

Project at a Glance

Developing the Danube waterway infrastructure in an efficient, sustainable and user-oriented way, that is the goal of the study *Preparing FAIRway 2 works in the Rhine-Danube corridor*. It takes up core aspects of the flagship project *FAIRway Danube* and develops them further in order to have them ready for implementation in the envisaged follow-up project.

Overall, the study aims to deliver the following results:

- Inventory of navigational and environmental characteristics of the Croatian-Serbian common section of the Danube. The data collected through these surveys will be used for navigation purposes and will support the environmental authorities in the definition of the conservation objectives for the River Basin Management Plans in Croatia.
- Delivery of a study including the results of the 1D hydraulic modelling for the entire Croatian and Serbian Danube common section.
- Delivery of the terms of references for the functional upgrades of the transnational waterway monitoring system (WAMOS 2.0).
- Definition of a concept for the stakeholders' cooperation and coordination along the Austrian, Croatian and Serbian sections of the Danube.
- Delivery of a study for Austria, Croatia and Serbia to assess the needs to upgrade existing or construct new mooring places along the Danube and the Sava

www.preparingfairway2.org



Connecting Europe Facility

Budget: 3,292,000 EUR

Austria, Serbia, Croatia

Concept for Stakeholders Coordination



Stakeholder Talks, Danube Business Dating 2018 © viadonau

Stakeholders have a great influence on the successful implementation of a project and its outcomes. The well-structured cooperation with stakeholders and the establishment of a trustful relationship is therefore essential.

At the same time, it can be challenging to optimally target all relevant stakeholders. While for example the inland waterway transport industry can greatly benefit from CEF-funded projects, their limited time availability can make it difficult to exchange information with this group.

As a first outcome of the project, a concept for stakeholders coordination was elaborated. The result is a manual, which supports communication professionals of CEF-funded projects in inland navigation to plan and implement the strategic cooperation and to optimally target relevant stakeholders.

The concept delivers guidelines, practical checklists, and tools for planning and implementing the coordination process. An emphasis was set on providing hands-on information. The concept further specifies stakeholders' needs and suitable communication channels for their optimal involvement. A special focus is set on the requirements of inland waterway transport industry.

Valuable opportunities are seen in the use of diverse communication channels, while exploiting the personal and digital exchange with stakeholders. Events like the Danube Business Talks in Austria are valuable means to inform, consult and network with stakeholders. The personal exchange at events will remain very important also in the future, however digital or hybrid formats can complement the communication portfolio, when used wisely. The concept provides practitioners with decisional and organisational aids for the optimal coordination.

The basis for the concept was a SWOT analysis, which identified strengths and weaknesses of stakeholders' coordination activities within CEF-funded projects carried out in the Danube region, in particular the CEF-funded flagship project *FAIRway Danube*. The [Executive summary of the SWOT analysis](#) is available for download on the [project website](#).

The [Concept for stakeholders coordination](#) was finalised in December 2021 and can be downloaded from the [project website](#).

Deniza Staewa,
viadonau



Croatia

Being funded by the Connecting Europe Facility, the starting point for the future development of the common Croatian-Serbian Danube section are the (inter-)national ambitions and legal requirements to provide reliable transport infrastructure and to achieve the Good Navigation Status as required from by the TEN-T Regulation from Member States, while respecting applicable environmental law.

The hydro-morphological conditions on the common Danube section are extremely dynamic, which negatively affects a stable good navigation status.

On the other hand, the natural state of this Danube section is a precondition for the survival of natural flood related ecosystems. Balancing these requirements is a challenging but welcome task in the project.

The goal of activities carried out in the project is to create a basis for a joint strategy and future coordinated activities to keep the Danube as an important international waterway in a way that will not endanger the existing ecosystems and their biodiversity.

In order to achieve this, the relevant hydrological, hydraulic and morphological data will be collected along with biodiversity components (fishes, birds, river benthos and floodplain habitats).

This is the first comprehensive and consolidated collection of similar data in the Croatian-Serbian common section carried out in a cooperation project since 2009.

Based on the collected hydromorphological and hydrological data, 1D hydraulic modelling for definition of critical bottlenecks will be performed. Biodiversity data will serve, among others, as an input for future River Basin Management Plans.



Serbia

Common Croatian-Serbian Danube section

River-km 1433,1 to river-km 1295,5

Monitoring activities

As part of the monitoring activities the current situation in the common Croatian-Serbian Danube section will be investigated. Data relevant for the waterway management will be collected, the inventory of biodiversity components will be taken and all will be combined into a GIS database.

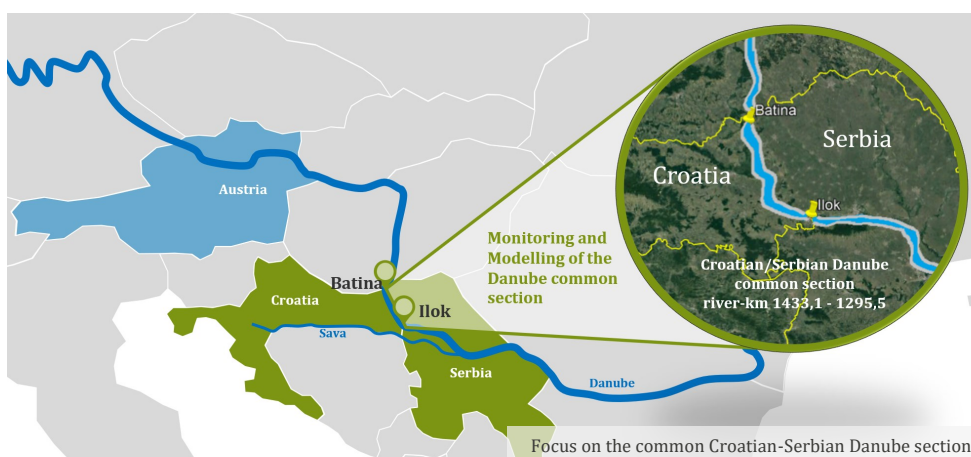
The methodologies proposed for inventory of biodiversity components were defined in cooperation with national and international experts and aligned with methodologies provided by the national authorities responsible for NATURA 2000 or Water Framework Directive.

To ensure the completeness of sampled data, biodiversity monitoring activities will be carried out in different relevant

seasons. The importance will be given to NATURA 2000 and endangered species. The monitoring activities will be carried out by external experts selected in a EU-wide open tender procedure.

As the first step, the **Monitoring plan** was prepared in cooperation with national experts in the field of nature protection and water management in Croatia and Serbia and with the support and valuable feedback from the project's Stakeholders Forum. This monitoring plan created a basis for the detailed Terms of Reference. The actual field monitoring activities are expected to start in 2022.

Lidija Hubalek, Croatian Ministry of the Sea, Transport and Infrastructure



Modelling and Multi-Criteria Analysis

In 2014, 17 critical sectors were identified on the Croatian-Serbian common stretch of the Danube River. However, as the hydro-morphological conditions change constantly, these sectors need to be newly examined, modelled and prioritised. The redefined bottlenecks, for which alternative solutions will be elaborated, will be agreed among technical experts from both countries and Stakeholders Forum.

Once the bottlenecks are determined, the multi-criteria analysis and its parameters (criteria and weights) are to be agreed upon in the Stakeholders Forum and applied to each modelled option. Criteria will consider navigational, environmental, technical and financial aspects.

Alternative solutions, including "do nothing", for each agreed bottleneck will be defined and modelled, whereas sufficient amount of model simulations will be

performed in order to reach the quality results acceptable for all involved parties.

As of today, there are no preferred solutions for future waterway management or river engineering measures on the common Danube section. The desired goal is to develop sustainable waterway management approaches and support future integrated planning processes through defining the variants that allow the achievement of *good navigation status*, *good ecological status* and *favourable conservation status* at the same time.

The **Concept for hydraulic and morphological modelling** was elaborated. It creates the basis a European-wide public procurement. The actual modelling activities are expected to start in 2022.

Ivan Mitrovic, Serbian Ministry of Construction, Transport and Infrastructure

Stakeholders Forum

The involvement of relevant stakeholders is one of the essential requirements of integrated planning process set by the Joint Statement on Inland Navigation and Environmental Sustainability in the Danube River Basin.

The Stakeholders Forum was set up in line with the commitment of involved waterway authorities to apply sustainable waterway management approaches, and to learn from best practice examples in implementation of similar projects on the Danube, like those carried out in Austria or Serbia.

The kick-off meeting of the cross-border Stakeholders Forum was held in virtual setting on 12 April 2021.

The basic principles of the forum include: voluntary and free of charge membership, mutual acknowledgment and respect for different standpoints of forum members, and transparency of work.

The Stakeholders Forum is a multi-disciplinary body that brings together interests of navigation, environmental protection and nature conservation, industry and archaeology. This interdisciplinary cooperation is the basis for

creating long-term sustainable solutions. The Forum is an advisory body and provides a platform for all stakeholders to express their views on the project activities. All stakeholders' views are respected and feed into recommendations for further solutions, regardless of what those solutions may look like in the future.

Given the greater importance of the work done and the diversity of stakeholders from different countries, the documents are produced in English and can be downloaded from the [Forum website](#).

The Forum serves as well as a platform for exchanging information about planned or ongoing projects and initiatives relevant to the region. Thus, the presentation of the "River Training structures in the Danube as mapped for the LifelineMDD project" was done and the participants also received information about the [World's First 5-Country Biosphere Reserve Mura-Drava-Danube](#), approved on 15 September 2021 by the UNESCO's Man and the Biosphere (MAB) Programme.

Ivan Mitrovic, Serbian Ministry of Construction, Transport and Infrastructure



Danube upstream Ilok from the Serbian bank © Georg Rast

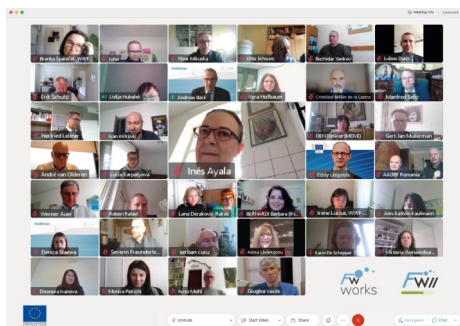
Advisory Committee

The Advisory Committee acts as a consultative body, validating the objectives, work and results of the project.

It consists of organisations, which provided the Letter of Support or Letter of Intent to follow the projects *Preparing FAIRway 2 works in the Rhine-Danube Corridor* and *FAIRway works! in the Rhine-Danube Corridor* (our sibling project).

The members include representatives from inland navigation sector, inland ports and shipping industry, branch organisations, as well as environmental NGOs. European Commission representatives are also invited to participate.

The first meeting was held on 9 March 2021 in a virtual setting. The next meeting is planned for mid-2022.



First Advisory Committee Meeting © viadonau

Members

Stakeholder Forum

- International Commission for the Protection of the Danube River (ICPDR)
- Croatian Institute for Environmental and Nature (Croatia)
- Institute for Nature Protection of Vojvodina Province (Serbia)
- Danube Commission
- Aqua et Archaeologica (Serbia)
- Association for Nature and Environment Protection Green Osijek (Croatia)
- Sport Fishing Association Vukovar (Croatia)
- Bird Protection and Study Society of Serbia
- Society for Birds and Nature Protection (Croatia)
- Public Institution "Kopacki Rit Nature Park" (Croatia)
- World Wide Fund for Nature Adria
- World Wide Fund Austria

Observers

Stakeholder Forum

- Ministry of Agriculture, Forestry & Water Management – Waters Directorate (Serbia)
- Croatian Ministry of Economy and Sustainable Development
- Austrian Environmental Agency
- Austrian Man and Biosphere (MAB) UNESCO Committee
- Croatian Waters

Status: December 2021

Information

Meeting documentation, presentations, documents and other important information are available for download on the [Stakeholders Forum website](#).

Interested organisations are welcome to participate in the work of the Stakeholders Forum.

Contact

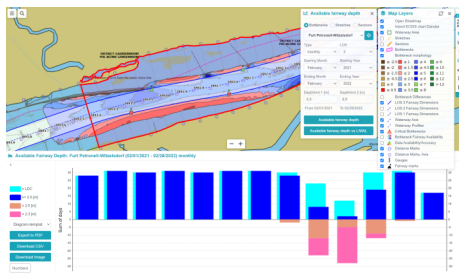
Ivan Mitrovic (chairperson)
imitrovic@plovput.gov.rs

WAMOS 2.0

Specification of version 2.0 of the Waterway Monitoring System

In the EU-funded *FAIRway Danube* project, several Danube riparian countries, including Austria, Croatia and Serbia, have taken a first step towards unifying and merging national waterway data into a transnational Waterway Monitoring System (WAMOS). Making this data available through one common platform, WAMOS supports the Danube waterway managers in aligning national fairway improvement strategies and facilitates their reporting obligations.

Within the scope of *Preparing FAIRway 2*, the concept for functional upgrades of WAMOS is being developed. The new functionalities are intended to improve the system's analytical capabilities, the user friendliness and efficiency of operations for all users by simplification and automation of processes. WAMOS 2.0 will integrate new data linked to the physical status of the waterway, like bridge clearance, discharge, or AIS Aids to Navigation. By combining this data with, for example, traffic analysis, WAMOS 2.0 can help waterway managers to better understand the specific use of a waterway, in particular in shallow water areas or narrow sections. WAMOS can also be



River morphology and bar chart of fairway depth, Bottleneck Petronell-Witzelsdorf, Austria ©viadonau

used in the future to monitor the rehabilitation and maintenance measures.

WAMOS currently uses data from different sources like the D4D-Portal, national WAMS (Waterway Asset Management System), or national River Information Services (RIS). In the future new data sources are being considered, such as the newly developed EuRIS system (www.riscomex.eu), which will provide fairway, infrastructure and traffic data.

Preparations for further upgrades of WAMOS 2.0 will be completed beginning 2023. The actual implementation takes place in subsequent projects.

Susanne Bachl, viadonau

Mooring Infrastructure

Assessment, Requirements and Documentation for Mooring Places



Mooring place in Bavaria, Germany © viadonau

Publicly available mooring infrastructure provides essential services for the inland waterway transport sector. It enables crew members to comply to regulations on working and resting times, while offering safe anchorage during emergencies, in case repairs are required, to conduct crew changes, to restock on supplies, as well as for medical or leisure purposes.

The availability and quality of public mooring places tends to be very heterogeneous along the Rhine-Danube corridor. Both, the quality and quantity along the Danube is usually lower than in the Western realm of that waterway network.

This Action has the aim to prepare a methodology to harmonise the upgrade

and/or construction of mooring places infrastructure along the Danube and the Sava.

In a first step, the current situation and future needs for mooring infrastructure in the beneficiary countries Austria, Croatia and Serbia were analysed. The results are being integrated into further assessments and studies. These serve as planning documents for the possible construction and/or upgrade of public mooring places in the project countries and will consider the feasibility for future investments.

The prepared methodology can be used for all riparian Danube countries in the future.

Deniza Staewa, viadonau



Vessel docking at mooring place © viadonau

Project Partners

Austrian Beneficiary and Coordinator of the Action

Federal Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology

www.bmk.gv.at

Austrian Implementing Body

via donau - Österreichische Wasserstraßen-Gesellschaft mbH

www.viadonau.org

Croatian Beneficiary

Ministry of the Sea, Transport and Infrastructure

www.mmpi.gov.hr

Croatian Implementing Body

Port Authority of Vukovar

www.luv.hr

Serbian Beneficiary

Ministry of Construction, Transport and Infrastructure

www.mgsi.gov.rs



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