



Lifeline MDD - cross-sectoral partnership for ecological connectivity in the TBR MDD

The Mura, Drava and Danube form one of the most valuable river corridors in the Danube Basin, a lifeline for people, species and habitats. Flowing more than 700 kilometres and connecting an area of 930,000 hectares stretching across Austria, Slovenia, Hungary, Croatia and Serbia, they connect a unique landscape of the **UNESCO** 5-country Biosphere Reserve Mura-Drava-Danube (TBR MDD). Designated on September 15th this year, the area has now become the largest riverine protected area in Europe. However, connectivity within the corridor has been reduced due to human-made changes to rivers and their natural processes. Thus, the main goal of lifelineMDD is to improve ecological connectivity through a cross-sectoral partnership and the implementation of restoration measures.

Over three very intensive days, between 24-26th of November, the mid-term conference of project lifelineMDD took place, online, with the participation of over 100 registered guests. The conference schedule spread over three days, including one and a half days of scientific conference (the first, focused on the UNESCO 5-country Biosphere Reserve Mura-Drava-Danube – TBR MDD), and, on two half-days, a workshop for stakeholder involvement and management of the Lower Mura Valley Biosphere Reserve (Austria).

Scientific project partners (and conference co-host) BOKU (University of Natural resources and Life Sciences, Vienna), IRSNC (Institute of the Republic of Slovenia for Nature Conservation), INCVP (Institute for Nature Conservation of Vojvodina province, Serbia), and co-host and project lead WWF Austria presented their first

results of the studies conducted within the TBR MDD on biotic elements and abiotic framework conditions. The first results of the field survey and analysis of collected data on fish and river birds in the 5-country river corridor were presented. Also, preliminary results of the studies on sediment balance and sediment mobilization were presented. A combined hydrology and climate change study focused on the river system formed by the Mura, Drava, and Danube. Its first results have shown wide-ranging changes to be expected throughout the biosphere reserve if no action is taken.

In the frame of two interesting panel discussions, combined results of the studies were jointly analysed further and valuable takeaways were proposed. Most importantly, the urgent need for joint action towards integrated restoration was emphasized, as well as the message of hope: there is plenty of evidence, that river restoration can be very successful, therefore there is the potential for recovery of the rivers if targeted restoration action is taken towards their improvement.

Partners IRSNC co-hosted over two half days a workshop dedicated to building bridges, i.e. stakeholder involvement for the management of the biosphere reserve, as well as the elaboration of a management Plan for the Lower Mura valley Biosphere reserve in Austria. In spite of the online setting, lively discussions took place among a varied group of different stakeholders. Results and outcomes of the group works will be further processed and two further workshops will be held to complete the process.





Day#1 Scientific conference Wednesday, November 24th 2021

Welcome to the conference

Mario Klösch - University Natural Resources and Life Sciences; Kerstin Böck – WWF Austria, project manager lifelineMDD; Patricia Schelle – WWF International Freshwater Programme

The bigger picture: the 5-country Biosphere Reserve Mura-Drava-Danube (TBR MDD) - A journey through space and time (slides)

Arno Mohl, WWF Austria

lifelineMDD - Where we are headed to (slides)

Kerstin Böck, WWF Austria

Keynote lecture: Balanced sediment budget and morphodynamics as preconditions for habitat quality (<u>slides</u>)

Helmut Habersack, University of Natural Resources and Life Sciences

Keynote lecture: Stressors that alter fish communities in large rivers (slides)Marina Piria, University of Zagreb, Faculty of Agriculture

Bird study - Presentation of results as a basis for needs for action (slides)Monika Podgorelec, Institute for Nature Protection of the Republic of Slovenia

Fish study - Presentation of results as a basis for needs for action (slides)Pablo Rauch, University of Natural Resources and Life Sciences

Sediment balance and transport study - Presentation of results as a basis for needs for action (slides)

Mario Klösch, University of Natural Resources and Life Studies

Panel discussion regarding findings from biotic studies within the 5-country Biosphere Reserve Mura-Drava-Danube

Monika Podgorelec, Pablo Rauch, Helmut Habersack, Arno Mohl

Construction site of Hydraulic Engineering Laboratory - Introduction and Online field trip

Helmut Habersack, HE Team BOKU

Speakers of Day #1

Arno Mohl is a landscape architect and conservation expert who founded and leads the "Mura-Drava-Danube" programme at WWF Austria and has been successfully fighting for the protection of the "Amazon of Europe" for over 30 years now.

Kerstin Böck is a river management expert, conservationist within WWF Austria's Mura-Drava-Danube programme and the project manager of project lifeline MDD.

Helmut Habersack: Full Professor at University of Natural Resources and Life Sciences, Vienna (BOKU) at the Institute of Hydraulic Engineering and River Research. UNESCO Chair on Integrated River Research and Management; President of the International Commission for the Hydrology of the Rhine Basin (CHR)

Marina Piria. Full Professor at University of Zagreb - Faculty of Agriculture (AGR), Division for Animal Sciences Department of Fisheries, Apiculture, Wildlife management and special Zoology.

Monika Podgorelec works at the Institute of the Republic of Slovenia, for Nature Conservation. For the last five years, she has been dealing with the topic of preserving species-rich grasslands and, prior to that, she mostly conducted a census of national monitoring of bats throughout Slovenia.

Pablo Rauch is working as a research assistant at the Institute of Hydrobiology and Aquatic Ecosystem Management at BOKU University in Vienna. He has a strong focus on applied fish ecological projects and coordinated the sampling campaign in the Mura and Drava for the assessment of the fish population status report.

Mario Klösch is lecturer and researcher at the Institute of Hydraulic Engineering and River Research (IWA) at the University of Natural Resources and Life Sciences (BOKU), Vienna. He is a river morphologist, working on river restoration, bedload transport, interactions of vegetation with sediment transport and interested in linkages between morphodynamics and habitat provision



Graphical recordings of Day #1 scientific conference











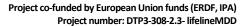
Graphical recordings of Day #1 scientific conference













Day#2 Scientific conference & Workshop Thursday, November 25th 2021

Recap of Day#1 and Introduction to Scientific Studies: River Training Structures and Historical Mapping of the TBR MDD

Kerstin Böck, WWF Austria

River training structures study & Historical mapping of TBR MDD - Presentation of results as a basis for needs for action (slides)

Ulrich Schwarz, FLUVIUS

Sediment mobilization study - Presentation of results as a basis for needs for action (slides)

Saša Sobočan - Pomgrad

Climate change and Hydrology study - Presentation of results as a basis for needs for action (slides Nadeem & slides Zlatanović)

Nikola Zlatanović – Hydraulic engineering expert; Imran Nadeem – Climate change expert

Virtual visit of the Mura Hydraulic Model (slides)

Mario Klösch, BOKU HE Team

Synthesis Report on science-based needs for action – Outlook (<u>slides Böck</u> & <u>slides</u> <u>Schwarz</u>)

Ulrich Schwarz, Kerstin Böck

Panel discussion regarding findings from abiotic studies within the 5-country Biosphere Reserve Mura-Drava-Danube

Ulrich Schwarz, Saša Sobočan, Helmut Habersack, Mario Klösch, Nikola Zlatanović, Imran Nadeem

Speakers of Day #2

Ulrich Schwarz is geographer and working since over 20 years in the Danube River Basin, namely along the Mura, Drava and Danube rivers in the MDD TBR in the field of hydromorphology, floodplain ecology and river restoration. His consultancy named FLUVIUS is based in Vienna.

Saša Sobočan, graduate economic engineer of civil engineering is working as project manager for LifelineMDD in the private construction company Pomgrad VGP. POMGRAD VGP as partners of the project bring important local knowledge of water management, including practical construction knowledge to the partnership.

Imran Nadeem is an atmospheric physicist and computational climate scientist. He is expert in high-resolution regional climate modeling, climate change and its impacts. He is currently working with IIASA and BOKU.

Nikola Zlatanović is a hydrology and hydraulics engineer, specializing in practical applications of hydrology including hydrologic and hydraulic modelling of river basins, risk mapping and application of remote sensing products.



Graphical recordings of Day #2 scientific conference





Graphical recordings of Day #2 scientific conference





Day#2 Workshop: Building the Bridge - between transboundary cooperation and national management Thursday, November 25th 2021

Start of Workshop "Building the Bridge - between transboundary cooperation and national management"

Daniel Zollner, Institute E.C.O., Kerstin Böck, Patricia Schelle

Presentation: The TBR MDD as a unique learning site for transboundary stakeholder involvement (slides)

Daniel Zollner, Institute E.C.O.

Stakeholder platforms for sustainable cooperation: Presentation of the outcomes of stakeholder mapping and analysis (<u>slides</u>)

Urška Dolinar, Institute Iskriva

Keynote lecture: Challenges and Opportunities in Transboundary Cooperation – Examples from the German-French Biosphere Reserve Palatinate Forest and Northern Vosges (slides)

Stefanie Ofer, Palatinate Forest-North Vosges Biosphere Reserve, Germany

Interactive brainstorming session

- Needs and proposals for stakeholder cooperation in TBR MDD—In-depth analysis of stakeholder mapping

Institute Iskriva and E.C.O.

Speakers of Day#2 Workshop: Building the bridge between transboundary cooperation and national management

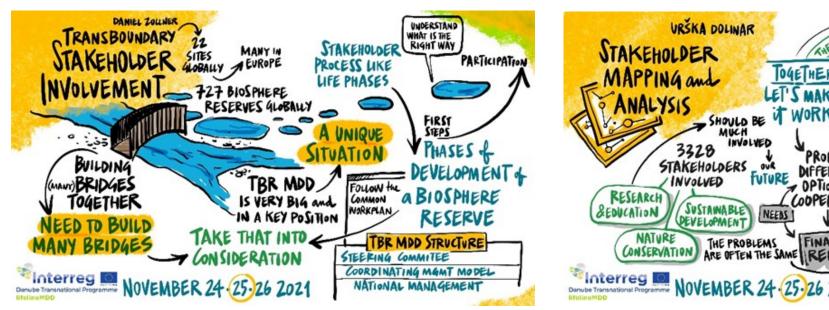
Daniel Zollner is Head of the sustainability team at ECO Institute for Ecology, Klagenfurt, a landscape planner, farmer and responsible for the participatory development of model regions and protected areas. Together with this colleague Lisa Wolf he also led the coordination of the 5-country nomination form for the TBR MDD.

Urška Dolinar is the director of Iskriva, Institute for Development of Local Potentials in Slovenia, a regional development and tourism expert, and the project manager of applied projects in the TBR MDD: Amazon of Europe Bike trail and Amazing Amazon of Europe.

Stefanie Ofer has been working for the German-French Biosphere Reserve Palatinate Forest and Northern Vosges since 2017 and is a public relations and communication as well as an international affairs officer. She has a Bachelor's degree in Romance Studies and Modern History from the University of Mannheim and a Master's degree from the UNESCO Chair for World Heritage Studies (BTU Cottbus).



Graphical recordings of Day #2 workshop









Day#3 Workshop: Building the Bridge - between transboundary cooperation and national management Friday, November 26th 2021

Elaboration of a Management Plan for the Lower Mura Biosphere Reserve $Lisa\ Wolf$

"Pulling the strings together" - Communication, Cooperation, Objectives,
Activities and Management
Lisa Wolf

Joint agreement/Flyer on the main fields of activity for the management of the TBR MDD

Lisa Wolf

Closing of Workshop and Conference Kerstin Böck, Iskriva, E.C.O, Mario Klösch

Speaker and moderator of Day#3 Workshop: Building the bridge between transboundary cooperation and national management

Lisa Wolf: Lisa Wolf is Deputy head of the sustainability team at ECO Institute for Ecology, Klagenfurt. She is geographer specialised in collaborative planning of conservation areas and responsible for tourism analyses, geography planning and the implementation of collaborative online tools.



