

Assembling River Perspectives: Using a Jigsaw Puzzle to Co-Create a Traveling Danube Exhibition

Partager des perspectives fluviales : Utiliser un puzzle
collaboratif pour co-cr  er une exposition itin  rante sur le
Danube

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R  SUM  

La restauration durable des rivi  res et des plaines inondables repose sur l'implication active des parties prenantes et des citoyens. Dans cette optique, nous avons adopt   une approche de co-cr  ation afin de recueillir des contributions publiques pour la conception d'une exposition itin  rante sur le fleuve Danube, visant    sensibiliser    la gestion des rivi  res et des plaines inondables.

Cette d  marche s'est appuy  e sur une m  thodologie innovante, le Mur de Puzzle Collaboratif Interactif Danube4all, qui a permis de mobiliser plus de 300 participants r  partis sur 10 sites repr  sentant les r  gions du haut, du moyen et du bas Danube. Ces ateliers collaboratifs ont encourag   les participants    formuler des id  es sur les messages cl  s, les th  matiques prioritaires et les approches de visualisation adapt  es    une exposition scientifique itin  rante. En assemblant collectivement une carte-puzzle grand format du bassin du Danube, les participants ont partag   leurs perspectives et exprim   leurs pr  f  rences, refl  tant la responsabilit   collective et l'effort commun n  cessaires pour r  pondre aux d  fis environnementaux majeurs auxquels ce syst  me fluvial vital et ses affluents sont confront  s.

ABSTRACT

Sustainable river and floodplain restoration require active participation from stakeholders and citizens. To support this, we implemented a co-creation approach to gather public suggestions for conceptualizing a traveling exhibition on the Danube River, focusing on environmental education about river and floodplain management.

Using an Interactive Collaborative Danube4all Puzzle Wall as an innovative engaging methodology, over 300 participants across 10 locations from the upper, middle and lower Danube regions were inspired to contribute their ideas on key messages, critical topics, and preferred visualization methods for a traveling exhibition. Through the collaborative assembly of a large-format puzzle map of the Danube basin, participants share insights and express preferences, symbolizing the collective responsibility and shared effort required to address the critical challenges facing this vital system and its tributaries.

KEYWORDS

Community involvement, Engagement method, Exhibition concept, Danube basin, Participatory approach
Approche participative, Bassin du Danube, Concept d'exposition, Implication communautaire
M  thodologie d'engagement

1 INTRODUCTION

The Danube River, a lifeline for countless communities and a biodiversity hotspot, faces unprecedented environmental and socio-economic challenges. To promote the conservation and restoration of its aquatic ecosystems, the EU Horizon project Danube4all, as part of the EU Mission “Restore our Ocean and Waters 2030”, aspires to deepen society’s connections to the Danube’s threatened natural systems. The Danube4all project elaborates a plan to restore the longitudinal connectivity of the river network in the Danube basin in close collaboration with stakeholders, thereby also considering citizens interests. A key initiative within the project is the co-design of a concept for a traveling Blue Danube exhibition, which aims to inform the public about this unique ecosystem, and foster creative engagement with communities all along the Danube.

Topical exhibitions represent powerful tools for education, engagement, and storytelling. Traditionally, their development has been driven by research or expert-led approaches (Piacente 2022), where scientists, curators, and educators shape the narratives and presentations grounded in their specialized knowledge. While this approach ensures a high level of accuracy and depth, it often overlooks from the perspectives of local communities and target groups on the presented topics, which may bias the relevance and resonance of an exhibition among intended audiences (Wang and Lei 2016).

In contrast, public-driven exhibition concepts emphasize inclusivity and collaboration by actively engaging audiences in the development process to co-create and co-produce based on their own experiences (Barnes and McPherson 2019; Simon 2010). This participatory approach shifts the paradigm from a one-way knowledge dissemination to a collaborative approach where the public contributes ideas, perspectives, and priorities. Such a participatory approach may not only enrich exhibitions by incorporating a broader range of experiences and values, but also enhance engagement by fostering critical thinking, creativity, and a sense of ownership, ultimately inspiring positive action (Simon 2010; Knudsen 2016).

Aligned with this participatory vision, the Danube4all traveling exhibition concept adopts a bottom-up approach to ensure it will resonate with the diverse target groups in the Danube region — from the river’s source until its delta, each with a distinct relationship to the river and its accompanying challenges and assets. A collaborative curation process, using participatory methods, is essential to capture this diversity and ensure the exhibition reflects common experiences, priorities, and values of the communities it seeks to engage. This approach is particularly vital for a traveling exhibition, which must adapt to the needs and interests of different audiences as it moves across regions.

To achieve this, engaging such a diverse audience requires inclusive and stimulating methods capable of connecting personal and collective experiences while fostering curiosity and collaboration (Hein 1999).

2 THE INTERACTIVE COLLABORATIVE DANUBE4ALL PUZZLE WALL CONCEPT

At the heart of this bottom-up initiative, the Interactive Collaborative Danube4all Puzzle Wall was identified and tested as an approach to capture attention and actively involve citizens to contribute with their insights and ideas in a structured way. To meet this challenge of engaging diverse audiences, the Puzzle Wall employs a large-format jigsaw puzzle map representing the Danube basin. This approach invites participants to contribute their personal and intellectual approaches to the planned Danube exhibition by considering three guiding questions:

- Key messages: Which facts, aspects, and stories about the Danube and its valley would you like to see featured in our future Danube exhibition?
- Critical questions: If you could influence the management and conservation of the Danube and its valley, what are the most pressing issues you would address?
- Visualization methods: When visiting exhibitions, what captures your attention? How do you prefer information to be presented in a traveling exhibition about the Danube?

Participants were invited to share their responses by writing them on Post-it notes. Each note was then attached to one piece of the puzzle, which was then placed on a magnetic whiteboard, hence step by step complementing a visual representation of the Danube basin in a collaborative manner.

This participatory exercise was implemented in a variety of events, in places along the upstream, midstream, and downstream sections of the Danube. Besides laypersons, experts in aquatic ecology, staff from authorities, NGOs, and representatives from Water Museums, adults, young and children participated, ensuring a balanced integration of public-driven inclusivity with research-driven scientific rigor. This dual focus supports the traveling

exhibition's educational impact, thus making it culturally meaningful and relatable to diverse communities.

These interactive co-creation activities were conducted during ten events between April and November 2024, engaging more than 300 participants who provided 527 responses to the guiding questions (Table 1). Participants were encouraged to post either one or several responses. Displays of the Interactive Collaborative Danube4all Puzzle Wall were linked to larger events, as Citizen Science Festival in Austria, Aquarium Day in Karlovac - Croatia, outdoor festivals in Ulm, Germany, and Tulcea, Romania, as well as workshops, conferences, and meetings across the Danube basin. These varied settings reflected the envisaged travel route of the envisioned exhibition, and enabled contributions from a wide array of audiences (Figure 1).

The 527 contributions received on post-its will be systematically and qualitatively analyzed to identify recurring themes, regional priorities, and diverse perspectives, providing valuable input for shaping the content of the exhibition concept. The results of this analysis, including key insights and trends, will be shown in the presentation.

To complement in-person participation, a QR code linking to the questions was distributed, offering a digital option for input. However, no responses were received via the QR code, underscoring the value of engaging, hands-on activities for effectively capturing citizen contributions. This result highlights the importance of engaging formats, such as the Interactive Collaborative Danube4all Puzzle Wall, in fostering meaningful participation.

The collected insights offer a rich foundation for shaping the Blue Danube traveling exhibition concept. This co-creation process hence ensured that the voices of diverse communities became integral to the exhibition's development, fostering a shared vision of sustainable stewardship for the Danube basin.

Table 1. Overview of the co-creation events, detailing the date, number of responses collected, number of participants, audience type assessed, and the corresponding Danube region represented.

	Event	Date	Nr. of Records	Nr. of Participants	Audience Type	Danube Region
1	Danube Festival Ulm (DEU)	10.07.2024	35	22	General public (visitors)	Upper Danube
2	ECSA Festival Vienna (AUT)	06.04.2024	108	68	General public (museum visitors)	Middle Danube
3	AQUATIKA Aquarium, Karlovac Birthday (HRV)	19.10.2024	152	N/A	General public (aquarium visitors)	Middle Danube
4	AQUATIKA Aquarium Karlovac Workshop (HRV)	23.10.2024	54	40	Pupils	Middle Danube
5	RowMania Tulcea (ROU)	07.09.2024	15	15	General public,(event visitors)	Lower Danube
6	Close Project Timisoara (ROU)	21.11.2024	37	17	Authorities, NGOs, students	Lower Danube

7	DANUBE4all Annual Meeting (SRB)	24.05.2024	42	28	Researchers, project partners in DANUBE4all	Upper, Middle, Lower Danube
8	EcoDaLLi Living Lab Ulm (DEU)	09.07.2024	17	17	Researchers, partners in other Danube Lighthouse projects, ministry staff, entrepreneurs	Upper, Middle, Lower Danube
9	IGB Summer Party (DEU)	04.07.2024	33	33	Scientists	
10	WAMU-net Conference Porto (PRT)	10.10.2024 11.10.2024	34	21	International water museum experts	
		Total	527	261 + N/A		



Fig. 1 Co-creation exercises with various participant groups: (a & e) scientists; (b) general public from the Lower Danube; (c) partners of other Danube Lighthouse projects; (d) Water museum experts; and (e) the completed Danube4all Puzzle Wall showcasing contributed posts. (Source: G. Costea, 2024).

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