

ICPDR IKSD

International Commission
for the Protection
of the Danube River

Internationale Kommission
zum Schutz der Donau

Shared waters – joint responsibilities

ICPDR Annual Report 2021







2021 marked a unique era of cooperation throughout the Danube River Basin. The year was fueled by the lessons learned in 2019 and 2020 during the ongoing global pandemic, which has required and continues to require special measures at all levels of management throughout the Basin. However, the ICPDR was able to execute its functions and duties without any negative impact. The organisation continues to demonstrate its ability to mobilize and coordinate national expertise and stakeholder involvement, as well as the broad community of observers within river basin development.

The ICPDR successfully updated and implemented the 2021 Danube River Basin Management Plan and Flood Risk Management Plan Updates. I am also personally proud of the fact that Montenegrin participation in the development and contribution to the content of both plans increased significantly in comparison with the Plans' updates six years ago. For the completion of these two important publications, stakeholders, interested parties and the public from across the Danube were warmly invited to contribute their input to the Public Consultation process. On behalf of the ICPDR, I want to thank both authors and contributors for taking the time to constructive and valuable input to both plans. This participation and involvement is of huge importance for the work of the ICPDR. These updates offer a form of renewal for the ICPDR and rich and comprehensive information about water management issues for the most international river basin in the world.

Included among our many highlights in 2021, are the return of many in-person events, such as the Danube Art Master and Danube Day activities throughout the Danube region.

Also, 2021 saw the completion of the fourth Joint Danube Survey (JDS4) in collaboration with dozens of scientists and laboratories throughout the Danube River Basin and Europe in general.

Coordinated via a newly developed online back-end system, it was the world's most comprehensive river monitoring survey. The survey provided an up-to-date and comprehensive picture of the status of the Danube River Basin, including tributaries, surface water bodies, and groundwater alongside the Danube River.

While COVID-19 restrictions heavily influenced the Montenegrin Presidency, I am proud to see that our 2021 Presidency priorities were accomplished successfully despite the pandemic situation in the Danube Basin. This Presidency gave Montenegro a solid incentive for the work and activities within the ICPDR. As ICPDR President, I had the privilege to lead this development process during 2021.

This Annual Report depicts the broad spectrum of ICPDR activities during 2021. It illustrates the ICPDR's ever-broadening commitment as needed by the multi-functional and multi-faceted nature of the Danube River itself. The ICPDR truly remains a beacon of international river basin management and a champion of transboundary cooperation.

I wish to convey my appreciation for the excellent cooperation and support I experienced at all levels during my term, particularly from member countries and their governments, and last but not least, by the ICPDR Secretariat.

Finally, I wish the Romanian Presidency all success in taking forward the ICPDR agenda for cleaner, healthier and safer waters in 2022.



Momčilo Blagojevič
ICPDR President 2021

ICPDR highlights in 2021

While the ICPDR worked through the ongoing challenges caused by the COVID-19 pandemic, the ICPDR's activities throughout 2021 were still able to boast major developments in our vision for the Danube River Basin. The finalization of JDS4's results and DRBMP & DFRMP Updates 2021 took top priority.

The following highlights are just a few from the multitude of activities carried out by the ICPDR in the Danube River Basin in 2021:

- In collaboration with dozens of scientists and laboratories throughout the DRB and Europe in general, 2021 saw the completion of the [JDS4](#) (the fourth Joint Danube Survey). It is the [most comprehensive river monitoring survey in the world](#). Coordinated via a newly developed online back-end system, the survey included ground-breaking methodologies for eDNA monitoring and target and non-target screening of Danube River Basin Specific Pollutants.

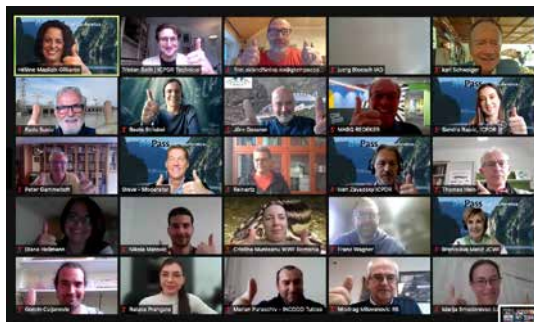
The Danube River Basin Management Plan & Danube Flood Risk Management Plan Updates 2021 were concluded. Both management plans were developed with extensive efforts and commitment from ICPDR Expert and Task Groups including continuous data collection via DanubeGIS and drafting contributions to the various chapters.

- The ICPDR organised a [Hydropower Workshop](#).
- The [2021 Joint Statement Meeting](#) was organised by the ICPDR.
- 2021 saw the [MEASURES](#) final Conference. Due to the COVID-19 pandemic, the [We Pass project](#) was given an extension and concluded this year. Additionally, the [We Pass 2 project](#) was commissioned estimating completion in March 2024.
- The ICPDR finalized and published the [Guidance document on sustainable agriculture](#) along with a policy paper. Moreover, a recommendation paper on [sustainable wastewater management](#) was also released.



Joint Danube Survey (JDS)

The key purpose of Joint Danube Surveys (JDS) is to produce reliable and comparable information on carefully selected elements of water quality for the length of the Danube River, including its major tributaries. Three Joint Danube Surveys have previously been conducted, in 2001, 2007, and 2013. The fourth of its kind, JDS4 was launched in June 2019 at sampling sites in 13 countries across the Danube River Basin and completed in 2021.



We Pass project

We Pass, the project focusing on preserving and re-establishing fish migration routes in the Danube River Basin held its Final Conference online via Zoom on 17th & 18th November 2021. The project's aims were largely to focus on the preservation and re-establishment of endangered fish species' migration routes in the Danube River, its tributaries, and specifically at the Iron Gates dams located between Romania and Serbia.



Policy Paper

Agriculture is an important component of the economy in many Danube countries. In 2021, the ICPDR published a Guidance Document on Sustainable Agriculture, along with a Policy Paper.



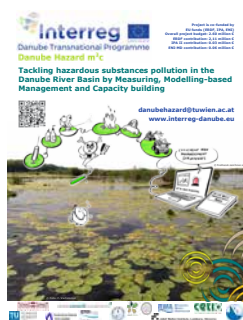
- The **DANUBE HAZARD m3c project**, funded by the Danube Transnational Programme, kicked-off in July 2020. The project aims to achieve durable and effective transnational control and reduction of hazardous substances water pollution. The interim outcomes of the modelling work provided direct inputs to the DRBMP Update 2021.
- In 2021, the **APC EG** conducted two tests on the Danube Accident Emergency Warning System (AEWS). The tests obtained positive results with active Principal International Centres (PIAC) participation and confirmed that the system is working as expected. The ICPDR published a recommendation paper on the Tailings Management Facilities (TMF) based on the outcomes of the Danube TMF project.
- The **18th edition of Danube Day** took place in 2021. This year saw the return of many in person events after two years of COVID-19 related restrictions. The **Danube Art Master 2021 competition** was slightly delayed but results of the international competition could be announced in March.
- In the fourth year of the **ICPDR's social media campaign**, the “Country Takeover Week” campaign continued and general activity showed with a steady positive increase in followers across all platforms.

The ICPDR also provided participation and partnership in important activities and events both in the Danube River Basin.

- The **28th ICPDR Tisza Group meeting** was held online. During the meeting, project proposals for the next call of the Danube Transnational Programme and potential funding sources were discussed.
- The **2nd Sava RBM Plan** is progressing with activities performed in accordance with the accepted work plan. Preliminary maps have already been prepared and the 2nd Sava River Basin Management Plan is scheduled to be ready for adoption in 2022.

Danube Day Activities

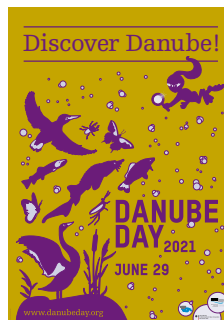
Danube Day 2021 marked the 18th anniversary of the event, it also saw the return of several family-friendly on-site events compared to the purely online Danube Day in 2020. Activities took place in Bulgaria, Slovenia, Austria, Serbia, Romania, Hungary, Slovakia, the Czech Republic, Moldova, Ukraine, Germany, Croatia, and Bosnia-Herzegovina.



Interreg DANUBE HAZARD m3c is a highly important activity towards managing hazardous substance pollution in the DRB. The project aims to achieve durable and effective control and reduce hazardous substance water pollution.



Danube Art Master Competition 2021
In the “art” category of the Danube Art Master competition, the winning work was Fish Lanterns made by Class 5 and 6 of Montessori Mittelschule in Vilshofen, Germany (Juniors category). The competition is an opportunity for the children of the Danube River Basin to consider and discover the health of their local rivers and a moment to reflect on how they wish to help preserve these waters for the future.



Danube Day 2021
Held annually, Danube Day celebrates the Danube and the rivers that flow into it and their vital role in providing water, food, power, recreation, and livelihood. The day also commemorates the anniversary of the signing of the Danube River Protection Convention in Sofia, Bulgaria, in 1994. For Danube Day 2021, we invited more than eighty million people in the 14 Danube countries to celebrate the day, learn about the waters, experience the river, and #DiscoverDanube.



Working Together: the ICPDR's operational and institutional framework

Since its establishment in 1998, the International Commission for the Protection of the Danube River has brought together representatives from the highest ministerial levels, technical experts, members of civil society, and the scientific community and works towards a better future for the Danube and its tributaries.

The ICPDR is the largest international body of European river basin management experts. Its mission is to promote and coordinate sustainable river and water management methods for the benefit of all citizens of the Danube River Basin.

Structure of the ICPDR

On 29 June 1994, Danube countries came together and signed the [Danube River Protection Convention \(DRPC\)](#), coming into force in October 1998. Since then, the ICPDR has served as a forum for coordination and cooperation on fundamental water management issues, taking all appropriate legal, administrative, and technical measures to maintain and improve the quality of the Danube River Basin and its tributaries. The ICPDR is made up of 15 Contracting Parties: Austria, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Germany, Hungary, Moldova, Montenegro, Romania, Serbia, Slovakia, Slovenia, Ukraine, and the European Commission.

The work of the ICPDR is guided by two group meetings, an [Ordinary Meeting](#), which establishes policy and strategy, and a [Standing Working Group](#), which provides guidance and prepares key decisions. Working alongside these are Technical Expert Groups, Task Groups, and representatives of stakeholder groups that provide the scientific and technical basis for ICPDR's work.

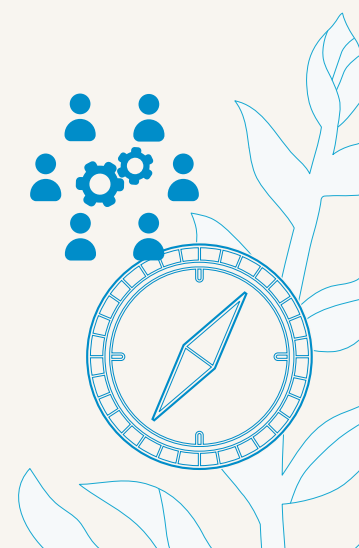
[Expert groups \(EG\)](#) are one of the most active and vital parts of the ICPDR structure. They assist in meeting the requirements specified under the DRPC and work along with the implementation of the [EU Water Framework Directive \(WFD\)](#) and the [EU Floods Directive \(FD\)](#).

There are currently 7 expert groups:

- River Basin Management Expert Group (RBM EG)
- Pressures and Measures Expert Group (PM EG)
- Monitoring and Assessment Expert Group (MA EG)
- Accident Prevention and Control Expert Group (APC EG)
- Flood Protection Expert Group (FP EG)
- Information Management and GIS Expert Group (IMGIS EG)
- Public Participation Expert Group (PP EG)

List of Expert Group Chairpersons

Group Name	Name	Nominated by	Organisation
RBM EG	Jane Korck	Germany	LFU Bayern
RBM EG	Daniela Buzica	European Union	EU, DG Environment
PM EG	Elena Tuchi	Romania	Romanian Waters
MA EG	Franz Wagner	Austria	BMLRT
APC EG	Iurii Nabyvanets	Ukraine	Ukrainian Hydrometeorological Institute
APC EG	Janez Polajnar	Slovenia	Slovenian Environment Agency
FP EG	Clemens Neuhold	Austria	BMLRT
IMGIS EG	Dragana Ninković	Serbia	Jaroslav Černi Water Institute
PP EG	Susanne Brandstetter	Austria	BMLRT





Task groups were established under the responsibility of the permanent expert groups, and they are called upon to provide insights on specific tasks. They consist of delegates from existing expert bodies and additional affiliated experts and specialists.

There are currently 4 Task Groups:

- Hydromorphology Task Group (HYMO TG)
- Economics Task Group (ECON TG)
- Groundwater Task Group (GW TG)
- Nutrient Task Group (N TG)

List of Task Group Chairpersons

Economics	Cristian Rusu	Romania	Romanian Waters
Groundwater	Andreas Scheidleder	Austria	Umweltbundesamt
Hydromorphology	Petra Repnik	Slovenia	Slovenian Water Agency
Nutrient	Franz Überwimmer	Austria	Office of the Upper Austrian Government

ICPDR Observers

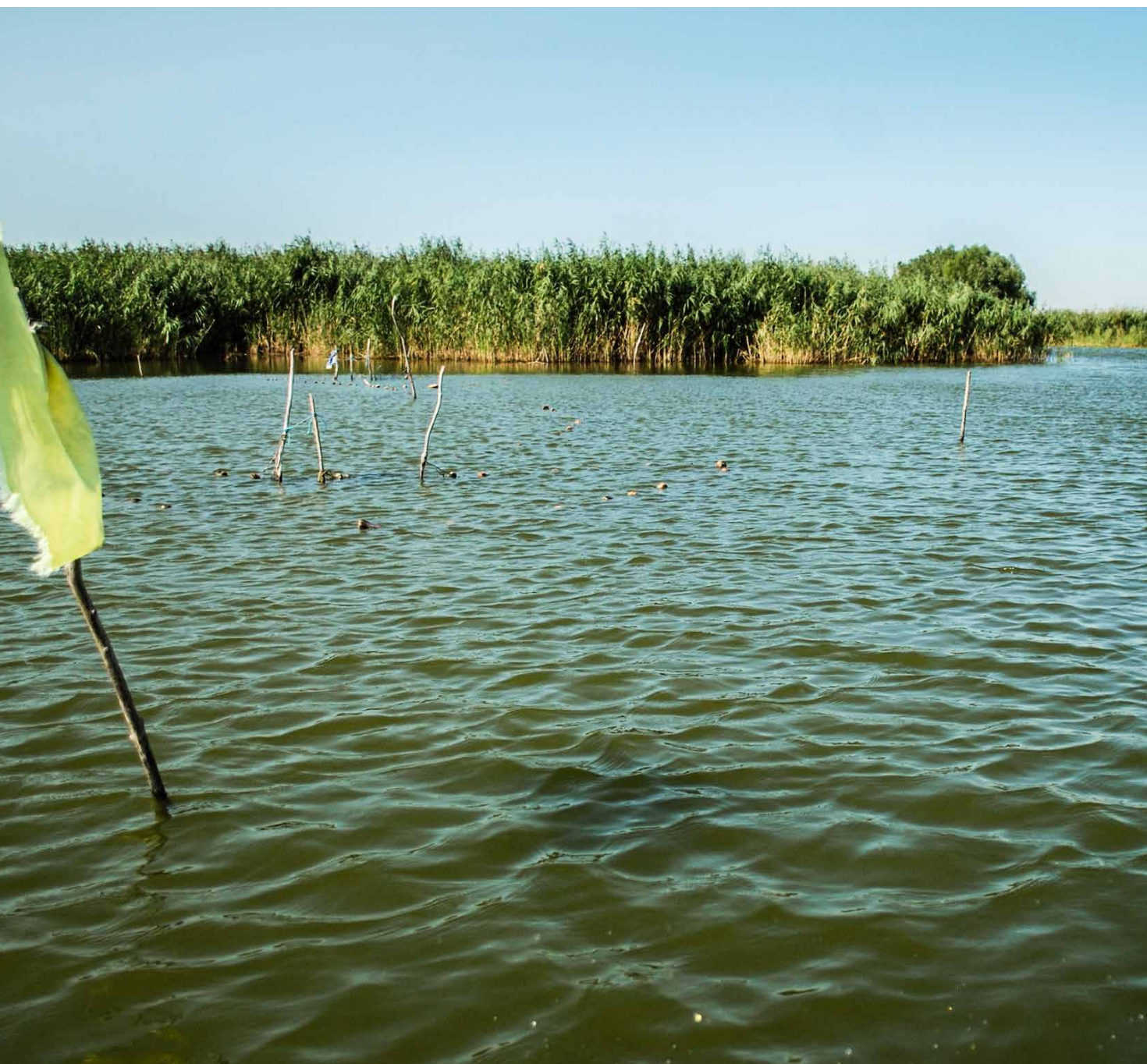
The ICPDR strongly believes that environmental protection is a community responsibility and the active involvement of the public is a core principle in sustainable water management.

So far, the following 24 organisations have taken the opportunity to become ICPDR observers:

- **Black Sea Commission (BSC)**
- **Carpathian Convention**
- **Central Dredging Association (CEDA)**
- **Danube Civil Society Forum (DCSF)**
- **Danube Competence Center (DCC)**
- **Danube Commission (DC)**
- **Danube Environmental Forum (DEF)**
- **Danubeparks**
- **Danube Sturgeon Task Force (DSTF)**
- **Danube Tourist Commission (DIE DONAU)**
- **European Anglers Alliance (EAA)**
- **European Barge Union (EBU)**
- **European Water Association (EWA)**
- **Friends of Nature International (NFI)**
- **International Association for Danube Research (IAD)**
- **Global Water Partnership (GWP-CEE)**
- **International Association of Water Service Companies in the Danube River Catchment Area (IAWD)**
- **International Hydrological Programme of the UNESCO (IHP/Danube)**
- **International Sava River Basin Commission (ISRBC)**
- **RAMSAR Convention on Wetlands**
- **Regional Environmental Center for Central and Eastern Europe (REC)**
- **VGB PowerTech e.V. (VGB)**
- **viadonau**
- **World Wide Fund for Nature – Central and Eastern Europe (WWF-CEE)**

River Basin Management: Securing a Sustainable Future for the Danube River

It is the responsibility of the River Basin Management Expert Group (RBM EG) to develop activities relevant to the implementation of the Water Framework Directive (WFD) and the development of the Danube River Basin Management Plan (DRBMP). Furthermore, the Hydromorphology Task Group (HYMO TG) and Economics Task Group (ECON TG) both report to the RBM EG.



In 2021 the RBM EG's key focus fell on finalization of the Danube River Basin Management Update 2021, representing a huge leap forward towards long-term sustainability goals for the Danube River Basin. Additionally, the group continued their efforts towards the issues of sturgeon conservation and sustainable hydropower development.

In the [DRBMP Update 2021](#) the [RBM EG](#) and several of its task groups revised and agreed to their respective chapters, annexes and maps. These Task Groups included the Hydromorphology Task Group (HYMO TG) and the Economics Task Group (ECON TG.) Along with these additions, the [RBM EG](#) and its Task Groups revised and agreed to their respective Terms of Reference and Work Programmes for 2022–2024.

Due to COVID-19 restrictions, both [HYMO TG](#) and [ECON TG meetings](#) were held online in September 2021.

The HYMO TG “GEF Danube River Basin Hydromorphology and River Restoration” project (DYNA) transferred the GEF implementing agency role from WWF to UNDP.

The first meeting of the [Nominated Water Balance Experts](#) was held online in October 2021. Later that month, lead countries together with core drafting group members organised the first meeting of the drafting core group. A draft concept for a future Danube basin wide project on a water balance was sent to the [RBM EG](#) for written procedure.

In cooperation with the Danube Commission and ISRBC the [12th Joint Statement meeting](#) was organized online by the ICPDR from 15 to 16 September 2021.

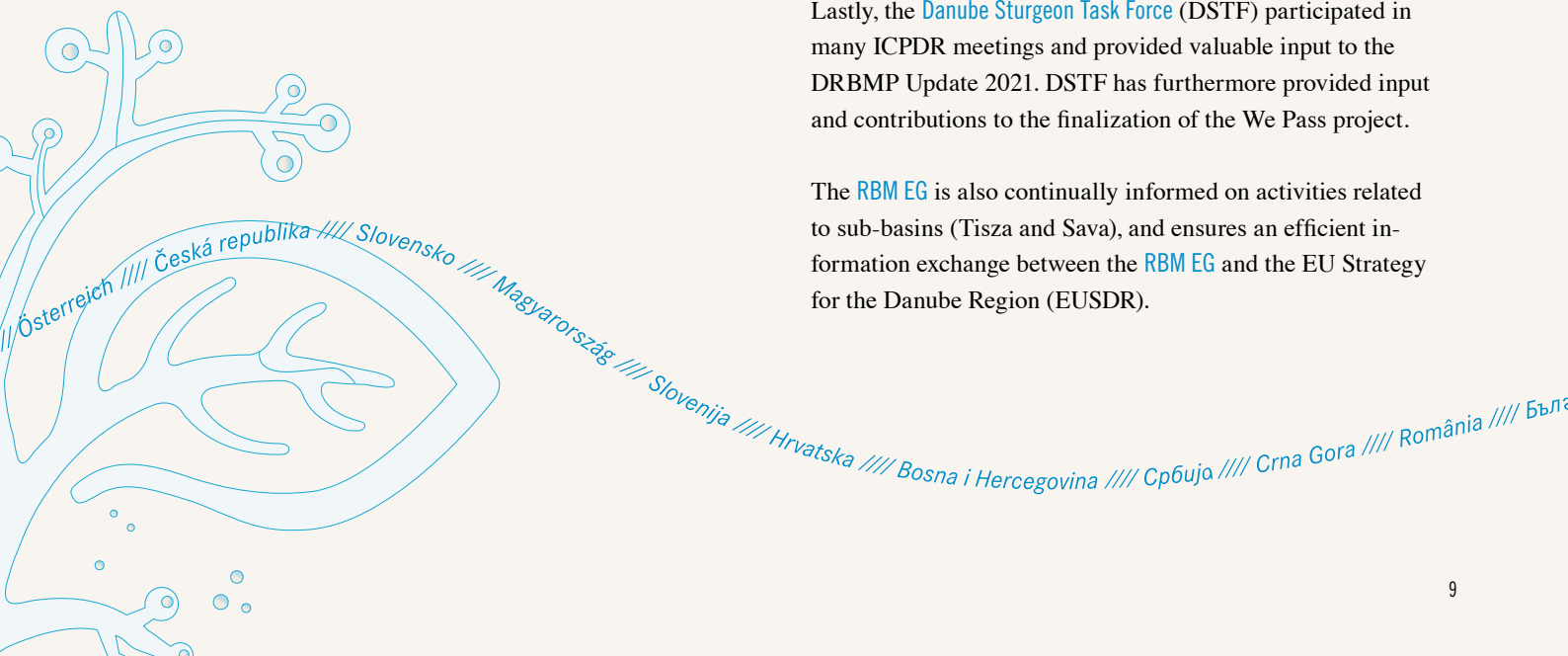
Sustainable Hydropower Development remains a central topic of the [RBM EG](#).

The Final Conference of the [We Pass Project](#) was held on 17 to 18 November 2021 as an online event. Before the finalisation of the We Pass project, the EC commissioned “Pilot Project: Making the Iron Gates Dams passable for Danube Sturgeon” (We Pass 2) in April 2021. The project is planned to be completed by March 2024. The ICPDR act as subcontractors of project lead CDM-Smith. Online inception and progress meetings took place in 2021.

Other projects in relation to the coordination of the sturgeon issue included the [MEASURES project](#), which was conducted between June 2018 and July 2021, the final results of which were incorporated in the DRBMP Update 2021.

Lastly, the [Danube Sturgeon Task Force](#) (DSTF) participated in many ICPDR meetings and provided valuable input to the DRBMP Update 2021. DSTF has furthermore provided input and contributions to the finalization of the We Pass project.

The [RBM EG](#) is also continually informed on activities related to sub-basins (Tisza and Sava), and ensures an efficient information exchange between the [RBM EG](#) and the EU Strategy for the Danube Region (EUSDR).



Pressures and Measures: Assessing Challenges and Targeting Priorities

The Pressures and Measures Expert Group (PM EG) plays a vital role in understanding environmental and other pressures facing our Danube River Basin. This understanding is essential for our long-term sustainable development – as is assessing the efficacy of proposed alleviating measures.

The PM EG contributed key data for the DRBMP Update 2021. Other highlights included the update of the MONERIS model and the on-going DANUBE HAZARD m3c project along with workshops and the publication of several guidelines and policy papers.

In summer 2021 the [PM EG](#) updated and assessed key data to the final [DRBMP Update 2021](#) on urban wastewater and industrial wastewater discharges. Along with this, the nutrient pressure assessment with the [MONERIS model](#) was accomplished in the framework of the [EU LIFE Grant](#) supporting the development of the DRBMP Update 2021. The IGB Berlin was sub-contracted to accomplish the modelling task. The final model input database was completed by early summer 2021. The final model results were incorporated into the DRBMP Update 2021 in autumn 2021.

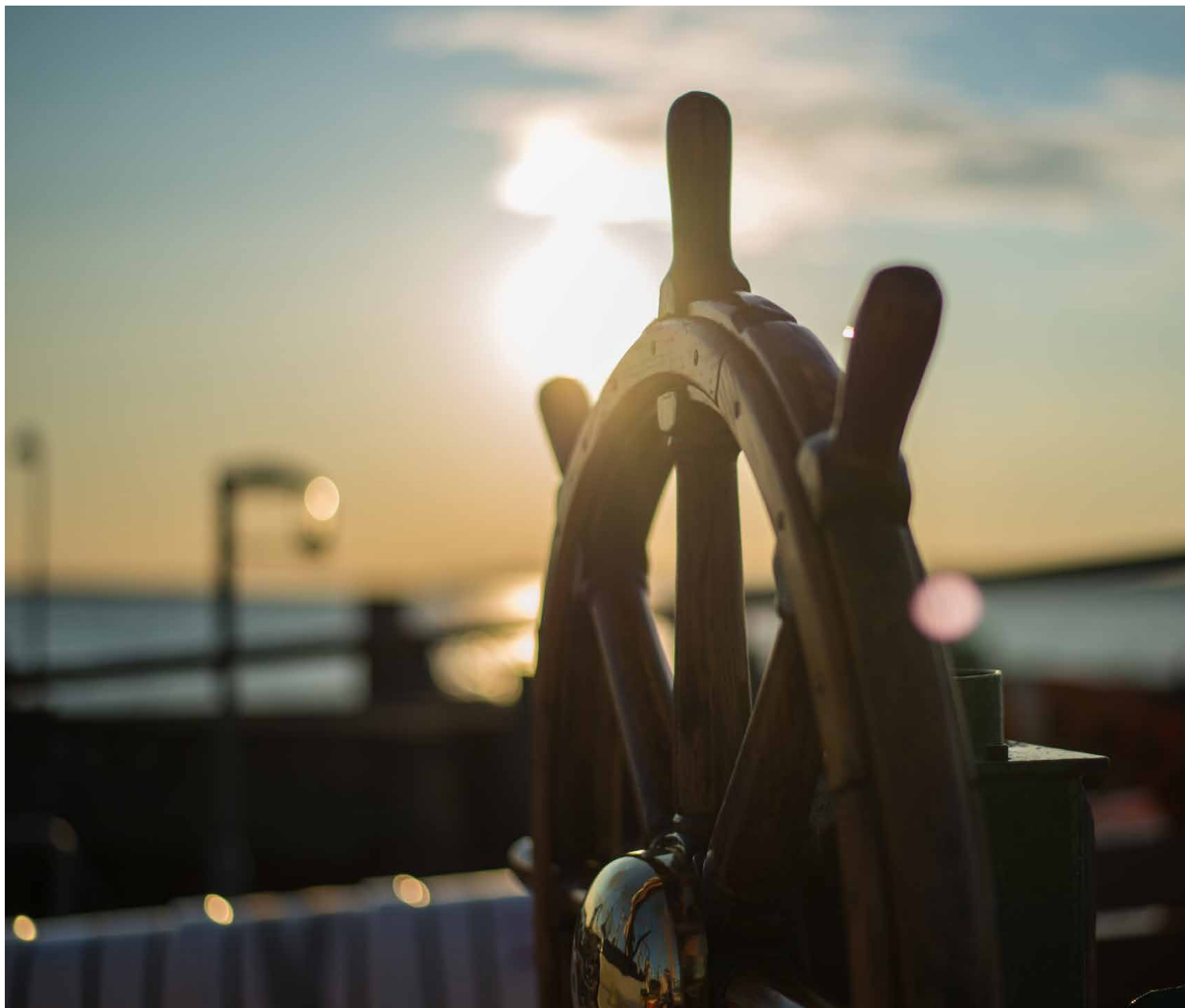
The [PM EG](#) also discussed the findings of the [JDS4](#) on the urban wastewater treatment plant (UWWTP) effluents and influents. The findings were used to characterize the chemical removal potential of the UWWTPs and the released chemicals were prioritized based on the frequency and extent of exceedance of their ecotoxicological thresholds. The results were included in the DRBMP Update 2021.

Within the framework of the [World Bank-ICPDR initiative](#), a workshop on rural wastewater management was held on 19 to 20 January 2021. The workshop focused small scale wastewater management issues emphasising on decentralized sanitation and wastewater treatment systems in rural areas and individual and low-cost solutions.

On 10 June 2021, in cooperation with the EUSDR PA4, the [Danube Water Program](#) and the [International Sava River Basin Commission](#), the ICPDR co-organized an online workshop on sewage sludge management. The main aim of the workshop, in line with the ongoing revision of the EU Sewage Sludge Directive, was to address the policy and technological aspects of sludge management in the Danube region by inviting policy makers, advisors and experts in the field.

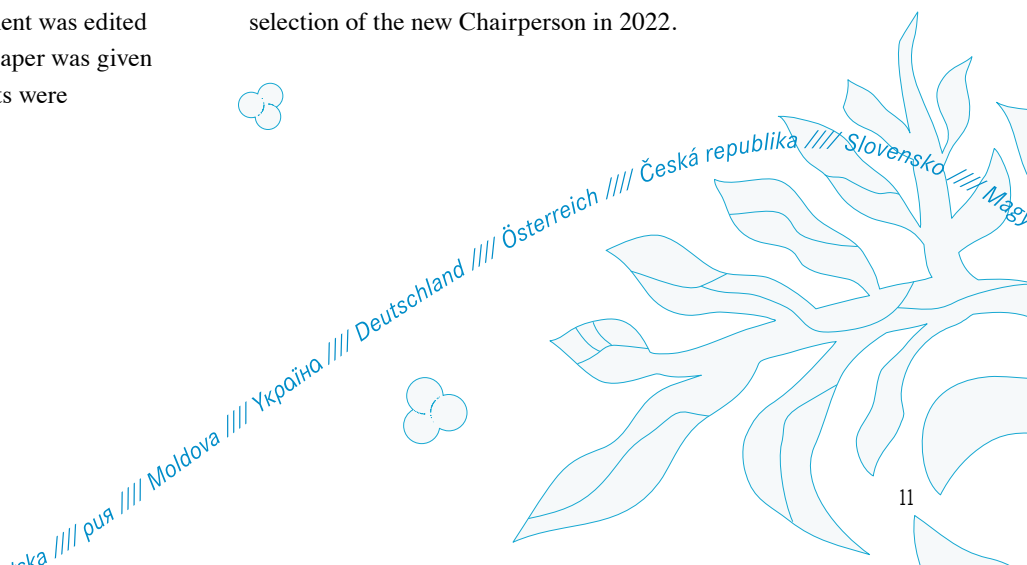
In summer 2021 the [PM EG](#) also published a recommendation paper on [sustainable wastewater management](#). The paper communicates the overall challenges, specific needs and potential solutions related to wastewater management in the Danube River Basin. Moreover, it also provides several recommendations and potential actions for national policy making to improve wastewater management.

The [DANUBE HAZARD m3c project](#), a highly important activity towards managing hazardous substance pollution in the Danube River Basin funded by the Danube Transnational Programme, has been ongoing since July 2020. The project aims to achieve durable and effective transnational control and reduction of hazardous substance water pollution. The interim outcomes of the modelling work provided direct inputs to the development of the DRBMP Update 2021 whereas the final results will be extremely useful even for the 4th DRBMP (due in 2027) and will contribute to guide the related water management activities in the DRB for years to come.



The Guidance Document on [Sustainable Agriculture](#) and the Policy Paper on Sustainable Agriculture were finalized based on the latest EU and international reports and policy developments. The Guidance Document was edited and further illustrated, whereas the policy paper was given a specific design and layout. Both documents were published in summer 2021.

Lastly, during the 35th [PM EG](#) Ms. Elena Tuchiu announced her departure as Chairperson of the [PM EG](#). Ms. Tuchiu continued her support to the [PM EG](#) and the handover process until the selection of the new Chairperson in 2022.



Monitoring and Assessment (MA EG): Quantifying Problems and Monitoring Progress

The Monitoring and Assessment Expert Group (MA EG) is responsible for all water quality and assessment issues, including the Joint Danube Survey (JDS). The group's scope covers the Trans-National Monitoring Network (TNMN) operations, including its Analytical Quality Control (AQC) programme.

Despite COVID 19 related delays, top priorities for 2021 included the DRBMP Update 2021 and the conclusion and publication of the JDS4.

The [DRBMP Update 2021](#) was revised by the [MA EG](#), with the ranking of the confidence class on chemical status maps being unified. Discussions took place on the discrepancies in the status assessment of the transboundary WBs resulting in a table produced by the Secretariat using pairs of water bodies and related remarks combined with updated [DanubeGIS data](#). Update discussions also indicated that there were structural limitations when it came to ecological potential assessment methods for heavily modified water bodies along the Danube and its tributaries. It was recommended that future activities should focus on sharing knowledge among the Danube countries on assessment methods for relevant biological communities.

The working deadline for [JDS4 scientists](#) to submit their contributions to the final manuscript of the Scientific Report was June 2020. However, due to COVID-19 outbreak restrictions – which directly impacted laboratory activities throughout Europe – more flexibility was required. Delays were expected and a contingency plan put in place, including bespoke respective deadlines for differing situations and authors, and an accelerated subsequent review process. The proof-reading process continued in January 2021, after the final formatting and format checking the [JDS4 Scientific report](#) was submitted for print. The report was made available on 31 March 2021.

The [MA EG](#) also held brainstorming sessions on JDS4 topics that would require more attention for the JDS5 with eDNA being singled out as a key topic. It is being envisaged that the monitoring of eDNA could be used for biodiversity assessments and detection of wastewater's bio-pollution.

A new [IAS](#) was declared to the Danube, the Desert false indigo (*Amorpha fruticosa*). Along with this, the monitoring of macrophytes in the riparian zone was also added into the potential program of the future JDS5.

The [Work Program 2022–2024](#) was adopted and presents the [MA EG's](#) tasks and activities for the years 2022, 2023, and 2024. To provide an overview of the whole RBM planning cycle, the plan's timetable also outlines the activities in 2025–2027. One of the main changes was the addition of a “Biodiversity” activity led by Serbia in the [MA EG](#). Together with the Work Program, the [MA EG](#) also reviewed and revised its Terms of Reference. The Terms of Reference set the scope and key principles of the work of the [MA EG](#), while detailed tasks are described in the Work Program.

The [TNMN Yearbook 2019](#) prepared by Slovakia was approved. The 2020 data on loads at Reni was produced by Romania, approved by the [MA EG](#) and ICPDR and submitted to the Black Sea Commission.

The [MA EG](#) agreed that there should be a stronger emphasis on monitoring sturgeon populations. It was decided that [sturgeon monitoring](#) be included in the upcoming JDS5 using also the molecular methods that were tested during the JDS4.

With the completion of the current river basin management cycle, an update of the Groundwater Guidance document was due. Tables and figures were updated based on information received from the countries and the Guidance was discussed by the GW TG. This guidance provides technical guide and is a living document continually updated and completed according to developments and agreements within the Ground Water Task Group.



Accident Prevention and Control Expert Group: Reducing Risks and Responding to Water Emergencies

The Accident Prevention and Control Expert Group (APC EG) focuses on testing and maintaining the Danube Accident and Emergency Warning System (Danube AEWS) and updating inventories of accident hazard sites (AHS).



In 2021 the APC EG carried out two AEWS tests and provided substantial inputs to the draft DRBMP Update 2021.

The APC EG amended the document “Alert thresholds for extraordinary water pollution in the framework of the Danube AEWS” to include the Alert Thresholds for tailings material.

Two AEWS tests were carried out, the first being on 8 April 2021. The main objective of this test was to check the functionality of the system, 24/7 operability of Principal Alert Centres (PIAC) and the basic usage of the system. The test confirmed that the system itself worked as expected without any technical issues. The second more comprehensive multinational test took place on 29 September 2021. PIAC members were asked to perform the test according to the instructions, followed by an online discussion regarding proceedings and shared experiences during the APC EG meeting. All actively participating PIACs were able to perform the tasks within the system given by the test instructions. The AEWS system was working as expected and the reactivity and connectivity to the server was smooth throughout the test.

The APC EG contributed to the DRBMP Update 2021 by providing assessments on Accident Hazard Sites (AHS) and Tailings Management Facilities (TMF) and their pollution hazard in the DRB. The results of these investigations were incorporated into the pressure assessment along with maps and annexes. Recommendations on sustainable TMF management were also added to the Joint Program of Measures, which commits Danube countries to prevent transboundary accidental pollution of surface waters.

The outcomes of the [Danube TMF project](#), supported by the German Environment Agency, provided practical tools for risk based TMF prioritization on a regional scale and allowed for detailed safety assessments at individual sites that can be applied in several countries. Apart from the technical results, the project resulted in the creation of a recommendation paper on the TMF issue. The paper provided specific recommendations for the Danube countries on how to improve the safety conditions of TMFs located in the DRB. It highlighted key issues for Danube countries regarding policy making and implementation and supporting technical work. The recommendation paper was published on the ICPDR website in summer 2021.

To further promote the results of the Danube TMF Project in the DRB and to strengthen the practical aspects of the provided technical tools, the Secretariat supported by the [APC EG](#) started preparing a follow-up project focusing on the Sava region and other downstream countries.

In close cooperation with the [EUSDR Priority Area 5](#) (Environmental Risks), the Secretariat developed a draft concept note for a follow-up project to be implemented on the TMF issue. The aim would be to develop and implement a project which could include more practical exercises at various TMFs and could address other relevant aspects such as smart monitoring techniques, contingency and disaster management, and transboundary risk mapping.

A technical report and flyer on accident prevention and control was produced. The main content, illustrations and layout of the technical report and the flyer were developed and presented by the [APC EG](#) and the PP EG. The documents were updated based on the latest accident hot-spot data and the related hazard and risk assessments. The finalization and publishing of the documents were shifted to 2022 so that they could reflect the consolidated results and findings of the [DRBMP Update 2021](#).



Flood Protection: Sustainable Solutions for the entire Danube River Basin

The task of the Flood Protection Expert Group (FP EG) is to assess, map, manage and mitigate flood risks, and thus it forms the foundation for integrated basin-wide flood risk management in the Danube River Basin.

The Danube Flood Risk Management Plan (DFRMP) encourages movement away from merely defensive actions, and envisages a shift towards proactive and sustainable forms of flood risk management. This year the FP EG worked extensively on the 2021 update of this vital management plan.



The [Danube Flood Risk Management Plan Update 2021](#) outlines the key flood risk management priorities for the Danube Basin until 2027 and is a principal instrument for coordination of the implementation of the EU Floods Directive in the Danube River Basin. At the same time, in line with Article 9 of the FD, this plan demonstrates the efforts made by the ICPDR in coordinating the application of the FD and of the WFD, focusing on opportunities for improving efficiency, information exchange and for achieving common synergies and benefits having regard to the environmental objectives laid down in Article 4 of the WFD. Danube Flood Risk Management Plan Update 2021 summarizes the results of the updated preliminary flood risk assessment (PFRA) which was undertaken to provide an assessment of potential risks stemming from floods and presents the areas of potential significant flood risk (APsFR). The results of the updated PFRA also provided the public and stakeholders with important evidence that the areas with potential flood risk in the Danube River Basin are being taken care of for the benefit of all inhabitants and countries of the Danube River Basin. For the APsFR in catchments > 4000 km² the flood hazard maps and flood risk maps (FHRMs) have been produced and were presented in this Plan. This set of maps included the updated FHRMs from the 1st cycle and the new flood risk map of potentially affected cultural heritage sites.

The updated Plan presents the strategic basin-wide level measures to prevent and reduce damage to human health, the environment, cultural heritage and economic activity. Special attention in the [DFRMP Update 2021](#) was given to measures employing areas which have the potential to retain flood water, such as natural floodplains as well as the other areas enabling controlled flooding. In the frame of their prioritization those measures were favored which are sufficiently robust to the uncertainty in forecasting of climate change impacts. This robustness has been achieved through focusing on pollution risk in flood prone zones; on the application of non-structural measures when possible; and on “no-regret” and “win-win” measures.

The [FP EG Work Program 2022–2024](#) was discussed and adopted at the 40th meeting of the FP EG and would give an overview on the tasks and activities of the Flood Protection Expert Group for the years 2022–2024. The FP EG reviewed and adopted its Terms of Reference.

The new [Danube Hydrological Information System](#) (Danube HIS) aims to display data on the water level, discharge, water temperature and precipitation for the Danube and its major tributaries. Provision of data, however, is not mandatory, and availability remains up to countries' discretion. The scope of the Danube HIS is providing Danube basin-wide level basic hydrological and meteorological near-real-time data in a standardised format, and, if possible, the validated long-term data series for flood risk management or for any water related scientific activities in the DRB. The development of the system was supported by the DAREFFORT project, primarily via supplying the data providers with a hydrometeorological data exchange software. The Danube HIS Policy document was under discussion and development.

[Flood risk management projects](#) included the Danube Floodplain project, whose objective is to strengthen transnational water management and flood risk prevention. The key project outputs are DRB Floodplain Restoration and Preservation Manual, DRB Floodplain Management Strategic Guidance and Floodplain Restoration/Preservation Action Plan.

Along with this the [DAREnet project](#) is aimed at supporting flood management practitioners across the Danube River region deepen and broaden their research, development and collaboration. With the collaboration of the EUSDR PA5 Disaster Management Working Group, DAREnet organized the Danube Flood Resilience Innovation Event in Hungary. The event resulted in the identification of potential topics for a DAREnet “Exchange of Experts” program and the launch of the Danube Flood Resilience Innovation Competition.



Information Management and Geographical Information System: Mapping out a Brighter Future for the Danube

The Information Management and Geographical Information System Expert Group (IMGIS EG) plays a vital role in conceptualising, informing, presenting and supporting the tasks of the ICPDR. It's responsible for the development and maintenance of datasets, maps and online systems, such as ICPDR DanubeGIS.

GIS maps provide a detailed picture of the state of the basin, its utilisation and management to present future scenarios and pinpoint areas with optimal potential.

In 2021, the **IMGIS EG** closely followed the timeline and status of data collection in the DanubeGIS for the DRBMP/DFRMP Updates 2021. ICPDR contracting parties were tasked with data submissions, countries were also able to review and correct datasets in the DanubeGIS. The Secretariat provided the manual “Review of transboundary water bodies in DanubeGIS” and asked **IMGIS EG** experts to review the transboundary RWBs in the DanubeGIS online tool.

The resulting table was provided to the MA EG for discussing differences in status assessment.

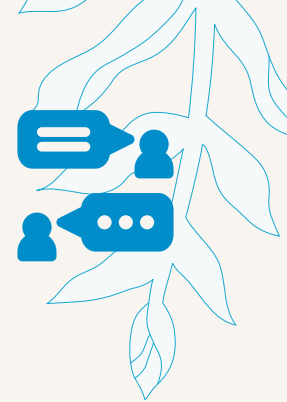
An overview table of transboundary RWBs was also discussed and approved by the RBM EG and included as an annex to the DRBMP Update 2021. Draft maps for the DRBMP and DFRMP 2021 Updates were discussed within the **IMGIS EG** and were distributed to national experts by the Secretariat, asking them for review whether the national data was represented as expected.

2021 also saw ongoing steps for the Danube Hydrological Information System (DanubeHIS) data exchange. The policy document for the future DanubeHIS has been drafted by the ICPDR Secretariat, based on the ICPDR, ISRBC and WMO related documents, the document text was adopted by the FP EG. The intended use of the DanubeHIS is being discussed with the FP EG, which will determine the system design and functionalities of DanubeHIS.

Additional projects the **IMGIS EG** is following that map the DRB, which have potential DanubeGIS usage, are the MEASURES project and the Danube FLOODPLAIN project, the latter of which was extended until the end of November 2021. The successful cooperation with the project has enabled the Secretariat to make the project's map data results accessible through DanubeGIS.



Public Participation: Promoting Public Participation and Communication in the Danube



The Public Participation Expert Group (PP EG) is responsible for outreach activities publicizes information about the Danube River Basin, to encourage involvement, is central to the activities of the ICPDR.

In 2021 the PP EG celebrated the conclusion and publication of the JDS4 along with the return of many of its onsite annual events after two years of COVID-19 related restrictions.

From March to September 2021, the ICPDR undertook its [Public Consultation Process](#) for the DRMBP and DFRMP Updates 2021. This process was the culmination of the ICPDR's six-year management cycle and an important opportunity for the public and stakeholders to provide input and feedback to be considered for the draft plans, which will guide action until the 2027 review.

In addition to regular channels, an online questionnaire was published, available in 10 Danubian languages in addition to English. It was worked on and reviewed by the PP EG and is an easy route for the public to learn about the DRMBP and DFRMP Updates 2021. Additionally, a [WFD-FD Internal Workshop](#) was held to prepare know-how for the Stakeholder Consultation Workshop held in June (Our Opinion – Our Danube), which included an overview of the draft plans, along with in-session statements from stakeholders.

During the “Our Opinion – Our Danube” workshop around 130 experts, stakeholders and members of the public were able to give their input on the 2021 updates of the Danube River Basin and Flood Risk Management Plans. The workshop was a key event for the update to its management plans giving residents of the Danube a unique opportunity to actively contribute to the six-year plans. The outcome of the workshop was also included in the Public Consultation Report 2021.

In March 2021 public and scientific reports of the [JDS4Project](#) went online on [DanubeSurvey.org](#) and [ICPDR.org](#). The two publications are a culmination of survey data from many hundreds of experts across the Danube River Basin, coordinated with the ICPDR as the most comprehensive river survey in the world.

While the report – running over 560 pages long – is a detailed record of all key findings, a user-friendly public report was also created.

A newly proposed [ICPDR Communication Concept](#) was taken under discussion by the PP EG in 2021 and special PP EG taskforce was put together to work on drafting the text. This Concept will comprise a ‘living document’ (much like the ICPDR’s Social Media Communication Guidelines), and will be reviewed every couple of years, enabling the PP EG to update effectively as technology evolves.

Since its introduction in 2019, the monthly ‘[Country Takeover](#)’ campaign has been a resounding success on the ICPDR’s social media platforms, thanks in no small part to the participation and contributions from our members countries and the European Union. Since its launch in June 2021, the second phase of this takeover project is running smoothly and sees countries providing content via a new and updated template document process.

[Danube Day](#) marked the 18th event of its kind; the 2021 edition of Danube Day saw the return of a number of on-site events in comparison to the purely online Danube Day in 2020. Activities took place in Bulgaria, Slovenia, Austria, Serbia, Romania, Hungary, Slovakia, Czech Republic, Moldova, Ukraine, Germany, Croatia, and Bosnia-Herzegovina. The PP EG agreed that the motto in 2022 would once again be “Discover Danube.”

As a result of unforeseen circumstances, the [Danube Art Master 2021](#) competition was slightly delayed but results of the international competition could be announced in March. A surprisingly large number of artworks were submitted in 2021, despite taking place under truly exceptional circumstances. This year’s international winners were announced at an online ceremony in March.

It is expected in 2022 that a [redesign of the ICPDR website](#) will be taking place. The input of the PP EG will be sought by the staff members at the Secretariat who will be leading the website renewal.

Partnership and cooperation: Planning with the Danube's Sub-Basins

Forging strong, successful partnerships at the local, national and international levels makes the work of the ICPDR a model for the rest of the world.

The ICPDR supports the development of sub-basin initiatives within the DRB as well as partnerships with our neighbouring regions. This cooperation, as well as a close relationship with the EU's Strategy for the Danube Region, is vital for sustainable integrated river basin management.

Sava River Basin

In the field of River Basin Management, the 2nd [Sava River Basin Management Plan](#) (SRBMP) progressed with activities performed in accordance with the accepted work plan. Members of the PEG RBM revised a draft of the SRBMP and the preliminary set of maps, and the public consultation campaign for the 2nd SRBMP started in November 2021. The Sava Stakeholder Forum promoted broad stakeholder involvement during the online event held in December 2021. Approval of the SRBMP is planned by the Meeting of the Parties (MoP) in 2022.

The implementation of the project [Water Contingency Management in the Sava River Basin-WACOM](#), which was approved at the 3rd call of the Danube Transnational Programme, is in progress. The activities focus on mapping the institutions and procedures related to the coordinated planning and response process in case of floods and/or accidental pollution events and developing the corresponding WACOM toolbox.

Regarding Flood Risk Management, the 2nd [FRM planning cycle activities](#) are ongoing. A draft of the Sava PFRA update is under development, along with the relevant GIS data-gathering process through the common data-sharing platform, the SavaGIS. Flood Forecasting and Warning Systems for the Sava River Basin (Sava FFWS) regularly contribute to the flood preparedness of the organizations responsible for hydrometeorological services and flood emergencies in all Sava countries.

Tisza River Basin

The focus of the activities in the Tisza River Basin has been to generate a new project based on the results of the [JOINTISZA Project](#) and the revised Tisza MoU objectives. During the 28th ICPDR Tisza Group online meeting potential topics were further discussed to develop project proposals for the next call of the Danube Transnational Programme or any other potential funding source.

EU Strategy for the Danube Region (EUSDR)

In 2021, the EUSDR (EU Strategy for the Danube Region) presidency was held by Slovakia. The 19th [Annual Forum of the EUSDR](#) was organized from 26–27 October of 2021 and prioritized the topics of digitization and innovation, climate change adaptation and a pharmaceuticals conference.

Cooperation with the Black Sea Commission

At its 32nd [BSC Regular Meeting](#) on 12–13 October 2016, the Black Sea Commission adopted the text of the Black Sea Integrated Monitoring and Assessment Program (BSIMAP) for 2017–2022. The BSIMAP has been drafted in the frame-work of the EU funded project “Support to the Black Sea Commission for the Implementation of the MSFD” (MSFD Project). A short-written report assessing the Black Sea ecosystem together with selected data on the selected indicators shall be presented to the ICPDR by the end of the respective year. This report shall be the official Black Sea report that would involve synthesis and interpretation of the data from the Advisory Groups of the Black Sea Commission on the ecosystem status of the Black Sea. The Black Sea Commission Permanent Secretariat prepared the BSC Summary report to ICPDR for 2018/19 and submitted it to the ICPDR Secretariat in mid-December 2020. Slovenia suggested that the ICPDR should promote cooperation on reducing the pressure on coastal and marine environment of the Black Sea in the frame of the interregional cooperation. A problem of sturgeon kills in the Black Sea was also discussed, asking the ICPDR for support.

Regular Budget and Financial Contribution

Regular Budget for the Financial Year 2021

Three independent auditors, appointed by the Contracting Parties, audited the consolidated financial statement including the accounting records of the ICPDR for the financial year from 1st January to 31st December 2021.

The Audit Team certified that the Statement of Accounts is correct, and the contents, structure and details are in accordance with ICPDR rules and regulations and accounting principles assuring transparency of financial management.

Contributions – Financial Year 2021

Contracting Party	Contribution in %	Contribution in EUR	Actual payment in EUR
Austria	8.33%	98,564.99	98,564.99
Bosnia & Herzegovina	4.72%	55,849.56	55,849.56
Bulgaria	8.33%	98,564.99	98,564.99
Croatia	8.33%	98,564.99	98,564.99
Czech Republic	8.33%	98,564.99	98,564.99
Germany	8.33%	98,564.99	98,564.99
Hungary	8.33%	98,564.99	98,564.99
Moldova	1.40%	16,565.56	0.00
Montenegro	3.36%	39,757.32	39,712.82
Romania	8.33%	98,564.99	0.00
Serbia	8.33%	98,564.99	98,564.99
Slovakia	8.33%	98,564.99	98,564.99
Slovenia	8.33%	98,564.99	98,564.99
Ukraine	4.72%	55,849.56	0.00
European Union	2.50%	29,581.34	29,581.34
Total	100.00%	1,183,253.24	1,012,228.63

Expenditure – Financial Year 2021

Budget Line	Approved Budget in EUR	Expenditure in EUR	Balance in EUR
1. Staff	800,900.00	786,950.43	13,949.57
2. Office Running	128,000.00	115,491.84	12,508.16
3. Publications	79,600.00	58,175.17	21,424.83
4. Travel & Meetings	25,000.00	1,914.81	23,085.19
5. Services	149,753.24	110,254.03	39,499.21
Total	1,183,253.24	1,072,786.28	110,466.96

Contracting Parties and Heads of Delegations

Austria

Günter Liebel,
Federal Ministry of Agriculture,
Regions and Tourism
www.bmlrt.at

Bosnia and Herzegovina

Mirza Hujic,
Ministry of Foreign Trade
and Economic Relations
www.mvteo.gov.ba

Bulgaria

from July 2020
until Feb. 2022:
Atanaska Nikolova,
Ministry of Environment
and Water
www.moew.government.bg

Croatia

Elizabeta Kos,
Ministry of Economy and
Sustainable Development
www.mingor.gov.hr

Czech Republic

Lukáš Záruba,
Ministry of Environment
www.mzp.cz

Germany

Heide Jekel,
Federal Ministry for the
Environment, Nature
Conservation and Nuclear Safety
www.bmu.de

Hungary

until Aug. 2021: Peter Kovács,
from Aug. 2021 until
Jan. 2022: Gabriella Jelinek,
Acting Head of Delegation,
Ministry of Interior
[www.kormany.hu/hu/
belugyminiszterium](http://www.kormany.hu/hu/belugyminiszterium)

Moldova

from May 2019:
Radu Cazacu,
Waters of Moldova
www.mediu.gov.md

Montenegro

from Dec. 2020:
Zorica Djuranovic,
Ministry of Agriculture, Forestry
and Water Management
www.gov.me

Republic of Serbia

Natasa Milic,
Ministry of Agriculture, Forestry
and Water Management
www.minpolj.gov.rs

Romania

Leonard Achiriloaie,
Ministry of Environment,
Waters and Forests
www.gov.ro

Slovakia

Vladimír Novák until Aug. 2020,
from Aug. 2020: Roman Havliček,
Ministry of Environment
www.minzp.sk

Slovenia

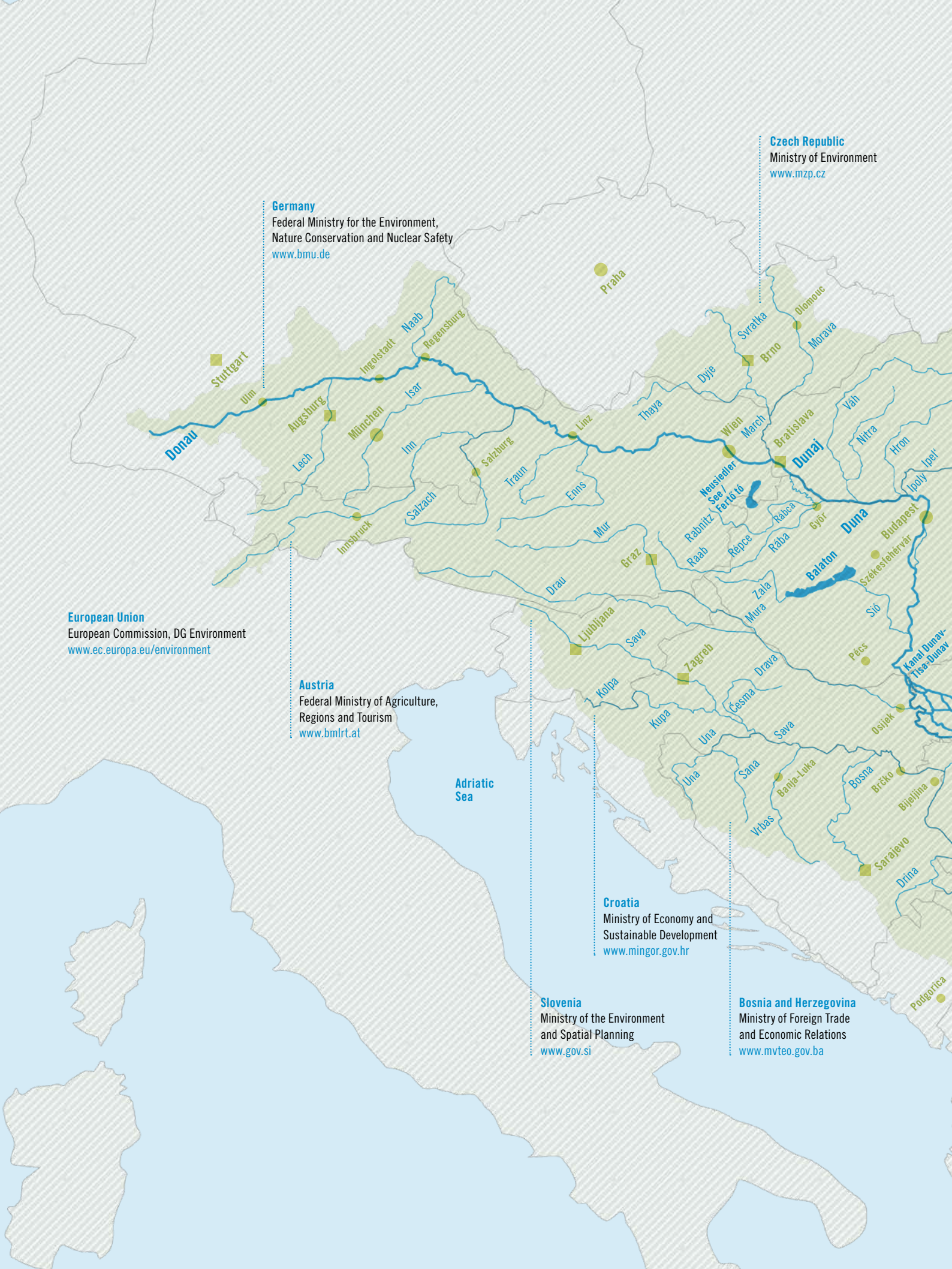
Mitja Bricelj,
Ministry of the Environment
and Spatial Planning
www.gov.si

Ukraine

from Oct. 2020: Iryna Stavchuk,
from Dec. 2021:
Mykhailo Kharev,
Ministry of Environmental
Protection and Natural Resources
www.mepr.gov.ua

European Union

Bettina Doeser,
European Commission,
DG Environment
www.ec.europa.eu/environment



Germany
Federal Ministry for the Environment,
Nature Conservation and Nuclear Safety
www.bmu.de

Czech Republic
Ministry of Environment
www.mzp.cz

European Union
European Commission, DG Environment
www.ec.europa.eu/environment

Austria
Federal Ministry of Agriculture,
Regions and Tourism
www.bmlrt.at

Croatia
Ministry of Economy and
Sustainable Development
www.mingor.gov.hr

Slovenia
Ministry of the Environment
and Spatial Planning
www.gov.si

Bosnia and Herzegovina
Ministry of Foreign Trade
and Economic Relations
www.mvteo.gov.ba

Slovakia

Ministry of Environment
www.minzp.sk

Romania

Ministry of Environment, Waters and Forests
www.gov.ro

Hungary

Ministry of Interior
www.kormany.hu/hu/belugyminiszterium

Ukraine

Ministry of Environmental Protection
and Natural Resources
www.mepr.gov.ua

Moldova

Waters of Moldova
www.medi.gov.md



Montenegro

Ministry of Agriculture, Forestry
and Water Management
www.gov.me

Republic of Serbia

Ministry of Agriculture,
Forestry and Water Management
www.minpolj.gov.rs

Bulgaria

Ministry of Environment and Water
www.moew.government.bg

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Contact

ICPDR – Permanent Secretariat
Vienna International Centre / D0412
Wagramer Strasse 5 / 1220 Vienna / Austria
T: +43 (1) 26060-5738 / F: +43 (1) 26060-5895
secretariat@icpdr.org / www.icpdr.org

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