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
Charlotte SIOT
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

GREEN DEAL FOR DANUBE RIVER TRANSPORT

National Governments of Danube States
- Reduction Administrative Barriers
- Infrastructure & Maintenance
- State Aid Fleet & Terminal Modernisation

Vessel & Fleet Operators
- Fleet modernisation Programmes and Projects

Ports & Terminal Operators
- Development Strategy & Action Plan and Implementation projects (Danube port network)

Danube IWT Users & Logistics Operators
- MoU - Innovative Danube Logistics / Pilot & Deployment Projects

Existing EU Programmes • National Programmes • Lead Projects • Financing Schemes

EUSDR PA1A • Danube Corridor Plan • Danube Innovation Centre (INDanube - EIBIP)

Various ongoing projects in DTP, H2020, CEF; some projects in preparation for forthcoming call

01/2017-06/2019
06/2018-11/2020
01/2017-06/2019
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.
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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Project co-funded by European Union Funds (ERDF, IPA)
GRENDEL: 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

**BUDGET**
- 1.8 MEUR
  - ERDF contribution: 85%
  - IPA contribution: 85%
  - State contribution: up to 15%
  - Own contribution: up to 15%

**TIME**
- 6.2018 - 11.2020
  - 30 months of working & cooperation together

**NON-FUNDED STAKEHOLDERS**
- Fleet owners & operators
- Logistics service providers
- Technology providers
- Cargo owners
GRENDEL: 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 Tankschifffahrts-Gesellschaft m.b.H (AT)
• Romanian River Ship Owners and Port Operators Association (RO)
• BAVARIA Schiffsfahrts- 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

Inputs from PROMINENT & other projects

- Know how & learning actions
- Fleet investment plans
- Consolidated investment & training needs

Funding & financing needs

- Advanced logistics solutions
- Greening technologies & operational measures

Model State Aid Scheme

- Finance support measures
- Recommendations for regulatory framework & HR measures

Danube Fleet Modernisation Strategy

- Advanced vessel concepts as good practice

Implementation projects 2021 - 2027

National State Aid Schemes

Operational Programs

Operational Programs

Know how & learning actions

Fleet investment plans

Consolidated investment & training needs

Advanced logistics solutions

Greening technologies & operational measures

Funding & financing needs

Model State Aid Scheme

Danube Fleet Modernisation Strategy

Recommendations for regulatory framework & HR measures

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Model State Aid Scheme

Danube Fleet Modernisation Strategy

Recommendations for regulatory framework & HR measures

Finance support measures

Advanced vessel concepts as good practice

Implementation projects 2021 - 2027

National State Aid Schemes

Operational Programs

Operational Programs
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

- **Reduction of environmental impacts & energy consumption**
  - Aimed at reducing the environmental impacts of IWT by reducing emissions of gaseous and particulate pollutants from internal combustion engines & auxiliary motors and reduction of energy consumption.
  - Examples:
    - low-emission engines, auxiliary motors
    - modernising propulsion equipment
    - vessels conversions to a new fuel e.g. LNG
    - hydrodynamics improvements

- **Modernisation of vessels to increase multi-modality of freight transport**
  - Aimed at increasing the involvement of waterway transport in the multimodal transport chain by making the vessels more competitive, operationally flexible and secure.
  - Adaptation of the fleet to new market requirements in order to expand into new markets RORO, container, biomass, biofuels, LNG & transport of other gases, chemicals & others goods with quality (control) requirements which cannot be matched with current equipment.
  - Examples:
    - lightweight stacking covers for the hold (cargo compartment)
    - raising hatchways
    - transportation frames for passenger cars
    - broadening a vessel (push boats) or prolonging a vessel
    - digitalisation

- **Modernisation of vessels leading to increased safety of IWT**
  - Examples:
    - bow steering equipment
    - outer plating
    - electrical wiring
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
GRENDEL “Green and efficient Danube fleet”
Towards modernisation & greening of Danube inland waterborne sector and strengthening its competitiveness

www.interreg-danube.eu/grendel