5.ª Conferência Internacional da Rede de Museus da Água 5th International Conference Of The Global Network Of Water Museums









The Healthy Danube Network -Share and Co-create Exhibitions and Citizen Science Methods

Sandra de Vries, Gabriela Costea and Pippa de Kinder

Danube4all project









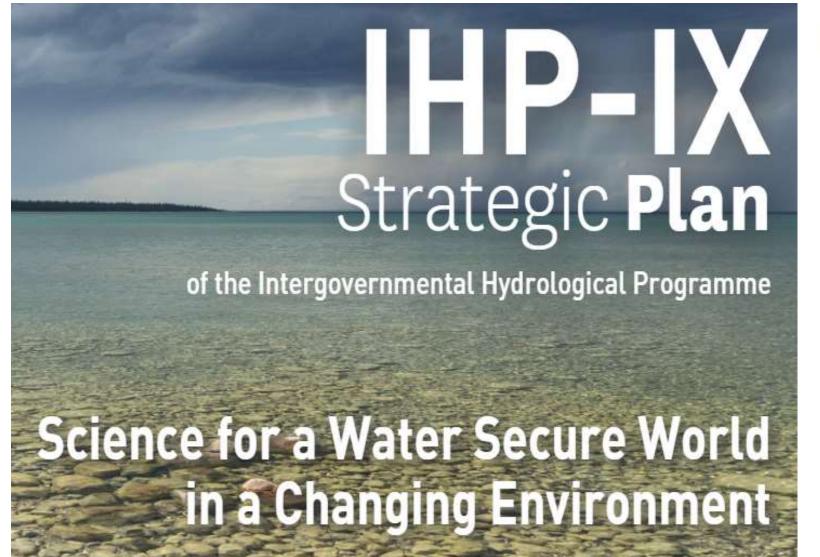








- 56. Strategies and activities addressing global changes that are science-based and inclusive of all sectors of society, enhance the overall resilience of these societies. Building communities and societies that are resilient in the face of changing and evermore complex environmental conditions, requires that science inform policy. Improving this aspect of the decision process permits involvement of citizen science and pro-active NGO, civil society and community partners with government, including the ability of decision makers to benefit from the use of indigenous knowledge.
 - 53. Enhancing the level of cooperation among scientists, policy-makers and practitioners, and the contributions of citizens to scientific activities (to data collection and the definition of problems to be solved citizen science) is vital to bridging the gap between existing data and those who must understand and subsequently interpret and apply this technical information in the policy arena. However, for this cooperation to become a reality, data collection and analysis methodologies must be validated and sufficient time and effort must be invested to develop comprehensive data at different scales and in distinct geographic and political settings, all contributing to better evidence-based water management.



- are those that relate to citizen science. This emerging field combines the efforts of scientists and the public to better understand the water cycle, including the effects of human behaviour. Similarly, encouraging Open Science and Open Data provides an opportunity for scientific information, data and outputs to be more inclusive, more widely accessible and more reliably harnessed with the active engagement of all the stakeholders (scientists, policy-makers and citizens), Furthermore, disciplines, such as socio-hydrology, provide an interdisciplinary field studying the dynamic interactions between water and people and an opportunity to showcase UNESCO's transition towards transdisciplinarity when conducting scientific research on water. Additionally, partnerships with water users, private entrepreneurs and NGOs to build a knowledge base and the trust of communities could multiply the positive impacts of applying innovative scientific findings and employing new technologies, particularly in rural and traditional societies. Enhancing scientific research and cooperation can help bridge data and knowledge gaps.
- 1.10 Conducting and sharing of research on integrating citizen science in the hydrological discipline by the scientific community and other stakeholders supported, to improve understanding of the water cycle enabling science-based decision making.





Danube4all

Aim

DANUBE4all aims to restore freshwater ecosystems in the Danube River Basin through the development of a comprehensive, scientifically-based and practically-orientated <u>Restoration Action Plan (RAPDRB)</u>. The project seeks to address the lack of knowledge, awareness, and **participation of local people** and business actors **in the implementation of freshwater ecosystem restoration**.

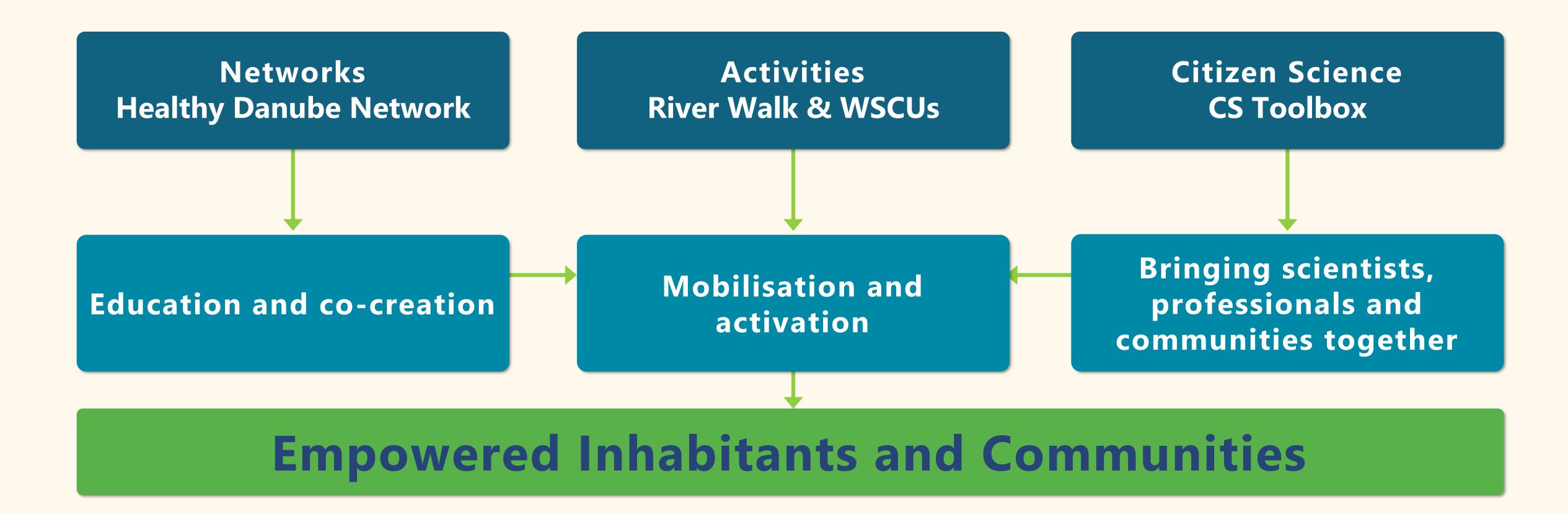




















Mapping and showcasing existing initiatives and museums



DANUBE4all

Citizen Science, Art and Co-creation in River Restauration

Survey for Organizations and Institutions working with Citizens in the Danube River Basin!

THE PROJECT

The DANUBE4all project aims to restore freshwater ecosystems in the Danube River Basin through the development of a comprehensive, scientifically-based end practically-orientated Restoration Action Plan.

We seek to address the lack of knowledge, awareness, and participation in the implementation of freshwater ecosystem restoration.

We want to explore together our common interest to better engage and empower inhabitants of the region.

THE SURVEY

What? A brief 15-minute questionnaire on freshwater restoration and citizen engagement in the Danube region.

For whom? All organizations involved with communities along the Danube and its main tributories.

Why? To understand your needs and expectation, to showcase your planned or ongoing activities; to engage you in our processes for citizens along the Danube River.

How? Scan the QR code on the right!

Funded by the European Union



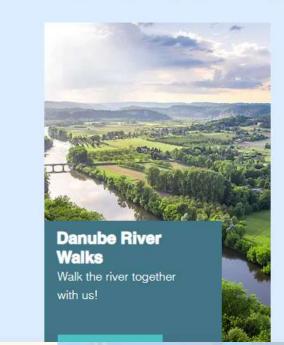
Join the Survey

Join Our mission!

Be a part of the Danube restoration!

By participating in our activities, you can help protect and restore this vital river ecosystem. Your insights and actions are crucial in ensuring a sustainable future for generations to come.

How can you engage?







in (

Initiatives and activities in the region

AARHUS CENTER NOVI SAD

SERBIA

Platform for information, citizen participation, education, cooperation, partnership, volunteering and activism to preserve the environment

CROWD WATER

INTERNATIONAL

CrowdWater stands for an independent and reliable data collection by citizens – Citizen Science – for modelling of floods and droughts and as a supplement to existing measurements.

DANUBE ART MASTER

INTERNATIONAL

The Danube Art Master is an environmental art competition that engages youth in creating artworks from natural materials found along the Danube River to promote river conservation.







Next >





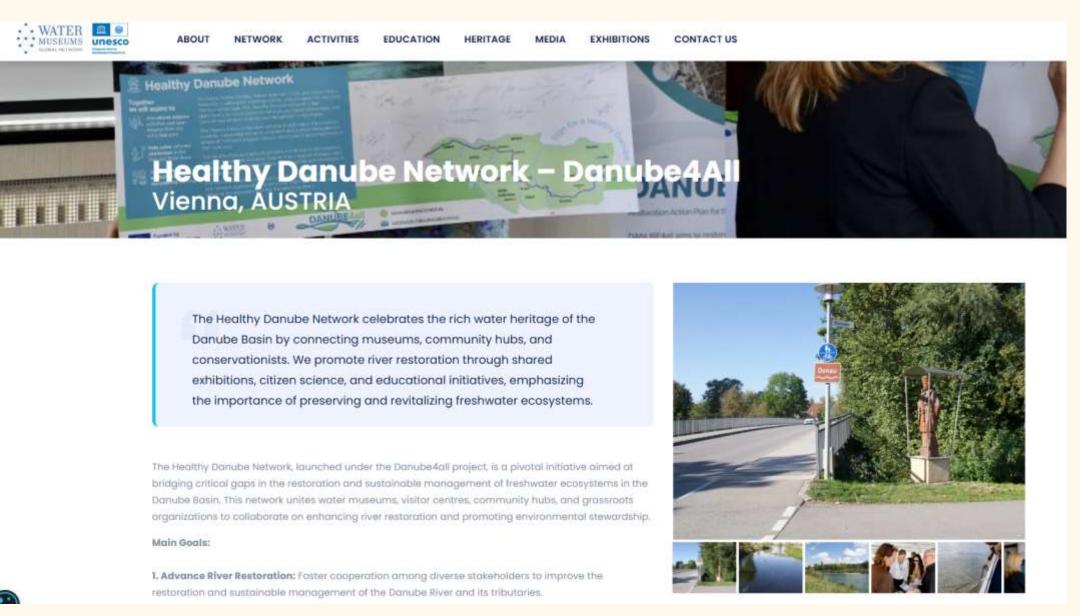
The Healthy Danube Network

- Launch in Belgrade during the General Assembly
- We became an official member

Launch of the network

















Getting to know the Danube Basin





Opening the road to restore the Danube Basin Ecosystem with citizen science

The Science Citizens Podcast

dec 2023 • 42 min. 2 sec



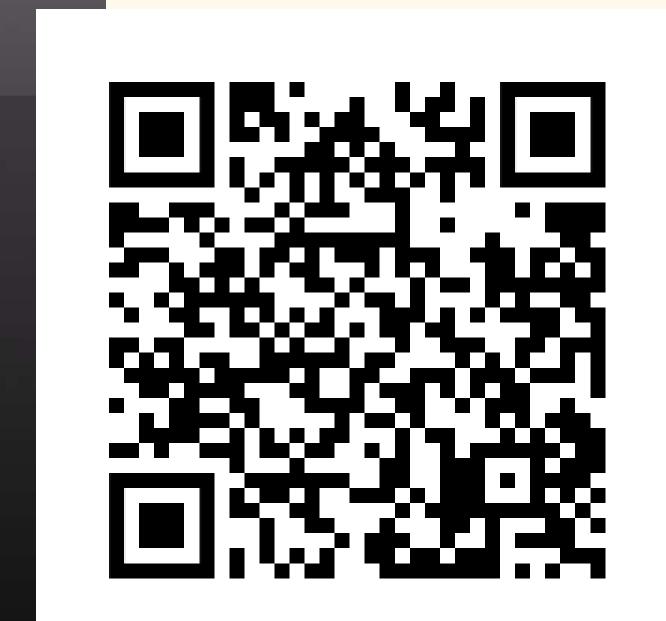




Beschrijving van aflevering

In this episode I will take you along the Danube River, where we have started the project Danube4All: https://www.danube4allproject.eu/. Within a duration of total 5 years, we will be responsible to create inclusive action with empowered local communities in the Danube River Basin, through public mobilisation and engagemen

... Meer weergeven







The Healthy Danube Network

Why join the network?

- Offer a way to get in contact with many other organisations doing similar work
- Learn from and share with each other
- We develop tools, events and methods that can be used by all to implement for education, engagement, and activation
- Develop together, co-create, (travelling) exhibitions













Together with the founder of Drinkable Rivers

Organized first River Walk: September 18 – October 11,

Is the start of many river walks that can replicate this method

First River Walk

Join the walk (click on the maps to enlarge)



Week 1

18 Sep: Jurilovca (old harbour) to Enisala

19 Sep: Enisala to Sarichioi

20 Sep: Sarichioi to lazurile 21 Sep: lazurile to Sarinasuf

22 Sep: Sarinasuf to Mahmudia

23 Sep: Mahmudia to Carasuhat wetland

Not local?

Please pay Danube Delta tourist tax



Week 2

26 Sep: Grojdibodu to Ianca

27 Sep: lanca to Călărași

28 Sep: Călărași to Bechet

29 Sep: Bechet to Zăval

30 Sep: Zăval to Valea Stanciului

1 Oct: Valea Stanciului to Foisor

4 Oct: Carna lakes to Bistret



Week 3

7 Oct: Gogosu to Tiganasi / Izvoru Frumos

8 Oct: Tiganasi / Izvoru Frumos to Crivina

9 Oct: Crivina to Hinova

10 Oct: Muzeul Regiunii Porților de Fier

and Iron Gates Museum (by car)

11 Oct: Drobeta-Turnu Severin to Orsova

(by train)



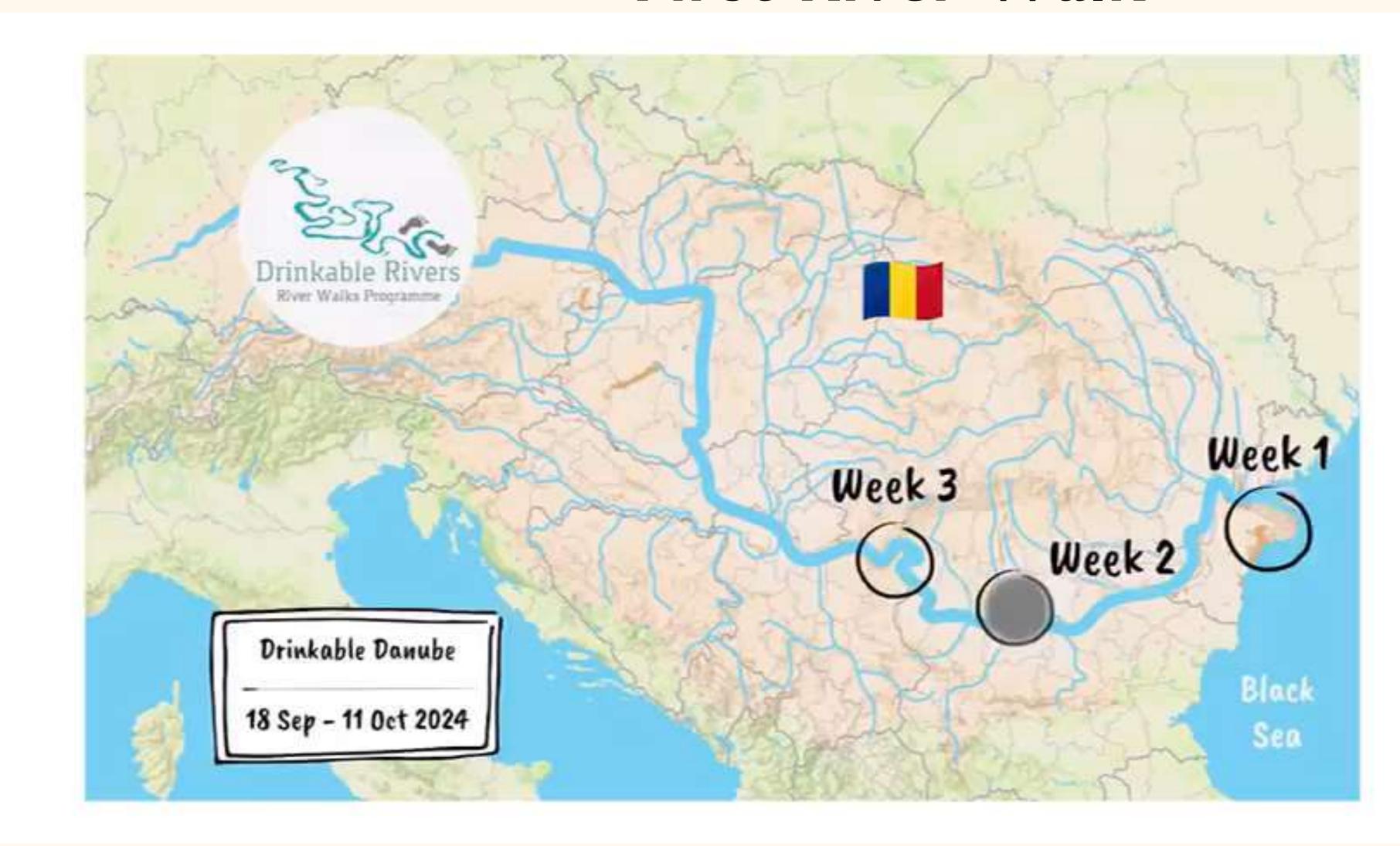








First River Walk









PHYSICAL

Stream width Stream flow Electrical conductivity & temperature Clarity Color and smell

CHEMICAL

pH Nitrate, nitrite Phosphate Ammonia Hardness

BIOLOGICAL

Plant coverage Examples of flora and fauna indicators: Dragonfly counting Bacteria levels

Mapping surroundings



Plants Coverage

Smell Color

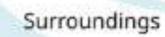








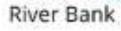




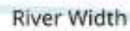


Bacteria









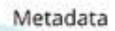


Flow Velocity



Phosphate







Measuring Strip











INFLUENCES

Plastic pollution



Water Sport Clean Ups

Core Idea

Collaborative efforts aimed at engaging local communities in monitoring and addressing plastic pollution in the Danube River and its tributaries.

Main elements

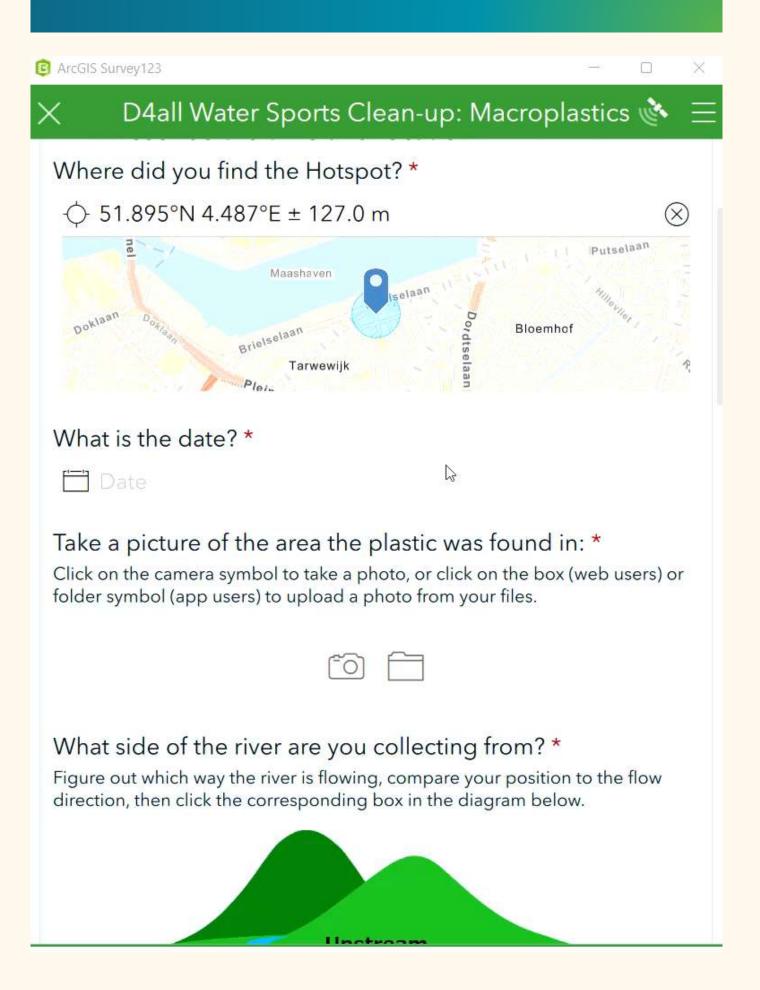
- Sports: Any type of water activity to go along the water
- Clean up: Litter and waste is removed
- Monitor:
 - accumulation of macro plastics (River-OSPAR)
 - sampling of microplastics in the water
- Local: Adopted by a local organisation that will implement it yearly





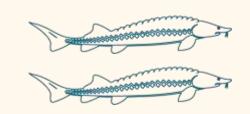
- Monitoring manuals
- Data collection surveys
- Guidelines for event implementation











Every year we start anew



DANUBE4all

Water Sports Clean Up

Water Sport Clean Up (WSCU) events are collaborative efforts aimed at engaging local communities in monitoring and addressing plastic pollution in the Danube River and its tributaries.





HOST AN EVENT WITH US

We are looking for organizations that are eager to host WSCU events in the following years with us and involve their community in experiences that foster environmental stewardship along the Danube River.

HOW DOES IT WORK?

During the WSCU events, people use kayaks, SUPs, rowing boats, or slow motorboats to go down a segment of the Danube (or one of its tributaries), and clean up macroplastics.



www.danube4allproject.eu community@danube4allproject.eu Participants will also monitor what they find and take samples of microplastics in the water. This way, we will not only clean up the river but also raise awareness on the importance of preserving our natural water resources for future generations and collect relevant information on the sources of this pollution.

CREATING IMPACTFUL EXPERIENCES, TOGETHER

As a partner organization, you will play a crucial role in organizing and hosting these events. We provide comprehensive support, including guidance on event planning, access to material to monitor, and assistance in mobilizing volunteers. By partnering with us, you'll contribute to tangible efforts in combating plastic pollution and promoting

Year 1 - Pilot: Austria, Vienna – Postponed, tbc.

Local partner BOKU – together with Scouts

Year 2: Slovakia

Local partner VUVH

Year 3: Bulgaria

Local partner IBER BAS

Year 4: Croatia

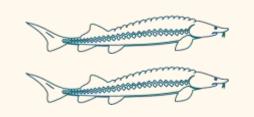
Local partner RBI





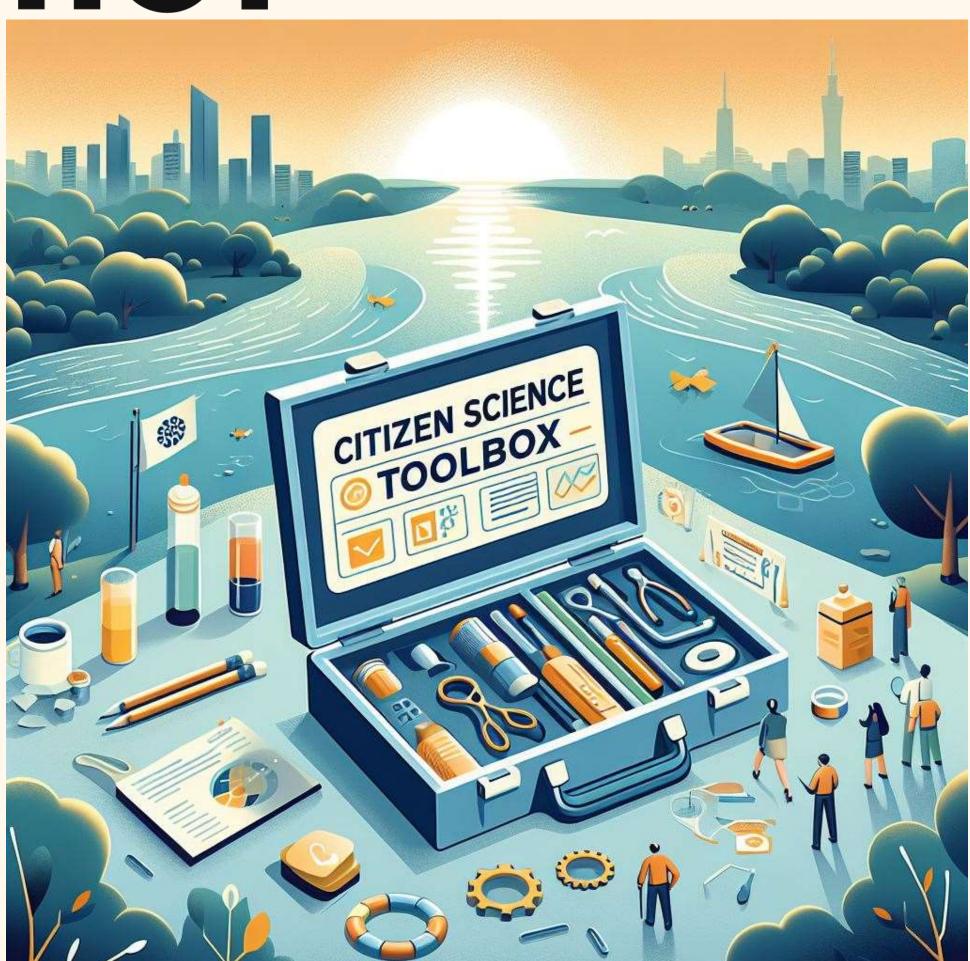


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Citizen Science Toolbox





- Existing CS methods for river restoration
 - **New methods**
 - ► A guide, more than just tools



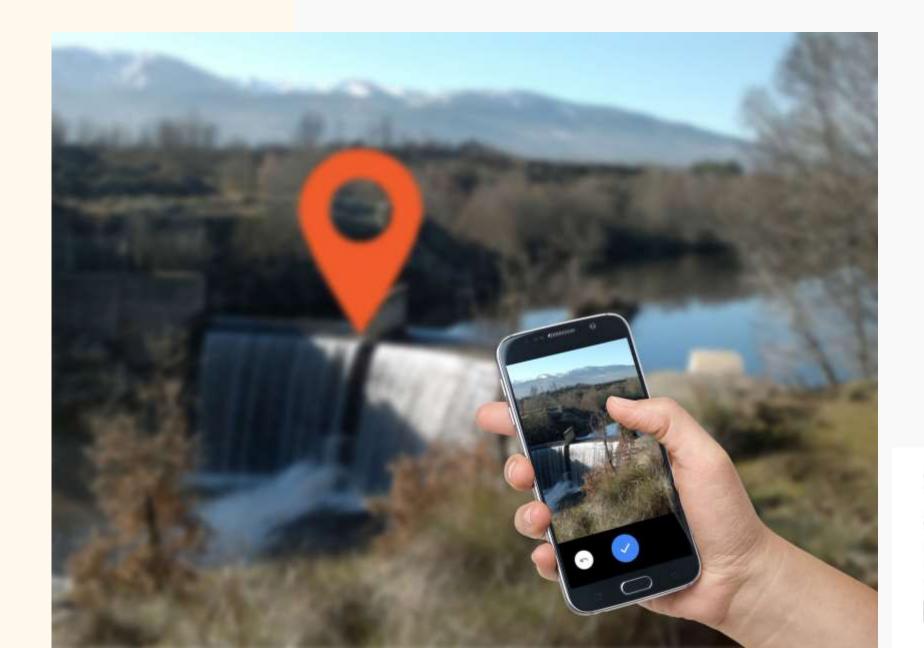




Existing CS monitoring











New methods and findings





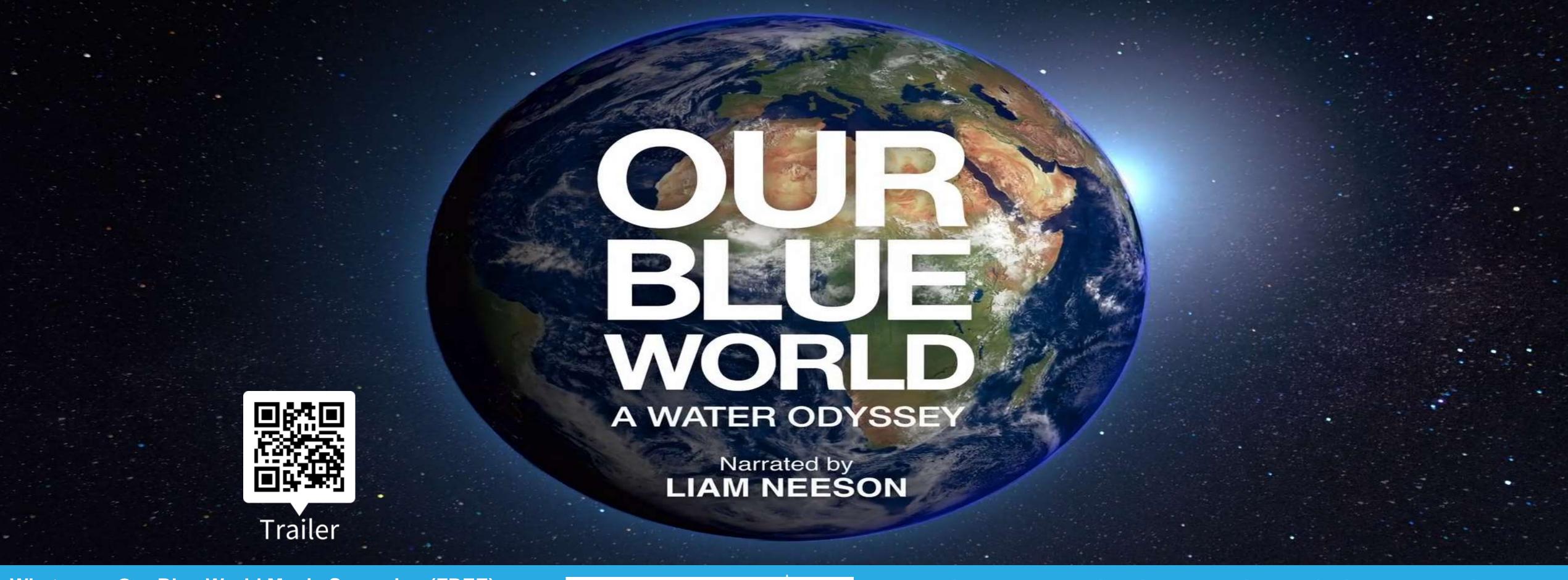




Images courtesy of Pulsaqua/Alice Demoulder







What: Our Blue World Movie Screening (FREE)
Why: Our deep relationship with water is a global story. Our Blue World is a water odyssey landmark film that tells compelling human stories of water.

Scan this QR code to find out how to organize an individual screening in your area.



By taking a deep dive into the lives of eight dynamic and visionary people around the world, this beautiful, dramatic and moving film sets out to reveal our profound relationship with water and its role as the nourishing life force for all that lives on this planet.

Scenes for Our Blue World have been filmed on six continents around the world and will feature stories in Peru, China, Egypt, Ireland, Cambodia, New Zealand, USA, and the Netherlands.

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