

Danube STREAM

Activities and outputs on the interface of waterway
management and nature conservation

Dunakiliti, 26-27.04.2017

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Danube STREAM

KEY PROJECT DATA

Project partners

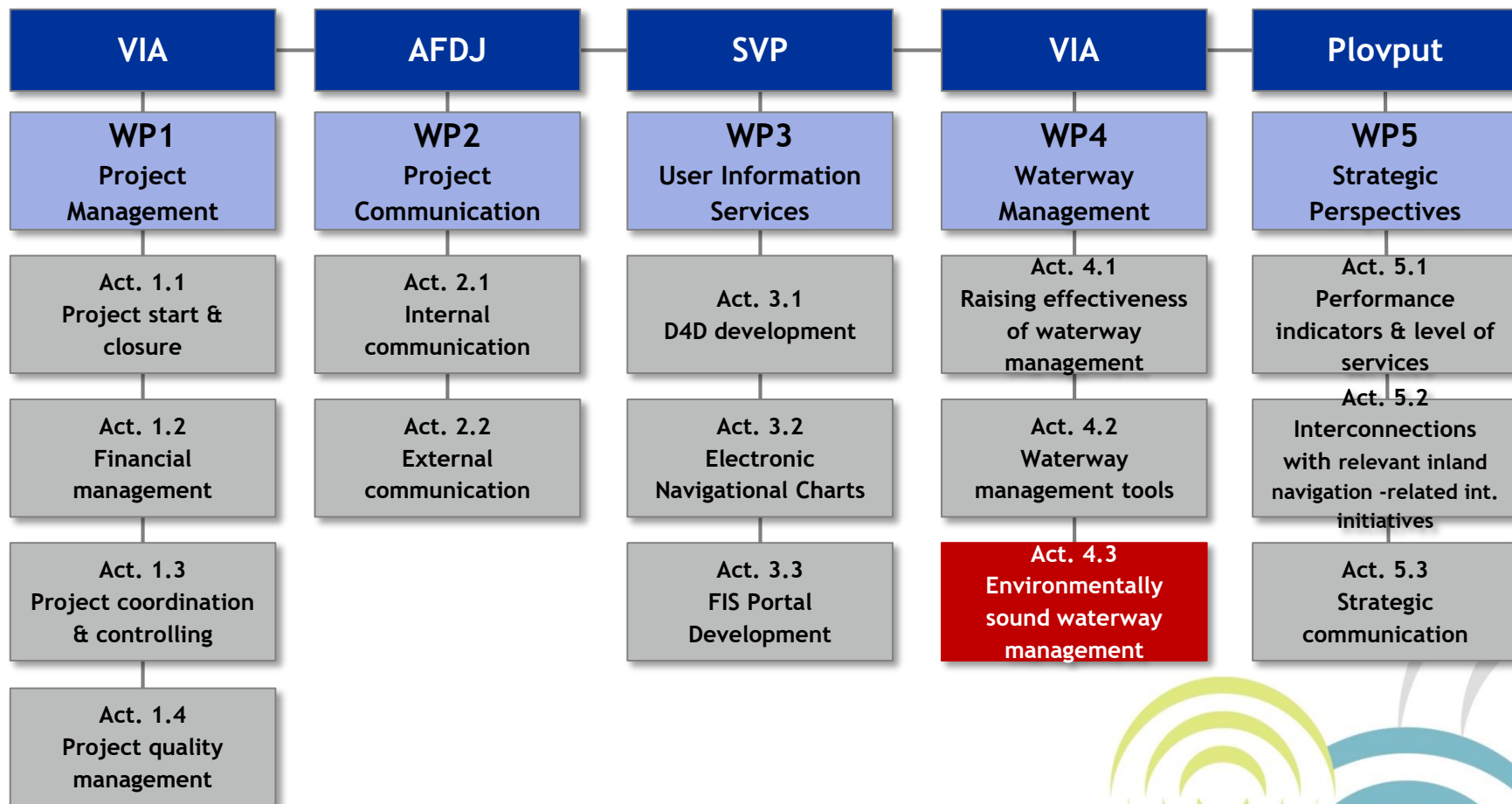
Partner no.	Partner name	Short name	Country
LP	via donau - Austrian Waterways Company	VIA	AT
ERDF PP1	Slovak Water Management Enterprise	SVP	SK
ERDF PP2	General Directorate of Water Management	OVF	HU
ERDF PP3	National Association of Radio Distress-Signalling and Infocommunication	RSOE	HU
ERDF PP4	Agency for Inland Waterways	AVP	HR
ERDF PP5	River Administration of the Lower Danube Galati	AFDJ	RO
ERDF PP6	Administration of Navigable Canals S.H.	ACN	RO
ERDF PP7	Executive Agency for Exploration and Maintenance of the Danube River	EAEMDR	BG
IPA PP1	Ministry of Construction, Transport and Infrastructure - Directorate for Inland Waterways	Plovput	RS

Associated strategic partners

No.	Name Of associated strategic partner	Short name	Country
ASP 1	German Federal Ministry of Transport and Digital Infrastructure	BMVI	DE
ASP 2	Danube Commission	DC	HU
ASP 3	International Sava River Basin Commission	ISRBC	HR
ASP 4	DANUBEPARKS - Danube River Network of Protected Areas	DANUBEPARKS	AT



WP breakdown structure



Overview

SUMMARY ACTIVITY 4.3

Our tool kit to achieve stable fairway conditions along the Danube and its tributaries

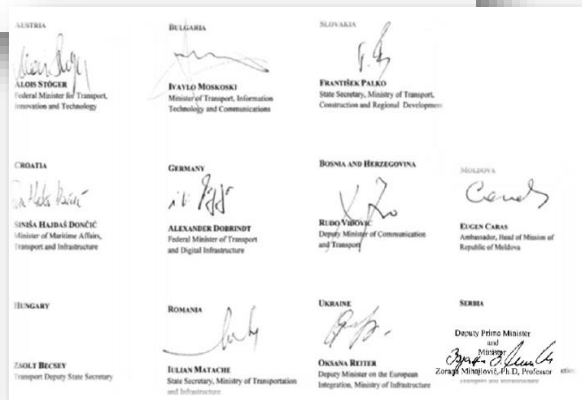
1. Strong partnership and cooperation among waterway administrations and stakeholders
2. Definition of common levels of service and work plans
3. Development of best practices in waterway maintenance
4. Up-to-date fairway information for waterway users
5. Close performance monitoring and reporting



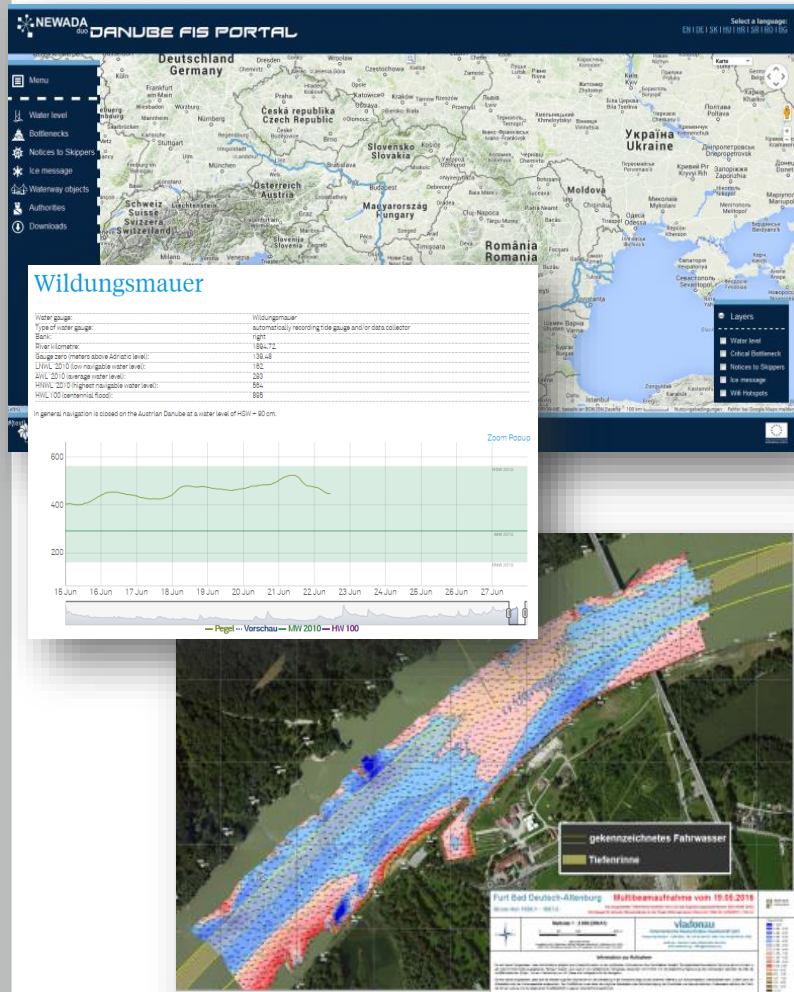
Definition of common levels of service and work plans



- **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



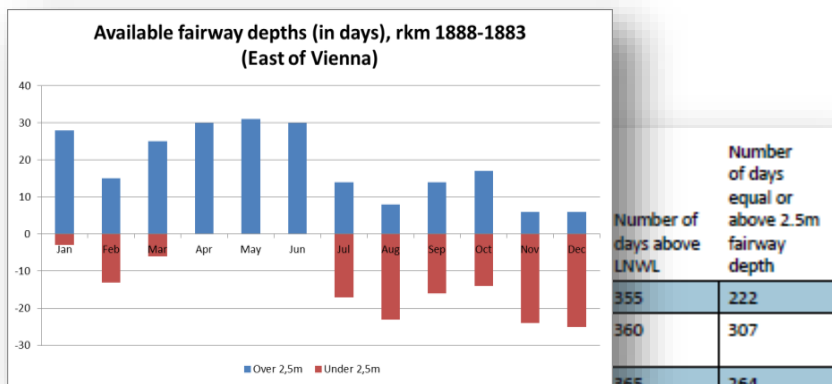
Up-to-date fairway information for waterway users



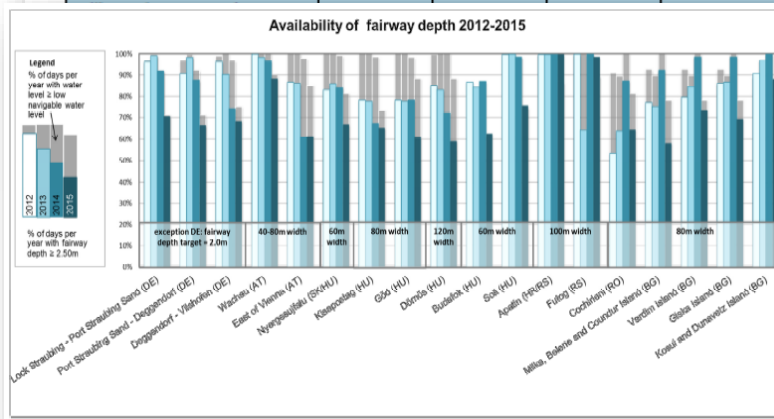
Features of available online services

- Water levels
- Shallow section information
- Lock status
- Notices to skippers
- Marking database
- Atlas of berths
- ...
- Easy access to data
 - www.danubeportal.com

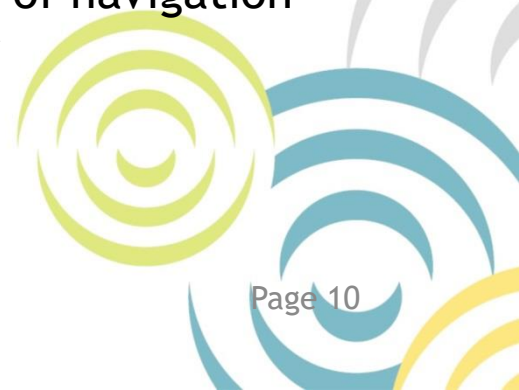
Close performance monitoring and reporting



Location	Navigation Season (rkm)	Navigation Width (m)	Number of days above LNWL	Number of days equal or above 2.5m fairway depth
Göd	1668 - 1666	80	357	286
Kisapostag	1567 - 1565	80	357	246
Solt	1559 - 1558	100	358	232
Bechet	678 - 676	80	365	365
Corabia	629 - 626	100	365	365

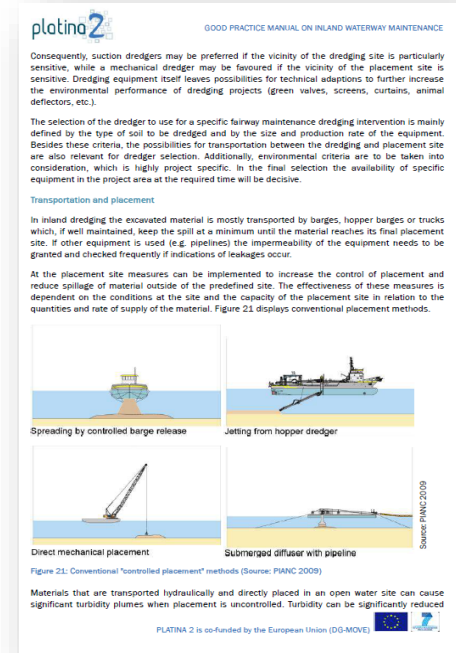


- Monitoring of Key Performance indicators and Levels of Service
- Among others through publication of Common Danube Report
- Examples
 - Availability of 2.5m fairway depth at critical locations
 - Closures of navigation per year



Development of best 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
- Danube STREAM output: Strategy on environmentally sound waterway management (elaborating on work done in PLATINA-2 project)
 - Exchange of practical approaches applied in different river corridors all over Europe
 - Guidelines for practical implementation of economically and ecologically sustainable waterway maintenance procedures



Environmentally sound waterway management

1. What is the problem?

- Waterway projects have to be in line with Water Framework Directives and other relevant environmental law
- Environmental requirements are sometimes inhibitive

2. Where do we stand today?

- Joint Statement / planning guidelines for integrative approach
- Several good practice documents available
- Existing cooperation with Danube Parks



Development of Inland Navigation and Environmental Protection in the Danube
 ICPDR IKSAD
 International Commission for the Protection of the Danube River International Commission for the Protection of the Danube River

Joint Statement on Guiding Principles for Inland Navigation and Environmental Protection in the Danube
 Inland navigation can contribute to making transport more efficient and have a significant influence on river ecosystems, particularly in the Danube basin. Integrating the potential of inland navigation into the Protection of the Danube River (ICPDR) has led to a joint statement on inland navigation and environmental protection. As a result of this cooperation, the ICPDR and IKSAD have developed a joint statement on inland navigation and environmental protection in the Danube basin. This statement is intended to guide the development of future waterway development.

Manual on Good Practices in Sustainable Waterway Planning
 platino

platino 2 GOOD PRACTICE MANUAL ON INLAND WATERWAY MAINTENANCE

Consequently, suction dredgers may be preferred if the vicinity of the dredging site is particularly sensitive, while a mechanical dredger may be favoured if the vicinity of the placement site is sensitive. Dredging equipment itself leaves possibilities for technical adaptations to further increase the environmental performance of dredging projects (green valves, screens, curtains, animal deflectors, etc.).

The selection of the dredger to use for a specific fairway maintenance dredging intervention is mainly defined by the type of soil to be dredged and by the size and production rate of the equipment. Besides these criteria, the possibilities for transportation between the dredging and placement site are also relevant for dredger selection. Additionally, environmental criteria are to be taken into consideration, which is highly project specific. In the final selection the availability of specific equipment in the project area at the required time will be decisive.

Transportation and placement

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

At the placement site measures can be implemented to increase the control of placement and reduce spillage of material outside of the predefined site. The effectiveness of these measures is dependent on the conditions at the site and the capacity of the placement site in relation to the quantities and rate of supply of the material. Figure 21 displays conventional placement methods.

Spreading by controlled barge release **Jetting from hopper dredger**

Direct mechanical placement **Submerged diffuser with pipeline**

Figure 21: Conventional "controlled placement" methods (Source: PIANC 2009)

Materials that are transported hydraulically and directly placed in an open water site can cause significant turbidity plumes when placement is uncontrolled. Turbidity can be significantly reduced

platino 2 is co-funded by the European Union (DG-MOVE)

Environmentally sound waterway management

3. What do we intend to improve in Danube STREAM?

- Continued meetings/exchanges between waterway administrations and protected areas on national level
- Learn from best practices in Western Europe
- Intersectoral conferences (to be jointly organised with DANUBE parks CONNECTED)
- Preparation of report on environmentally sound waterway management: Guidelines for practical implementation of economically and ecologically sustainable waterway maintenance procedures

Environmentally sound waterway management

4. What do we need from you?

- Joint definition of criteria for best practices in environmentally sound waterway management
- Links to existing literature/guidance documents
- Proposals for best practices in environmentally sound waterway management
- Elaboration and description of best practices
- Feedback on draft report on environmentally sound waterway management

Planned tasks in Act. 4.3

Task No.	Title of Task	Responsible PP
4.3.1	Carry out national level discussion and meetings between WWAs and PAs	VIA
4.3.2	Study trip to Western Europe (e.g. NL, DE or FR)	VIA
4.3.3	Prepare intersectoral seminar	VIA
4.3.4	Prepare environmentally sound waterway management report	VIA
4.3.5	Organise intersectoral conference (incl. cross-sectoral BoD meeting)	Plovput

Task 4.3.1

Task 4.3.1	Carry out national level discussion and meetings between WWAs and PAs
Task Leader	VIA
Involved PP	VIA, SVP, OVF, RSOE, AVP, AFDJ, ACN, EAEMDR, Plovput
Task Start	01/04/2017
Task End	31/12/2017
Objective	<p>The partners will start the participation in Activity 4.3 with collaborating with the representatives of the national parks on national level. For this the project will connect closely with Protected Areas (united in the DANUBEparksCONNECTED project) to explore more environmentally sound waterway management processes, this will include both national and international aspects. Hence, measures to keep the ecological balance of the Danube as a waterway will be taken. The 7 national meetings shall provide a summary of the national procedures and good practices in the field of sustainable waterway management in national parks. The resulting national synergy documents shall be input for the transnational inter-sectoral conferences and the environmentally sound waterway management report.</p>

Task 4.3.2

Task 4.3.2	Study trip to Western Europe (e.g. NL, DE or FR)
Task Leader	VIA
Involved PP	VIA, SVP, OVF, RSOE, AVP, AFDJ, ACN, EAEMDR, Plovput
Task Start	01/07/2017
Task End	30/06/2018
Objective	The partnership will organize a study trip to Western-Europe (e.g. Netherlands, Germany or France) to learn about the best practices of other waterway management administrations in relation with environmental protection and waterway management. A summary report will be prepared after the study trip in order to be able to use it in the development of the environmentally sound waterway management report.

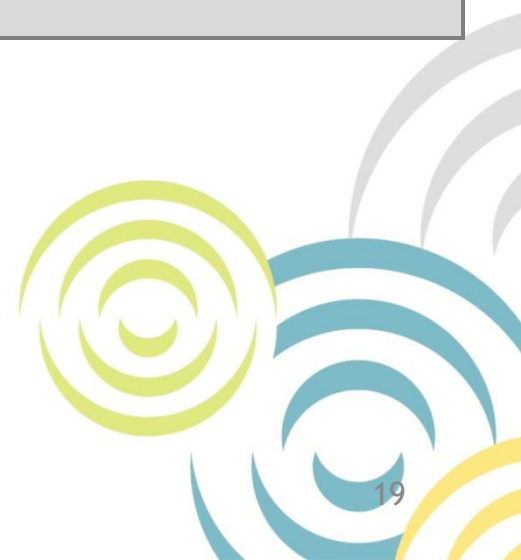


Task 4.3.3

Task 4.3.3	Prepare intersectoral seminar
Task Leader	VIA
Involved PP	VIA, SVP, OVF, AVP, AFDJ, ACN, EAEMDR, Plovput
Task Start	01/01/2018
Task End	30/09/2018
Objective	<p>Danube STREAM also goes beyond regional and transport strategies and reflects the environmental policies of the Community. The Water Framework Directive will be followed in respect to the River Basin Management Plans and interested parties will be invited to express their views on specific project topics. In this context a dedicated activity deals with environmentally sound waterway management and strongly relies on an open dialogue with environmental stakeholders.</p> <p>An intersectoral seminar will be organized by VIA to reach the most important environmental actors in relation with water management. This will aim to disseminate the joint works done in transnational projects in relation with the Danube River. The targeted actors will be ICPDR, DG Environment, NGOs, etc.. The main point on the agenda is to introduce running projects on the Danube to the environmental sector.</p>

Task 4.3.4

Task 4.3.4	Prepare environmentally sound waterway management report
Task Leader	VIA
Involved PP	VIA, SVP, OVF, AVP, AFDJ, ACN, EAEMDR, Plovput
Task Start	01/04/2017
Task End	30/06/2019
Objective	The partnership will develop - based on the PLATINA II Waterway Maintenance Manual (2016), the national synergy documents and the study trip to Western Europe - an updated strategy on environmentally sound waterway management with the assistance of protected areas along the Danube. This document shall serve as guidance on sustainable waterway maintenance for the partners after the project finalisation.



Task 4.3.5

Task 4.3.5	Organise intersectoral conference (incl. cross-sectoral BoD meeting)
Task Leader	Plovput
Involved PP	VIA, SVP, OVF, AVP, AFDJ, ACN, EAEMDR, Plovput
Task Start	01/04/2017
Task End	30/06/2019
Objective	The partners will start the participation in Activity 4.3 with collaborating with the representatives of the national parks on national level (Task 4.1.1). The cooperation will rise to transnational level, where two intersectoral conferences will be organized (one of them by Plovput, the other one by partners of the DANUBE parksCONNECTED project). During these conferences good practices in environmentally sustainable waterway management will be discussed and presented.



Activity 4.3 Environmentally sound waterway management - Deliverables

D 4.3.1	National synergy documents	7x	Period 2
D 4.3.2	Summary report of study trip	1x	Period 3
D 4.3.3	Preparation of environmentally sound waterway management report based on inputs of the PLATINA II project	1x	Period 5
D 4.3.4	Intersectoral seminar to introduce running projects on the Danube to the environmental sector	1x	Period 5