## Fairway Rehabilitation and Maintenance Master Plan

Setting standards for the Danube

Gert-Jan Muilerman | viadonau Danube Business Talks | 27<sup>th</sup> June 2016 | Linz

# 10 riparian states / 10 states in charge of waterway maintenance

- 7 EU Member States/3 non-EU Member States
  - Waterway rehabilitation and maintenance is and will remain a national responsibility
  - Budget decisions and operational measures are ultimately taken (or not) at national level
- Logistics waterway users need stable fairway conditions and a continuous level of service
- The quality of the Danube corridor is as strong as its weakest link



→ Corridor approach in waterway maintenance is essential

# Our tool kit to achieve stable fairway conditions along the Danube

- 1. Strong partnership and cooperation among waterway administrations and stakeholders
- 2. Definition of common levels of service and work plans
- 3. Development of good practices in waterway maintenance
- 4. Joint implementation projects
- 5. Up-to-date fairway information for waterway users
- 6. Close performance monitoring and reporting



#### 1. Strong partnership and coordination among waterway administrations and stakeholders

- Network of Danube Waterway Administrations (NEWADA) operational since 2009
- EU-Strategy for the Danube Region: Austria (bmvit and viadonau) and Romania (Ministry of Transport) have been coordinating Priority Area 1a (Waterways) since 2012
- European Commission (DG MOVE/DG REGIO) set Danube waterway maintenance high on the political agenda

- $\rightarrow$  The conditions for better cooperation are in place
- → More information <u>www.danube-navigation.eu</u>





# 2. Definition of common levels of service and work plans



#### Fairway Rehabilitation and Maintenance Master Plan

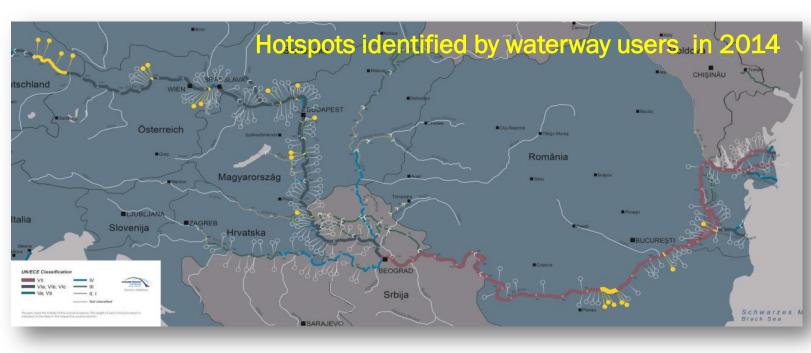
- Initiated in April 2014 by Danube Region Strategy (Priority Area 1a) in cooperation with the NEWADA duo project
- Prepared in close cooperation between PA1a, the European Commission and the Danube waterway administrations
- Endorsed in December 2014 and June 2016 by the majority of Danube Transport Ministers



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#### Fairway Rehabilitation and Maintenance Master Plan

- Defines a recommended minimum level of service (2.50m fairway depth at Low Navigable Water Level)
- Highlights critical locations (as identified by waterway administrations and Danube waterway users)
- Specifies the required national measures and budget needs







#### 3. Development of good practices

- The EU co-financed PLATINA-2 project established a European expert group for inland waterway maintenance
- Focus on free-flowing river sections, as these are most critical in terms of performance and maintenance needs
- Good practice manual on inland waterway maintenance
  - Exchange of practical approaches applied in different river corridors all over Europe
  - Guidelines for practical implementation of economically and ecologically sustainable waterway maintenance procedures

→ More information <u>www.naiades.info</u>



#### platina <mark>2</mark>

onsequently, suction dredgers may be preferred if the vicinity of the dredging site is particularly ensitive, while a mechanical dredger may be favoured if the vicinity of the placement site is ensitive. Dredging equipment itself leaves possibilities for technical adaptions to further increase

the environmental performance of dredging projects (green valves, screens, curtains, animal defectors, ec.). The adectors, ec.) the adectors of the dredget to use for a specific fairway maintenance dredging intervention is manily defined by the type of soil to be dredged and by the size and production nate of the explainment. Beaded these orients, the prossibilities for transportation between the dredging and placement size are also relevant for dredger selection. Additionally, environmental criteria are to be taken into consideration which is fully more careful. In the final selection the woulding of scatching the selection that the statement of scatching the selection.

#### Transportation and placement

inland dredging the excavated material is mostly transported by barges, hopper barges or trucks ich, if well maintained, keep the spill at a minimum until the material reaches its final placement e. If other equipment is used (e.g. pleplines) the impermeability of the equipment needs to be anted and checked frequently if indications of leakages occur.

t the placement site measures can be implemented to increase the control of placement and educe splilage of material outside of the predefined site. The effectiveness of these measures is lependent on the conditions at the site and the capacity of the placement site in relation to the untilties and rate of supply of the material. Figure 21 displays conventional placement methods.





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### 4. Joint implementation projects

#### FAIRway Danube project

- Implementation of specific parts of Fairway Rehabilitation and Maintenance Master Plan
- Set up and evaluate pilot activities for improved hydrological services
  - Surveying of riverbed and water level monitoring
  - Integrated data analysis and water level forecast
  - Exploit potential of dynamic fairway marking
- Procurement of equipment
- Physical interventions (dredging) are out of project scope
  - National responsibility
- Pre-feasibility study for lock rehabilitation Gabčíkovo
- → Significantly improve data quality, data coherence and coordination of actions along the Danube waterway corridor





### FAIRway Danube project - key facts

- 23.4 million Euro | co-financed by the Connecting Europe Facility
- 6 participating countries + Advisory Board including stakeholders





- Coordinated by bmvit + viadonau
- Lead time July 2015–June 2020
- → More information <u>www.fairwaydanube.eu</u>



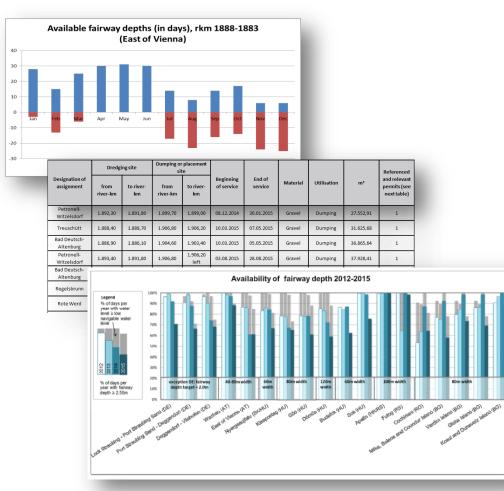
## 5. Up-to-date fairway information for waterway users



### Features of available online services

- Water levels
- Shallow section information
- Lock status
- Notices to skippers
- Position service
- Easy access to data
  - <u>www.danubeportal.com</u>
  - <u>www.doris.bmvit.gv.at</u>
  - DoRIS mobile app

# 6. Close performance monitoring and reporting



→ More information <u>www.fairwaydanube.eu</u>

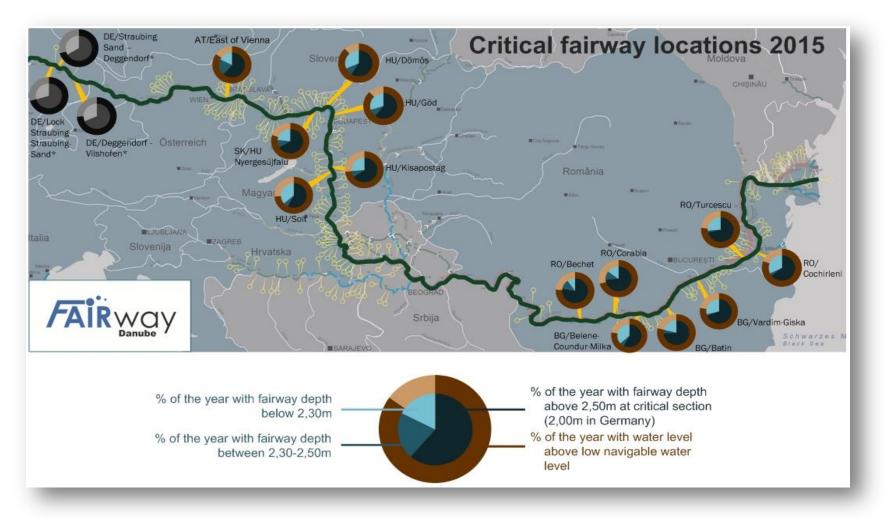
#### **National Action Plans**

- Monitoring of progress on implementation of Master Plan through yearly monitoring reports
- Status and outlook on
  - critical locations
  - hydrological conditions
  - rehabilitation/maintenance activities
  - environmental impacts
  - budget needs





#### Status of Danube waterway in 2015



→ More information <u>www.fairwaydanube.eu</u>



#### Conclusions



The tools are in our hands - let's use them!

### Danube waterway rehabilitation and maintenance is on our radar

- Corridor approach is crucial
- Active engagement of stakeholders
  needed
- Fairway Rehabilitation and Maintenance Master Plan is a living document with annual monitoring reports
- The National Action Plans create a level of transparency in national waterway maintenance issues, which was previously not available

### Thank you for your attention!

#### Contact



Gert-Jan Muilerman Team Manager Strategy & Action Programmes T +43 50 4321-1604 gert-jan.muilerman@viadonau.org Donau-City-Straße 1, 1220 Vienna Graphics designed by 💇 freepik.com