

Danube Transnational Programme

GRENDEL “Green and efficient Danube fleet”

DTP2-052-3.1-GRENDEL

Workshop “Encouraging the realization of a modern fleet, enhancing navigation safety and fostering innovations”, UNECE

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Project co-funded by European Union Funds (ERDF, IPA)

19th June 2019 – Geneva – Switzerland



Pro Danube – Structure & Objectives

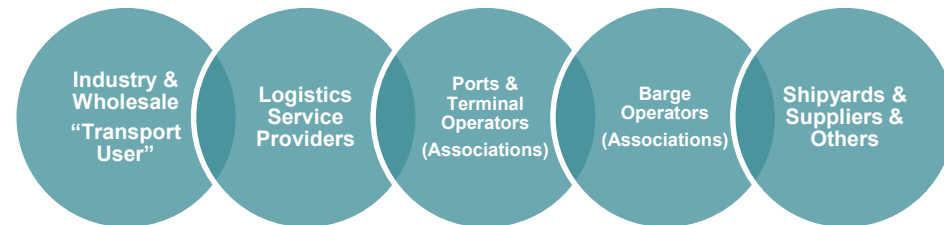
Platform of private companies with strategic economic interest in better framework conditions and higher public investment in the Danube transport & logistics system

In a nutshell

- Established autumn 2011 by a group of companies & associations
- Non-profit association based in Vienna
- Network of currently c. 200 companies
- More than a lobbying organisation as it initiates and executes projects
- Service company: Pro Danube Management GmbH
- Local representations: Pro Danube Romania, Pro Danube Serbia
- Initiator & coordinator of policy initiatives & projects in IWT, port development & LNG
- More info at: www.prodanube.eu

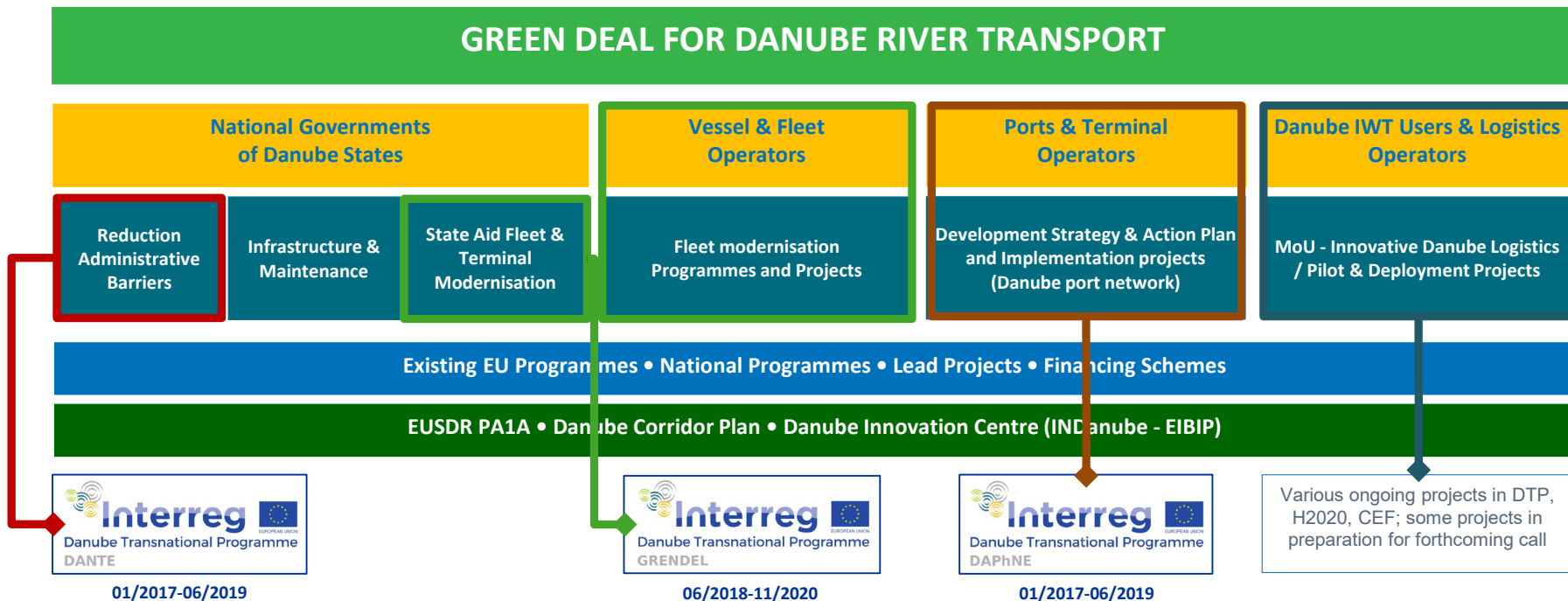
Priorities

- Engagement for better waterway maintenance & execution of TEN T bottleneck projects
- Promotion of investment in Danube ports
- Support to modernization of Danube fleet
- Elimination of administrative barriers
- Active involvement in EC initiatives & programs



Members & Partners

Motivation: Policy initiative based on cooperation & commitment

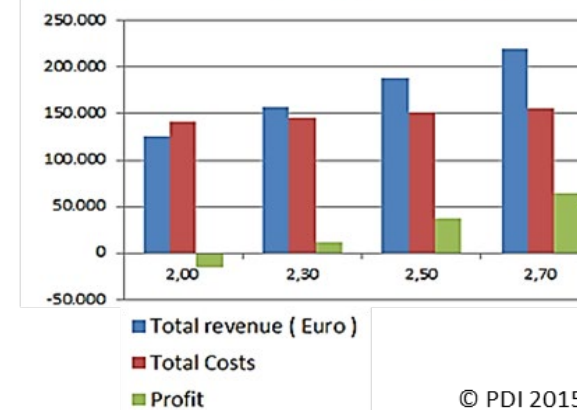


Challenges for greening of Danube fleet

- **Current fleet:** c.450 self-propelled vessels, c.370 pushers, c. 1.700 barges; 20 companies own more than 75% of vessels
- **Highly insufficient waterway maintenance in several Danube countries deprived vessel operators from major fleet investment** → fleet average >> 40 years
- **Need to fulfil NRMM STAGE V REGULATION (EU) 2016/1628**
*Priority for IWT till 2030 is **to improve air pollutants** to keep-up with road haulage (Euro VI trucks) and rail. Otherwise, shift to water policies undermined, while CO2 reduction is maintained.*
- **Need to adapt fleet to new market requirements** in order to expand into new markets such as RORO, Container, biomass, biofuels, LNG & transport of other gases, chemicals and others goods with quality (control) requirements which can't be matched with current equipment.

Profitable navigation requires sufficient draft

Draft	2,00	2,30	2,50	2,70
Total Revenue (Euro)	125.700	157.125	188.550	219.975
Total Costs (Euro)	140.863	145.891	150.919	155.947
Profit	-15.163	11.234	37.631	64.028
Profit %	-12,06%	7,15%	19,96%	29,11%
Profit per to	-2,53	1,50	4,18	6,10



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Fields of action for Danube fleet modernisation

Use of alternative fuels

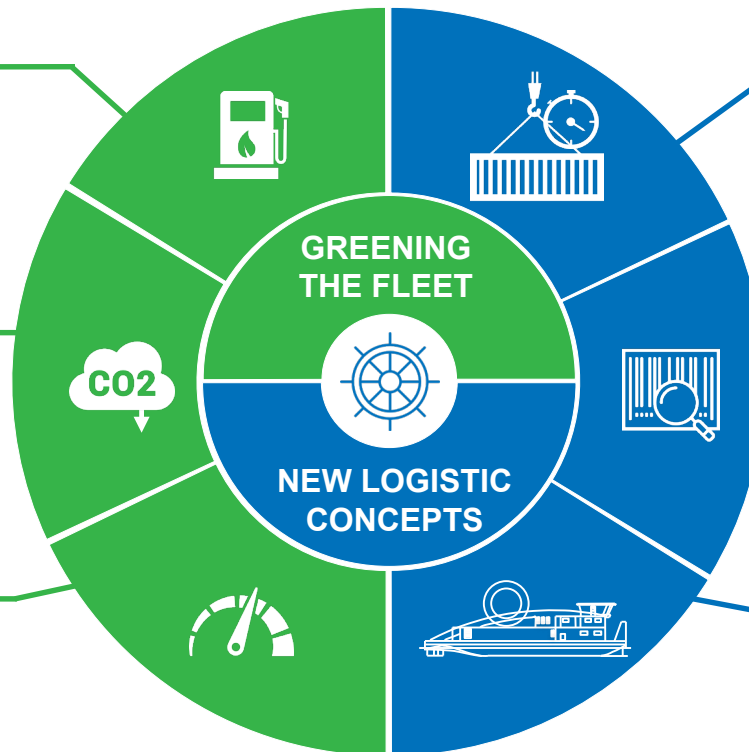
LNG/CNG • Bio-fuels •
Methanol • Ethanol •
Hydrogen • GTL

Air pollutant emissions reduction

Alternative technologies •
After-treatment • New engine
concepts and optimisation

Energy consumption reduction

Energy-efficient navigation •
Energy efficient ship design •
Hybrid/diesel-electric propulsion
• Electric propulsion



New logistics concepts

Synchromodality • DINA •
Advanced RIS • Digital market
places for cargo flows

New cargo flows

Find your (water)way • New
market segments:
(containerised) LNG as cargo
| steel & cars | continental
cargo flows

New vessel concepts

Optimal cargo load •
Automation of navigation /
vessel-trains

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GRENDL: Project key facts



FUNDED PARTNERS

- Fleet owners & operators
- Innovation & technology organisations
- IWT development agencies
- Education institutes
- Ship design experts
- River commission (Danube Commission)



ASSOCIATED STRATEGIC PARTNERS

- Ministries & their implementing bodies
- Other fleet owners & operators



1.8 MEUR

- ERDF contribution: 85%
- IPA contribution: 85%
- State contribution: up to 15%
- Own contribution: up to 15%



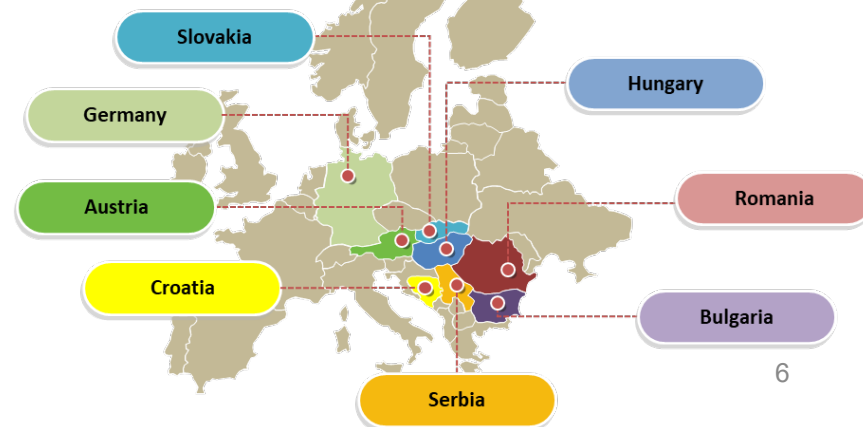
6.2018 - 11.2020

- 30 months of working & cooperation together



NON-FUNDED STAKEHOLDERS

- Fleet owners & operators
- Logistics service providers
- Technology providers
- Cargo owners



GRENDL: Project partners



FUNDED PARTNERS

Pro Danube International (LP)

- DST – Development Centre for Ship Technology and Transport Systems (DE)
- National Association of Radio Distress-Signalling and Infocommunications (HU)
- Danube Commission (International Org.)
- Bulgarian-Romanian Chamber of Commerce and Industry (BG)
- Pro Danube Romania (RO)
- Romanian Maritime Training Centre – CERONAV (RO)
- SDG – Ship Design Group S.R.L. Galati (RO)
- Romanian Naval Authority (RO)
- River Navigation Company NAVROM SA (RO)
- Fluvius Shipping and Transport. Company (HU)
- Danubia Kreuzfahrten GmbH (AT)
- Pro-Danube Serbia (RS)

ASSOCIATED STRATEGIC PARTNER

- Federal Ministry for Transport, Innovation and Technology (AT)
- Ministry of National Development (HU)
- Executive Agency Maritime Administration (BG)
- CFND (RS)
- Donau Tankschiffahrts-Gesellschaft m.b.H (AT)
- Romanian River Ship Owners and Port Operators Association (RO)
- BAVARIA Schifffahrts- und Speditions-AG (DE)
- Ministry of Maritime Affairs, Transport and Infrastructure (HR)
- Ministry of Transport (RO)
- Ministry of Transport and Construction (SK)

Pending:

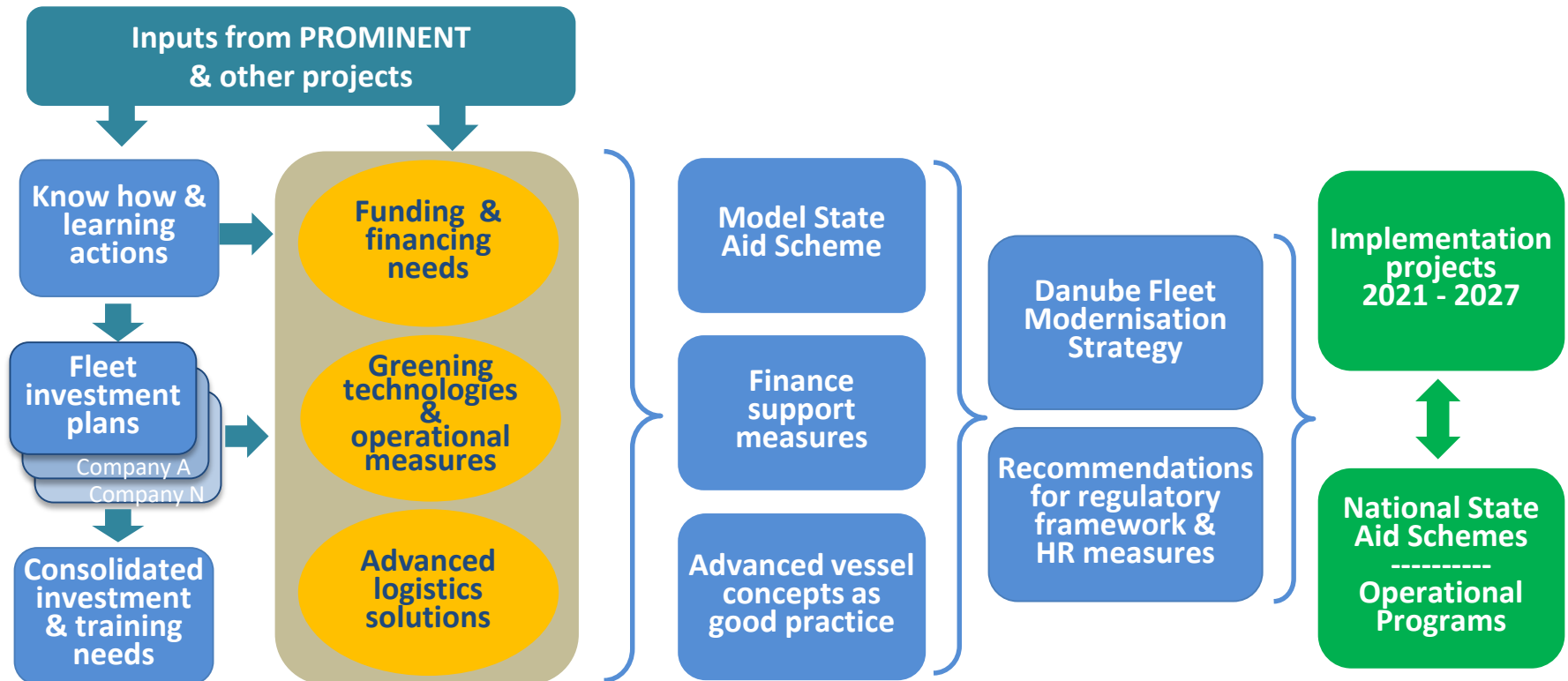
- *Ministry of Construction, Transport and Infrastructure, Republic of Serbia*
- *Yugoslav River Shipping Company (JRB)*

GRENDEL: Project Objectives



- Prepare / support vessel operators for modernisation / greening of Danube fleet based on **know-how transfer and results of European and regional innovation projects** & real-life demos following the European transport and environmental policy priorities
- **Elaborate fleet investment plans** defining investment volumes and greening technologies
- Investigate support to vessel operators regarding **financing opportunities for fleet greening**
- Facilitate state aid for fleet modernisation (funding volumes, funding objectives and activities) by **drafting a harmonized State Aid Scheme** which shall be implemented in as many Danube states as possible with the support of EU funds
- Further **develop regulatory framework for implementation of greening technologies**
- Identify required **new / future skills of workforce & prepare for training**
- Build up a **vessel operators' platform to facilitate knowledge transfer on greening technologies** (technical feasibility and financial viability) as part of the stakeholders' management
- Elaborate **Danube wide fleet modernisation strategy** and related recommendations
- **Implement tools, learning interactions and pilot actions** which are part of fleet modernisation strategy
- **Integrate IWT into logistics systems** in cooperation with logistics providers

GRENDEL: Work approach



GRENDEL: Outputs



FLEET INVESTMENT PLANNING

Know-how transfer
events

Technological
Factsheets & other
documents

Consolidated
Investment
& Training
requirements

PREPARATORY ACTIONS

Advanced green
vessel &
operational
concepts

Guidelines for
transport &
logistics
management

Support to fleet
owners & operators
(financing
instruments)

REGULATION & STRATEGY

Public
consultations

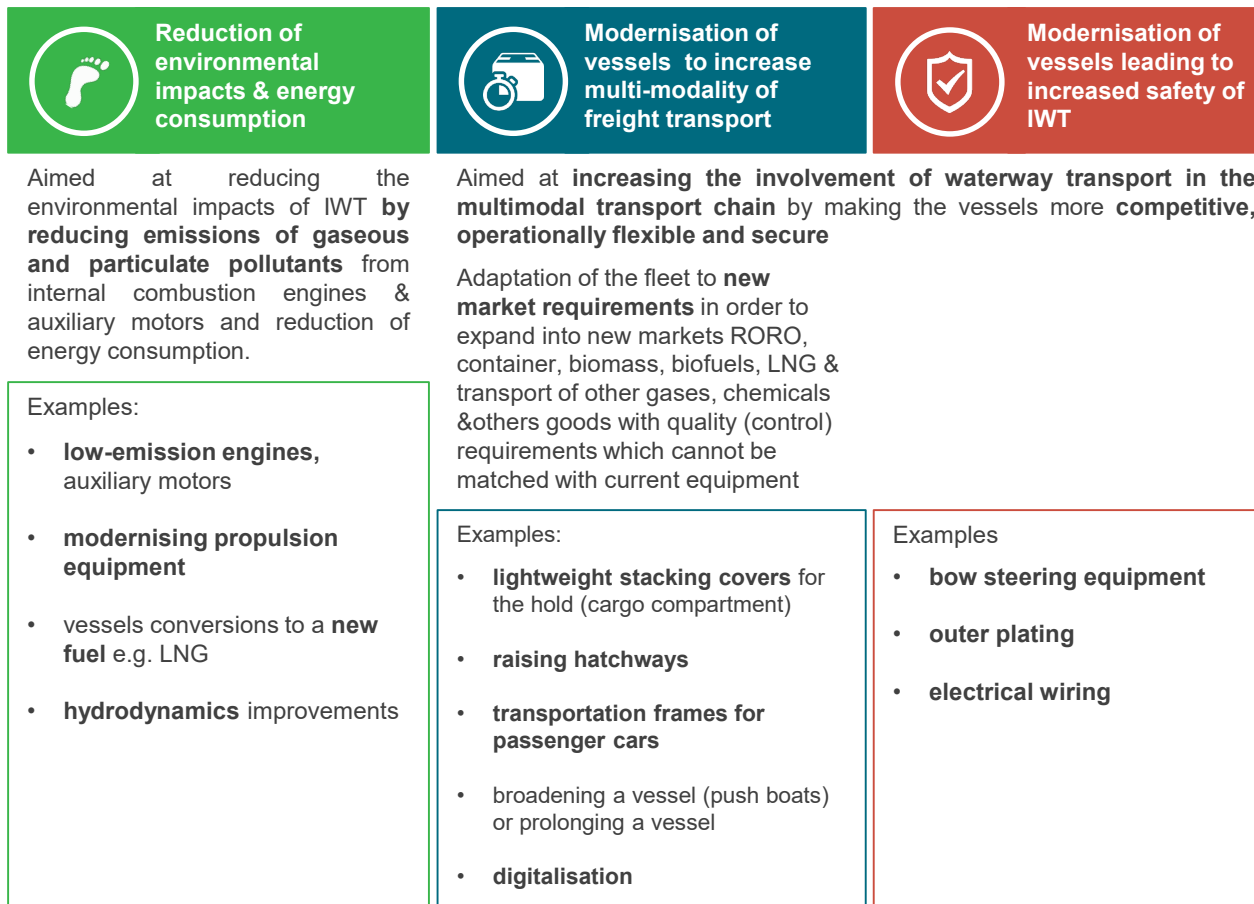
Model State Aid
scheme & other
public support
measures

IWT Fleet
Modernisation
Strategy &
Recommendations

GRENDEL: State Aid schemes (starting point)



CZ state aid scheme



GRENDEL: State Aid schemes (timeline)



Preparatory works:

- Inventory on past, existing & upcoming State Aid measures
- 2 State Aid workshops (first one on 26.03.2019)
- „State Aid meetings“ with European Commission services
- Analysis of impact and compatibility of proposed State Aid measures

Model State Aid scheme
& public support measures

available on 30.04.2020

- **Model which considers investment priorities** of Danube inland waterway transport sector
- *With a summary on other innovative financial instruments*

Draft State Aid scheme
developed based on the
model prepared

ready on 30.11.2020

- Will be prepared by **at least one** participating state

Objective that the Model State Aid scheme will be implemented in as many Danube states as possible with the support of EU funds.

Why public support for Danube fleet modernisation?

- Various **studies point to great value for society and to necessity of public interventions** in order to speed-up greening of inland fleet in Europe
- **Limited added value due to NRMM Stage V** as only applicable for new engines from 2019/2020
- **NO legislation for existing vessels** and their engines to bring down pollutant emissions
- **NO incentives & funding programmes** in Danube region yet
- **Hardly any business case for greening solutions** (except for LNG with high oil price scenario)
- Without intervention **ship owners must keep using the old** (polluting and inefficient) **engines**. This results in poor levels of emission reduction over the next decades and persisting high levels of harmful air pollutants (NOx, PM) and high CO2
- **Danger that old (polluting) vessels pushed out from Rhine** will be transferred to the Danube
- Modernisation of Danube fleet must be **coordinated and in line with Western Europe**



LNG-fuelled type C tanker EcoLiner developed by DAMEN within the LNG Masterplan for Rhine-Main-Danube project (2013-2015) © DAMEN



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Photo: © NAVROM

GRENDEL “Green and efficient Danube fleet”

Towards modernisation & greening of Danube inland waterborne sector and strengthening its competitiveness

www.interreg-danube.eu/grendel