



Oil and chemical tanker
(Eastern Pacific Shipping, EPC)

Oil/chemical tanker
(Marflet)

confidential

sustainsea
Co-funded by the European Union
Emissions Trading System
Innovation Fund
Innovation Fund
€7M budget

ASPIRING WINGSAILS

Installation No. 1: "Aspiring wingsails" EMFF project

OPP 49
OR.PA.GU.
ORGANIZACIÓN DE PALANGREROS GUARDESES

SHIPOWNER: OR.PA.GU. (Galicia, Spain)

VESSEL: Balueiro Segundo
37 m LOA longliner

eSAIL: Model 1 – 12 m x 2.85 m

INSTALLATION: May 2021 – Panama
First Sea Trials Campaign

APPROVAL: Spanish Flag & Bureau Veritas

New updated version in 2024 with the support of:

CDTI
@CDTIoficial

A brave Galician shipowner passionate about innovation...

Co-funded by the European Union

bound4blue

Promoter and Coordinator

ASPIRING WINGSAILS

Co-funded by the European Union

KYMA

Partner

Co-funded by
the European Union

bound4blue

CONTACT

Elena Maneiro Franco
Head of EU (and other) funding strategy
Business Development
emf@bound4blue.com

ISO 9001
BUREAU VERITAS
Certification

SEAGLOW

Hanne Bregendahl Pihl
EEN Denmark

SEAGLOW

Empowering the energy transition

SEAGLOW - Sustainable Energy Applications for Green and Low-impact Operation of small-scale fishing boats in the Baltic and North Sea basins (SEAGLOW)

Objectives:

1) Analyse the needs and contexts of fishing communities along with their value and supply chains to define evidence-based plans for small-scale fisheries decarbonisation
2) Adapt appropriate, robust technologies to reduce fossil fuel consumption in small-scale fisheries
3) Deploy and test technological solutions in real, operational, maritime conditions to obtain representative and realistic data
4) Assess and validate the environmental, social, and economic sustainability of the project's solutions and business models.
5) Co-design sustainable business and financing models and deliver hands-on business support services to facilitate their adoption and replication
6) Engage in solid multi-actor collaboration and cluster with relevant initiatives to drive the widespread replication of the SEAGLOW solutions

essels

rent engine applications and 1 vessel applying solely the cross regional demonstrators

	**Demonstrator I (Denmark)**: Hybrid driveline with Li-Ion batteries and electric motor for low-speed trolling and manoeuvring, methanol fuelled main engine for cruising and battery charging. E-coating and sensor technologies for improved environmental performance and reduced emissions.
	**Demonstrator II (Sweden)**: Plug-in hybrid driveline, with electric motor for positioning and manoeuvring on lobster fishing areas, biodiesel fuelled main engine for cruising. E-coating and sensor technologies for improved environmental performance and reduced emissions.
	**Demonstrator III (Estonia)**: 11.5 m fishing vessel, used for box trap fishing. Conversion from diesel to plug-in hybrid electric with charging in harbour. E-coating and sensor technologies for improved environmental performance and reduced emissions.
	**Norwegian test vessel for cross-regional demonstrators:** 10.65 m speed sjark vessel used for cod and pollock fishing. E-coating and sensor technologies for improved environmental performance and reduced emissions.
	**Cross-regional demonstrator IV**: E-coating combined nanoparticles and a polymer matrix – Polyramik ® coating to reduce fuel consumption, reduce leaching of microplastics into the ocean and reduce application costs for fishing vessels. Used on all regional demonstrators.
	**Cross-regional demonstrator V**: Low-cost fishing operational patterns and fuel consumption monitoring system (SIMUL) to register vessel position, speed, rotational speed and fuel consumption in real time, providing accurate operational figures on fuel consumption.

4 Vessels - All of less than 12 metres, but with different age, shape and usage

To be used as testvessel for interested fishermen and showcased in multible ports in Sweden throughout the project

Demonstrator 5 : Ecoating

Technologies to be used:

- Ecoating – toxin-free marine hard coating from COC.

Trial vessel:

- Ester T247 (Danish vessel)
- Valentina (Swedish vessel)
- PMA - 605 (Estonian vessel)
- R-1-SS Anne Katharina (Norwegian Vessel)

Outputs:

By working in conjunction with demonstrator V and sensor technologies, the following outputs are to be gained as part of the project:

- How will the coating impact fuel consumption due to reduced biofouling?
- How will the coating impact the level of biofouling on the vessel over the project period?
- How can the periodic cleaning of the coating be best organised and executed (implementation, cost, impact)?
- What effects does the use of different coating colours have on the biofouling (dark and light)?
- What are the effects of water temperatures, routes and standing times on biofouling / coating?

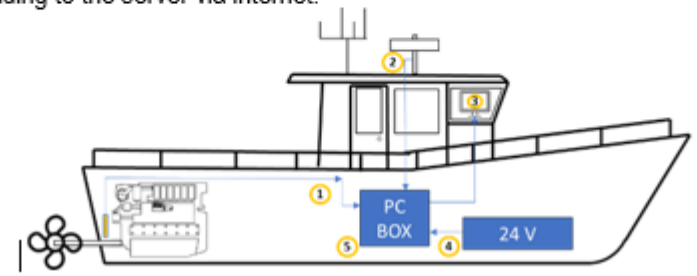
Expected impact:

- The expected impact of the COC hard coating is a reduction of 10% of fuel emissions for comparable performance.
- Using the sensor technologies, SEAGLOW will measure the individual effects and analyse and validate dependencies on the different influencing factors. Based on this, the effects on other boats and ships can be predicted or calculated.

Demonstrator 6: SIMUL Technologies

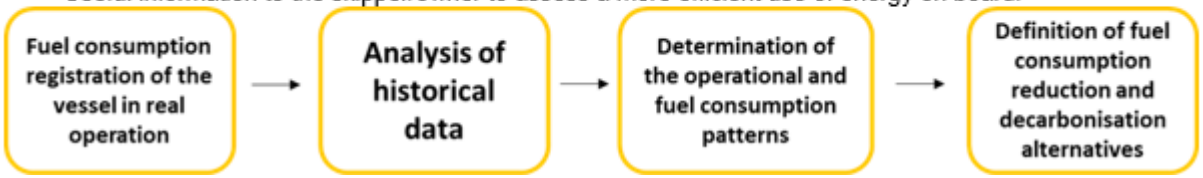
Technologies to be used:

1. Inductive tachometer: Measures engine speed and sends signal to the PC box.
2. GPS signal: time, vessel position, speed and course.
3. On-board visualisation: shows data in real time: engine rotational speed, vessel speed, and calculation of fuel consumption.
4. Connection to vessel batteries: Powered with 12-24 V; Low electric consumption to be installable in the artisanal and small-scale fishing vessels. 220 V powered version is also developed.
5. PC Box: Receives all the data from the acquisition devices and calculates the fuel consumption in real time.
6. Internet connection. Any modifications can be carried out remotely.
7. Data coupling and uploading to the server via internet.



Outputs:

- Vessel operational profile.
- Estimation of the fuel dependence of the fishing activity.
- Useful information to the skipper/owner to assess a more efficient use of energy on board.



Expected impact:

- A 4% reduction in fuel consumption, on average on all three demonstrator vessels from use of the sensors alone, in line with previous experience in Spain.
- High-quality data on fuel consumption from all combinations of technologies piloted.

Potential Synergies:

Looking for interested parties to join our Advisory Board – Please contact me on hbp@ndeu.dk

Regional policy conference to be developed showcasing potential solutions both from SEAGLOW, but also from other relevant projects.

SEAGLOW
Empowering the energy transition

Panel session

Sven Langedijk
Head of Unit European Commission
DG MARE:
Economic Analysis, Markets and Impact Assessment

Moderator

Jens Ole Hansen
COO Molslinjen Vest & Øresund
Molslinjen A/S

Speaker

Vikrant Venkataraman
Development Engineer
AVL List GmbH

Speaker

Peter Castberg Knudsen
Partner & CCO
PowerCon A/S

Speaker

Q&A

Thank you!

cinea.ec.europa

@CINEA_EU

CINEA - European Climate, Infrastructure and Environment Executive Agency

CINEATube

Tender Portal CINEA
Funding opportunities