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Waving back

Reflections on the WaVE project and perspectives on the future of water-linked heritage

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Waving back: reflections on the WaVE project and perspectives on the future of water-linked heritage

Edited by Marcin Dąbrowski,
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and Hans Thoolen

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Introduction

WaVE stands for **Water-linked heritage Valorization by developing an Ecosystemic approach**. This Interreg Europe project brought together five European locations that have in common a rich history of cultural heritage in which water plays an important role. The participating locations were: Breda in the Netherlands, Aarhus in Denmark, Ravenna in Italy, Alicante province in Spain, and the Ister-Granum region across the Slovak-Hungarian border. WaVE's main goal was to exchange knowledge and insight across those territories to promote integrated adaptive reuses of water-linked cultural heritage sites. The approach used during the project integrated water-linked heritage valorisation with ecosystemic change for sustainable regional and urban futures. The ecosystemic approach advocated by WaVE entails considering water-linked heritage in a holistic way, connecting the tangible, intangible, and natural heritage values and harnessing its power as a catalyst for integrated, place-based, and participatory strategies promoting sustainability and addressing the wider socio-economic and environmental challenges faced by cities and regions.

The implementation of the WaVE project entailed a close collaboration with stakeholders across sectoral and administrative boundaries, co-creating knowledge and strategic actions for water-related heritage valorisation. Storytelling was used to engage stakeholders, maintain the momentum of this engagement, and communicate the outcomes of the project. The five partners engaged local and regional stakeholders to formulate action plans for policy change. These plans addressed challenges and opportunities identified through dialogue, drawing inspiration from several interregional knowledge exchanges. Key practices included storytelling, placemaking, stakeholder engagement based on co-creation, and leveraging heritage features for diverse policy agendas, from resilience to climate change impacts, water management, economic development, urban renewal, to tourism. The action plans, implemented in 2022-2023, aimed to trigger significant changes in municipal and regional policies, supported by EU Cohesion Policy programmes. The project has fostered dialogue, knowledge exchange, and lively debates on water-linked heritage's significance and its role in addressing societal challenges.

Figure 1 UN Sustainable Development Goals addressed by WaVE (Image: United Nations)

The WaVE project approach aligns with several essential global and European policy documents. For instance, it supports various Sustainable Development Goals (SDGs) formulated in the United Nations' 2030 Agenda (United Nations, 2015). These include SDG 5: Clean Water and Sanitation; SDG 11: Sustainable Cities and Communities, with a specific focus on Target 11.4 concerning the safeguarding of cultural and natural heritage; SDG 13: Climate Action; and SDG 17: Partnerships for the Goals, aiming to create effective partnerships for sustainable development.

Moreover, The WaVE project is closely linked to the European Green Deal's objectives, as it promotes integrated adaptive reuses of water-linked cultural heritage sites to contribute to the conservation and sustainable use of natural resources. Additionally, the WaVE project actively supports the Green Deal's principle of engaging diverse actors in achieving sustainability goals, and it shares the objective of raising awareness and promoting behavioral change towards sustainable practices. Notably, WaVE's approach aligns well with the multidimensional approach advocated by the Green Deal.

Furthermore, the WaVE project can be of great value for the implementation of the principles of the New European Bauhaus (European Commission, 2021), an initiative launched as part of the European Commission's commitment to the European Green Deal. Inspired by the influential Bauhaus movement of the early 20th century, the New Bauhaus seeks to integrate art, design, sustainability, and innovation to shape a more sustainable and inclusive future. The WaVE offers tools that promote the values of the initiative, for the implementation of multidisciplinary approaches, bringing together stakeholders to collaborate on projects, encouraging experimentation, creativity, circularity, and co-creation to develop innovative solutions. Similarly to WaVE, the New European Bauhaus emphasises the importance of user-centred design and human well-being, seeking to create

spaces, products, and services that enhance the quality of life, promote social cohesion, and respect cultural diversity. In present times, when politicians are deeply worried about the energy transition and the housing demands, the WaVE project also helps to remind them of the values of heritage and its significance and as a 'vector' pushing spatial development towards a more sustainable future, instead of considering it just a 'sector' (protection of heritage from spatial change) or 'factor' (asset) in spatial development (Janssen, Luiten, Renes and Stegmeijer, 2017).

In section 2, this document presents five key messages formulated on the basis of the actions developed by the partners during the project, combined with the observation of the knowledge transfer processes that led to the elaboration of the action plans, and the insights from the debates during the project events. Section 3 overviews the state of play in heritage valorisation policies across the WaVE's five locations and trends therein while summarising the changes in each of these locations towards an ecosystemic approach to water-linked heritage achieved during the project's duration. The last section is dedicated to looking ahead, reflecting on the challenges and outlook for the partners and lessons from WaVE in the wider European perspective.

Figure 2 The water of the Darsena of Ravenna connecting the city with the coast and the ancient city and port of Classe (Image: Municipality of Ravenna)

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Key messages from the WaVE project

Over the nearly four years of the WaVE project, the partners engaged in an intensive process of interregional knowledge exchange, analysed the status quo in heritage valorisation in their areas with inputs from the local stakeholders and co-produced with them action plans intended to drive policy change towards an ecosystemic approach to water-linked heritage. Through animating, observing, and studying this rich learning process, we drew five interrelated key messages, which can offer guidance and inspiration for practitioners working with water-linked heritage.

Figure 3 Tibi Dam in Monnegre river valley (Image: Marcin Dąbrowski)

Embrace sustainability and nature-based solutions: We believe that it is essential to build awareness among stakeholders and citizens to consider water and water-linked heritage as valuable resources. We recognize that both are vulnerable to climate change impacts. However, they also hold the potential to inspire us to develop nature-based solutions for climate adaptation. By drawing on techniques and knowledge from the past, we can create sustainable practices that minimize environmental impact. Embracing sustainability also means adopting an ecosystemic approach, integrating past knowledge and heritage values rather than focusing solely on human-centred approaches. Water is then considered a vital element that connects visions for urban and regional transformation with transitions in energy, mobility, and the creation of blue-green spaces. By means of such a holistic approach, we can design new landscapes and pathways towards sustainability.

A good illustration of integrating past knowledge and heritage values can be found in Alicante, where the remarkable Tibi Dam, built in the 16th century (see Figure 2), and other water-related infrastructures are set to be part of the efforts to revitalize the River Monnegre. Alicante has a rich history of embracing traditional water techniques and knowledge, such as in Vega Baja, Almoradí, where traditional irrigation practices have nurtured over 2000 hectares for the production of artichoke. This exemplifies how different territories can draw upon their cultural heritage to take pride in and use their water resources in a sustainable way, while fostering a harmonious connection between tradition and progress.

Empower stakeholders, by promoting co-creation: We advocate for a shift from top-down decision-making to inclusive and open engagement with diverse stakeholders and social groups. By involving them in the valorisation of water-linked heritage, we

can identify and seize opportunities for our cities and regions. This collaborative approach promotes ownership, fosters innovation, and generates new ideas and solutions. Training programs and capacity-building initiatives can empower stakeholders to actively participate in the preservation and revitalization of water-linked heritage.

Co-creation of knowledge and solutions for water-linked heritage valorisation requires building and maintaining relationships with stakeholders. Through co-creation, we can achieve long-term impacts and social acceptance of heritage valorization strategies. Furthermore, we believe in the power of co-exploration and co-design to unlock the hidden potentials of water-linked heritage. Through collaborative workshops, joint research projects, and participatory design processes, we can identify new ways to valorize water-linked heritage and develop innovative strategies for implementation.

WaVE partners have proposed several actions to enhance coordination and communication processes among organisations involved in water-linked heritage valorisation. Conflicts of interest have been recognised among heritage-related organisations, particularly within municipal areas of urban (re) development and management, driven by different interests and priorities of various political backgrounds. These actions aim to overcome "silo-thinking" and achieve more effective redevelopment and higher-quality outcomes. Facilitating constant exchange and collaboration among disciplines and stakeholders enriches both the process and content of these actions, fostering motivation for collaborative work. The Water Table initiative in Breda is a good example of such actions, bringing together regional and local stakeholders to foster synergies and develop innovative cultural and natural heritage valorisation strategies.

This initiative was inspired by Alicante's Provincial Water Board, a panel of water experts and civil society representatives, working in Alicante to agree about water matters, in a region where water is very scarce.

Harness the power of storytelling: Storytelling is a powerful tool to engage stakeholders and stimulate their interest in water-linked heritage. Through compelling narratives, we can emphasise place identity, shared values, and the potential of heritage to create better, more sustainable environments. By using creative techniques such as theatre, visual arts, and multimedia platforms, we can ignite collective pride and ownership of strategies and policies.

Figure 4 Visual summary of the themes and actions related to storytelling activities conducted by the WaVE partners (Image: Chari Cámara)

Storytelling has been a central element of the participatory approach in the WaVE project, which has witnessed numerous examples of its transformative power for both tangible and intangible heritage. The Bridge Guard Art Residency in Ister-Granum stands out as a good example of an initiative to preserve intangible water-related heritage. It was created with the purpose of preserving the rich history of the Maria Valeria bridge, a symbolic crossing over the River Danube that connects Štúrovo in Slovakia with Esztergom in Hungary (Figure 5). The centre showcases the profound significance this bridge holds in the lives of the people residing on either side of the river. It serves as powerful evidence of the enduring stories and shared experiences that bind communities together, transcending borders and fostering a deeper sense of identity and understanding.

Amongst the diverse actions developed by WaVE partners across the five European locations, we can distinguish a number of actions involving storytelling about the historical and future value of water-linked heritage. Notable examples of such actions include the 'Placemaker' initiative in Breda, which utilises cultural events centred around water-linked heritage to engage key stakeholders from private, governmental, and civil society sectors in the revitalization of the CrossMark area (Fig. 7). Additionally, the 'Wiki' project in Aarhus aims to facilitate knowledge co-creation and storytelling about water heritage, enabling the exchange of stories and information related to this important aspect of cultural heritage (Fig. 8).

Figure 5 Mária Valéria bridge over the Danube, connecting Eszetergom and Štúrovo, the site of the Bridge Guard art residency (Image: Wikimedia Commons)

Figure 6 Visual record of the debate on the power of storytelling to promote stakeholder and citizen engagement in valorisation of water-linked heritage (Image: Chari Cámara)

Foster identity and inclusivity: Water-linked heritage plays a significant role in shaping local identity and represents shared values. By celebrating diversity and involving different perspectives, we create an inclusive environment where everyone's voice is heard. This includes engaging in dialogue with local communities, indigenous groups, and marginalised populations to understand their unique experiences and incorporate their knowledge into decision-making processes. By bringing together stakeholders from various backgrounds, we can think "outside the box" and overcome challenges. In this way, we can harness the potential of heritage as a tool for social integration, promoting inclusive spaces that foster understanding, respect, and cooperation among diverse communities.

Figure 7 Place-making on the post-industrial sites in Breda's CrossMark redevelopment area: Pier 15 skatepark, Brack restaurant, Belcrum beach (Images: G. Lanting via Wikimedia Commons)

Figure 8 Overview of the WaVE project sites in Aarhus City Archive's Wiki: the historic waterfront, coastal stretch from Skovvejen to Strandvejen; the old industrial harbour at Mindet, Mellearmen and Kornpier; and Aarhus river

WaVE has seen several examples and actions which foster inclusivity and identity. The municipality of Breda, for example, presented "Development in dialogue" as a good practice example for dealing with heritage sites. It basically means to leave aside the standard heritage procedures, changing towards more flexible attitudes for redeveloping heritage. Understanding the perspective of the developers and local people to valorise the cultural heritage, without listing the building by the heritage advisors, has opened new opportunities and smoothened redevelopment processes in eight projects since 2000.

In our visit to Alicante, the WaVE partners witnessed several small-scale local projects and actions that are already fostering local identity and inclusion along the River Monnegre. Examples of this are the restoration of the paper mill, the Mutxamel small dam and the engagement of local people in agricultural projects.

Broaden the definition of heritage, embracing dynamic approaches: To fully realise the potential of water-linked heritage, we need to expand our understanding of heritage beyond buildings and infrastructure. It should include intangible cultural heritage and natural heritage. By recognizing the interconnectedness of different elements, we can develop comprehensive strategies that preserve and promote the richness of water-linked heritage. Furthermore, rather than preserving heritage in its current state, we should recognize its dynamic potential to drive (sustainable) development (see Janssen et al., 2017).

Figure 9 Visual record of the debate on the use of water-linked heritage as a vector of ecosystemic change (Image: Chari Cámara)

This new definition and approach have been widely embraced by the WaVE partners, some of whom have changed initial infrastructure-dominated perceptions into broader views, as it was expressed by the Alicante team members.

Water-linked heritage is now considered not only as a vector for environmental upgrading but also for improving citizens' lives in our cities and creating economic development.

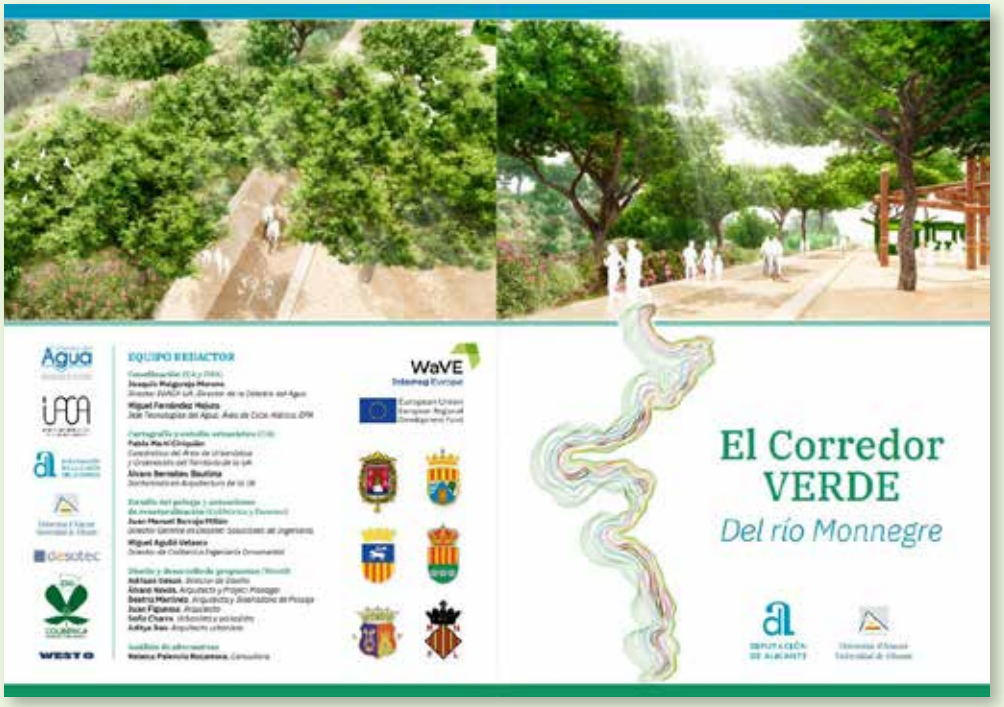

Figure 10 The River Monnegre Green Corridor project launched in Alicante (Image: Alicante Province)

The River Monnegre Green Corridor in Alicante is an excellent example of using water systems as a backbone for rethinking heritage. This project, launched in July 2021, aims to connect the Tibi Dam with the Mediterranean Sea by restoring the riverbed and establishing a sustainable mobility axis spanning approximately 20 kilometres and encompassing 200 hectares of land (Figure 10). The designated route runs across several municipalities, including Tibi, Xixona, Alicante, Mutxamel, Sant Joan d'Alacant, and El Campello. It will include dedicated bike lanes and scenic wooded trails, showcasing water-related natural elements such as springs, gullies, old dams, and mills, hermitages, ditches, and orchards.

Furthermore, two other partners have successfully expanded the concept of cultural heritage in the policies. Aarhus' targeted policy change was precisely the inclusion of the water-related areas in the revision of the Cultural Environment Report, which is part of the new Municipal Plan. Similarly, Ravenna has strived and succeeded to include intangible and natural heritage in its approach to water-linked heritage regeneration.

Towards an ecosystemic approach to water-linked heritage valorisation: insights from the WaVE locations

3

3.1 Our point of departure: taking stock of the heritage policy features and trends

In order to understand better the policy context in which the WaVE action plans were developed and implemented to trigger policy change, we explored and compared the state of play and trends in heritage valorisation policies across our five locations. To this aim, we developed a classification scheme - a typology - to analyse and compare different approaches to heritage valorisation by examining the findings from regional status quo analyses conducted across five locations. We gathered insights for this through questionnaires and online workshops involving experts from across the WaVE locations. This comparative study unveiled significant disparities in water heritage valorisation methods across various European contexts, while also highlighting some shared characteristics and trends, thus providing a comparative overview of the baseline for the policy change that WaVE was to deliver.

The typology is based on our understanding of an **ecosystemic approach to water-linked heritage valorisation.** Such an approach (1) recognises the **importance of interconnectedness between water systems, cultural heritage, natural resources, and the socio-economic and spatial features of a particular area.** This holistic and integrated approach also (2) requires a degree of **flexibility and adaptability** to go beyond the traditional, narrow and rigid understanding of cultural heritage. It also makes it (3) necessary to **work across disciplinary and policy boundaries to seek synergies between the policy agendas** concerned: from urban and regional development, urban planning, economic policy, water management, and environmental protection, to culture and tourism policies. Moreover, pursuing the ecosystemic approach to heritage valorisation (4) calls for the **engagement of a broad range of stakeholders and citizens** to gain access to local and expert knowledge, (re)define heritage values, co-create narratives about heritage and co-design strategies and actions to valorise it. Finally, doing all this (5) requires a **place-based approach**, whereby policies and strategies are adapted to address place-specific challenges and opportunities. This, in turn, calls for a strong role of the regional and local authorities which are best suited to develop such a place-based approach together with the regional and local stakeholders, while still coordinating and synergising their activities with the national and European levels.

City / region	Flexibility in protection of heritage	Integration	Broadness of understanding of heritage	Participation	Place-based / decentralisation
Aarhus	2 - Intermediate	2 - Coordinated	2 - Built and intangible heritage	2 - Active	2 - Deconcentrated
Breda	2 - Intermediate	3 - Integrated	3- Built and intangible as well as natural heritage	2 - Active	3 - Decentralised
Ister-Granum	2- Intermediate	2 - Coordinated	1 - Mainly built heritage	1 - Passive	2 - Deconcentrated
Alicante	1 - Rigid	2 - Coordinated	3 - Built and intangible as well as natural heritage	1 - Passive	3 - Decentralised
Ravenna	2 - Intermediate	2 - Coordinated	3 - Built and intangible as well as natural heritage	2 - Active	2 - Deconcentrated

Table 1 Overview of the typology across the five WaVE project locations (Source: Authors)

Building on these assumptions about what constitutes an ecosystemic approach to heritage valorisation, we defined five dimensions to analyse the current water-linked heritage valorisation policies and explore the extent to which they already adopt elements of this approach. For each of these dimensions we also defined three-step scales, as follows. The first dimension focuses on the level of safeguarding heritage and encompasses the flexibility in approaches to heritage valorisation. It ranges from (1) stringent and inflexible preservation methods, limiting opportunities for wider socio-economic or environmental changes, to (2) intermediate approaches that allow for some adaptability, and finally, to (3) flexible approaches that embrace heritage as a resource for policy change and encourage adaptive reuse. In most of our case study locations, heritage protection fell under the intermediate category, except for Alicante, which followed a rigid approach with limited scope for the creative use of heritage for policy change.

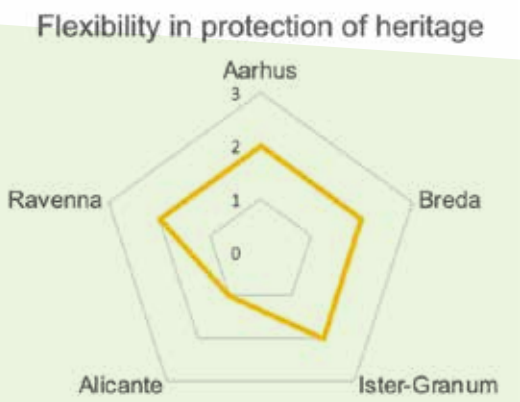

Figure 11 Flexibility in protection of heritage across the WaVE locations (Image: Authors)

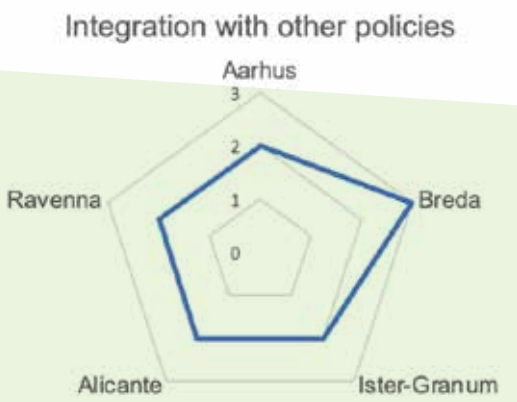

Figure 12 Degree of integration of heritage valorisation policies with other sectoral policies across the WaVE locations (Image: Authors)

The second dimension evaluates the degree of integration and coordination between heritage policies and other policy areas, such as environmental or economic policies. It ranges from (1) isolated heritage policies with minimal connections to spatial planning or other policy agendas, (2) to coordinated efforts where heritage valorisation policies align with spatial planning and other sector-specific policies to generate synergies and avoid conflicts, and finally, (3) to integrated approaches where heritage becomes a catalyst for economic, social, and environmental changes, forming an integral part of spatial planning and other development-oriented policies. Among the five cases, Breda stood out as the only location where water-linked heritage policy was considered "integrated" with spatial planning and other sectoral policies, while the rest demonstrated "coordination."

The third dimension explores the inclusiveness of heritage policies by considering the inclusion of intangible and natural heritage elements. Heritage policies can focus solely on (1) built heritage (buildings and infrastructure), (2) incorporate both built and intangible heritage (including aspects of identity, customs, storytelling, etc.), or (3) encompass not only built and intangible heritage but also natural heritage, thus promoting the valorisation of tangible, intangible, and natural cultural heritage. Ravenna, Breda and Alicante had the most comprehensive understanding of heritage in their valorisation policies, encompassing intangible and natural elements. In contrast, Aarhus and Ister-Granum remained focused predominantly only on built and intangible cultural heritage, without clearly integrating natural heritage into the heritage policy.

Figure 13 Broadness of the understanding of heritage across the WaVE locations (Image: Authors)

Figure 14 Degree of participation in heritage valorisation policies across the WaVE locations (Image: Authors)

The fourth dimension assesses the level of stakeholder involvement in decision-making processes concerning heritage valorisation. It spans from (1) passive participation, where stakeholders are merely informed or consulted, to (2) active engagement, involving two-way dialogue and a degree of responsibility in policy implementation, and finally, to (3) elements of co-creation, entailing collaborative knowledge generation, solution design, and outcome evaluation. Aarhus, Ravenna, and Breda were regarded as having "active" stakeholder participation based on assessments by stakeholders and experts in workshop settings, while Ister-Granum and Alicante exhibited "passive" participation without active engagement in decision-making.

Lastly, the level of decentralisation - the fifth dimension that we considered - sets the conditions for making heritage valorisation policies place-based, that is tailored to the specificities of the location where it is implemented. While we did not measure the degree to which policies are place-based per se, we made an assumption here that the capacity to deliver place-tailored policies is enabled through decentralisation of competencies and decision-making powers to the regional and local levels. Centralised approaches to heritage valorisation policies, steered by the central governments can hardly take into account the specificity of the places and engage effectively in participatory and co-creative processes with the local and regional stakeholders. This can best be achieved if the local or regional level authorities are in the driver's seat. Hence to capture this capacity to deliver place-based heritage policies, we focused on the degree of decentralisation, distinguishing between the following aspects: 1) centralisation (where decisions,

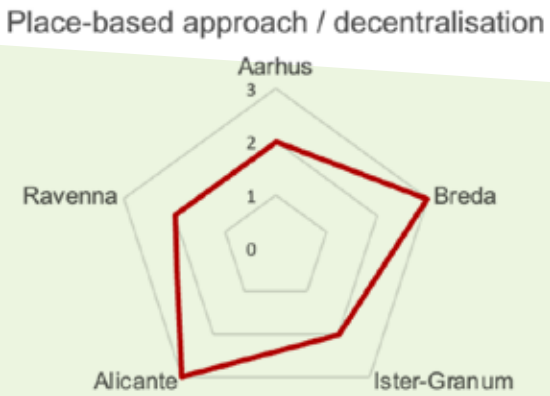

Figure 15 Degree to which heritage policies are decentralised and able to deliverer place-based strategies (Image: Authors)

funding, and rules are determined by the central government), 2) deconcentration (with sub-national representatives of the central authority playing a crucial role), and 3) a decentralised approach (allowing local or regional authorities a degree of autonomy in defining and managing their heritage policies). Breda (city) and Alicante (province) exhibited the highest degree of decentralisation. In Aarhus and Ravenna, the municipalities have less independence as they must work closely with central government representatives who hold a significant position in policy-making. Regarding Ister-Granum, while deconcentration was observed, it is important to note that it functions as a cross-border entity within the framework of the European Grouping of Territorial Cooperation, forming a community of local governments rather than being part of the territorial administration of a single state.

Figure 16 Ister-Granum Blue Routes site with coal loading industrial monument (image Peter Nagy)

Figure 17 Artist impression Backer + Rueb Breda (image Amvest)

Beyond the state of play, we also inquired our WaVE partners and stakeholders about the trends in water-linked heritage policies across the five locations in recent years. While there is considerable diversity in the existing policy landscape, an analysis of the trends reveals a significant degree of convergence and similar trajectories of policy change, which are broadly in line with the heritage valorisation approach promoted by WaVE (flexible, integrated, eco-systemic, inclusive and bottom-up), albeit with varying starting points and rates of progress (see Table 2).

Notably, there is a discernible trend towards a broader understanding of heritage valorisation (visible across all of our locations) and increased stakeholder participation in heritage policies in places with an already more proactive approach to participation (characterising Aarhus, Breda, Ravenna). In places with more passive the latter was not yet seen as a major trend: in Ister-Granum, no major change towards greater participation of stakeholders and citizens was noted prior to the launch of WaVE, whereas in Alicante, while the approach remained stable the experts consulted reported some early signs of a shift towards more active engagement of stakeholders and citizens. Overall, however, we found evidence of an ongoing shift towards a more comprehensive, ecosystemic perspective on heritage, where citizens and a wider range of stakeholders have a greater voice and active role in co-creating and co-producing valorisation policies. A similar trend can be observed in the integration of heritage policies with planning and sector-specific policies, with most locations showing a tendency to transcend the boundaries between sectors and achieve closer integration.

That said, the trends in the degree of heritage protection and decentralisation are more nuanced. In terms of protection, there is a general movement towards more flexible, market-oriented approaches to heritage valorisation, although some locations still maintain a stable approach. Regarding decentralisation, while a trend towards decentralisation is evident in certain places (Aarhus, Breda), most locations maintain a relatively stable balance of powers and responsibilities between central and sub-national authorities, reflecting the stability of territorial administration systems.

Figure 18 Aarhus Waterfront (image Dennis Borup Jakobsen).

City / region	Flexibility in protection of heritage	Integration	Broadness of understanding of heritage	Participation	Place-based / decentralisation
Aarhus	↑	⦿	↑	↑	↑
Breda	↑	↑	↑	↑	↑
Ister-Granum	⦿	↑	↑	⦿	⦿
Alicante	⦿	↑	↑	↑	⦿
Ravenna	↑	↑	↑	↑	⦿

Table 2 Overview of the trends in heritage approaches across the five WaVE project locations (Source: Authors)

↑ *trend towards the ecosystemic approach promoted by WaVE*
↓ *trend towards more traditional approach*
⦿ *stable approach (no change)*

In Alicante's case, our focus was on the Province of Alicante, the regional authority. While we noted stability in the relations between the central government and the Province, we observed a trend towards the more proactive role that the Province took in terms of shaping the policy agenda and steering its implementation, by facilitating the engagement of municipalities and other regional and local stakeholders in the policy process, which remains increasingly pluralistic.

This overview of the state of play helps to put the achievements of the WaVE project in perspective. In fact, it allows for understanding the point of departure or the baseline for the policy change triggered in WaVE, which was different for each of the five locations involved in the project. It also allows for a better understanding of how the WaVE action plans and policy changes that they catalysed fit within the already ongoing trends in water-linked heritage valorisation or how, in some cases, they spearhead new trends, as will be discussed in the next section.

3.2 Actions and policy change achieved in WaVE

The involvement of the five locations in the WaVE project had a major effect in terms of rethinking water and water-related heritage, pushing each of the partners towards the ecosystemic approach. Thus, in Aarhus, WaVE had a direct effect on the heritage policy and future planning policies and documents of the municipality of **Aarhus**, with an emphasis on the urban coastline, the old industrial harbour, and the river Aarhus, seen as an integral axis connected by water. This was achieved mainly by means of digital and analogue communication on water-linked heritage values, broadening the understanding of this heritage to include natural heritage along the river banks, and, crucially, deepening the collaboration between the City Archive, responsible for heritage mapping and protection, and the planning department of the municipality. This resulted in a new perspective on heritage as a vector for sustainable development in the renewed planning documents in Aarhus. That way, the policy change triggered by WaVE contributes to the trend towards a more integrated and place-based approach, while broadening the understanding of heritage in valorisation policies and in spatial planning.

Alicante started with design-thinking and imagineering process related to the historic Relieu and Tibi dams and reservoirs, and further with the elaboration of the Alicante Blue Routes. In the course of the project, Alicante partners built on those ideas to develop, in quite a spectacular way, an integrated strategy for the Monnegre Valley, connecting the different water-linked heritage sites along the river. The strategy was elaborated in close collaboration with a plethora of regional stakeholders. It was inspired by an amalgamation of insights from the different good practices from the WaVE locations, especially concerning proactive stakeholder engagement and the use of water as a strategic connector between policy agendas across the territory. The development of the strategy illustrates very well the integrated, ecosystemic approach that WaVE sought to promote and adds to the ongoing trends towards the use of water heritage valorisation as a vector to promote sustainable development, address environmental challenges and create new economic opportunities, and towards deepening public participation.

In **Breda**, WaVE solidified the position of water-related heritage within the city's ongoing massive transformation projects, namely in the CrossMark area. Besides that, WaVe contributed to the recognition of the value of placemaking in processes of transformation, also for the validation of water-related heritage within the urban tissue. Thanks to WaVE, in the discussions on the city's future, valorisation of water-linked heritage became an issue of equal importance to other major policy agendas, from urban management, and spatial planning, to water management, economic affairs, and tourism. While Breda was already well-advanced in participatory practices and the integrated approach to heritage, WaVE reinforced those trends and spurred the creation of new collaborative platforms, such as the Alicante-inspired Water Table bringing together a range of stakeholders to rethink urban and regional development through the prism of water.

Ister-Granum, in the course of the WaVE project, rediscovered the face, the force, and the spirit of water in a cross-border (Hungary-Slovakia) context. This partner made a systemic inventory and maps of water-linked heritage, gathered citizens' stories related to this, and made it accessible for the local residents and tourists. This gave a further boost to the Bridge Guard Project (cultural dimension), and lead to the revitalisation of several water mills in the region, while laying foundations for a number of projects to be

funded with European Union's Cohesion Policy. Ister-Granum's policy change triggered through its WaVE action plan reflects especially the deepening of citizen engagement trend and adds to the shift towards a more integrated perspective connecting water-linked heritage to other policy agendas, from culture to tourism.

Finally, in **Ravenna**, WaVE gave a further boost in the recognition of the water-related values in three coherent areas in and around the city: the Darsena development axe, the old harbour of Classe, and the Maritime Park. WaVE made way for the elaboration of a 3D digital platform for stakeholders and citizens, stimulated entrepreneurship, and boosted the revitalisation of buildings and infrastructure, including the previously undervalued post-industrial sites. Importantly, WaVE also had an influence on major policy documents, introducing a new perspective on water-linked heritage to the Transformative Agenda for Sustainable Development of the Ravenna Municipality and the Regional Operational Programme funded by the European Regional Development Fund. The European flag on the project helped a lot to generate more interactions between essential stakeholders. Like in other WaVE locations, the policy change in Ravenna produced during WaVE, added to the already ongoing trends towards a more integrated approach to heritage valorisation as a catalyst for urban transformations as well as more active engagement with the regional stakeholders and citizens.

The lessons drawn from this cross-regional learning and policy change process brought about by WaVE were distilled into 10 points of the WaVE Manifesto (Interreg WaVE, 2022) intended to inspire similar shifts elsewhere in Europe and beyond. The manifesto draws attention to water and water-related heritage in the massive territorial transformations and revision of basic urban and regional systems (energy, mobility, water management, etc.) needed in the face of climate change and a growing emphasis on circular economy as a means to address resource overconsumption. Moreover, the good practices of WaVE (Interreg WaVE, 2020) are stored in the database of Interreg Europe (Interreg Europe, n.d.), while the WaVE partners contributed to several sessions of the Interreg Learning Platform.

Figure 19 Ravenna Museo della Città e del Territoria (image Hans Thoolen)

Figure 20 Darsena Brewery (image Hans Thoolen)

4

Looking ahead

4.1 Next steps for the WaVE partners

Even though COVID caused restrictions in the cooperation the partnership succeeded in creating a very productive team spirit and catalyst effect for the motivation of stakeholders on the local level. Maintaining strong motivation is absolutely necessary in projects concerned with water and water-linked heritage, because the effects of the actions may not be immediately tangible and take time to bring fruit. Soul (triggering inspiration around the subject), trust (developing faith in each other and in the value of the final results), quality (going for the maximum value of the content and process), theatre (taking time to be an ambassador and to showcase the results), and courage (tackling the massive challenges and engaging partners with sometimes contradictory interests) are crucial elements. Together they create pride in the projects and transformations of the locations, ownership of the strategies, and long-term commitment to them. This is needed to overcome the many challenges ahead when it comes to advancing and institutionalising an ecosystemic approach to water-linked heritage.

Figure 21 Visual summary of the five principles that inspired the creation of WaVE action plans (Image: Chari Cámara)

First, there is the struggle around the recognition of the values of this subject. We need to give them a place among the many other regional and urban priorities. It takes time to bring the stakeholders together and to adjust the policies operating in the different "silos" around common goals and perspectives.

Then there is the financial issue. The valorisation of water and water-related heritage goes together with a creative process of finding resources for restoration or regeneration and the making of connections between stakeholders and policy agendas. There is a growing recognition of the values of water and heritage in processes of urban transformation, but the financing of these initiatives is often the difficult next step for private investors and public authorities. The processes connected to these projects take a long time and the return-on-investment calls for a long-term investment strategy that exceeds the four or five years mandates of an elected local or regional government. Still, there is a growing number of Public-Private, Public-Public, and Public-Private-People Partnerships around this subject, which could provide a solution to this challenge.

The complexity of water-related projects asks for new ways of design and the organisation of planning processes. It is, on the one hand, very important that a common and shared perspective is created in which the water heritage values are incorporated. On the other hand, top-down 'blueprint planning' should be avoided, because flexibility is needed in this kind of long-lasting transformation processes, and the speed in which social and economic conditions accelerate nowadays.

Last but not least, it is impossible to realise these costly and long-lasting projects without the support and engagement of the citizens in cities and regions. One of the lessons of WaVE is that citizen engagement in an early phase of planning is vital. Imagineering and storytelling are essential for this, as we have seen in the action plans in Ravenna, Aarhus, and Ister-Granum, inspired by the storytelling undertaken in the Blue Routes of Alicante. Placemakers – or perhaps we should call them 'urban scouts' – play an important role in the discovery and exposure of the values of heritage and their potential for valorising urban or regional character and identity, their possible contributions to economy and culture, and for creative possibilities to address climate change.

All the WaVE partners are motivated to continue their efforts, supported by the local and regional policies that were influenced and adapted thanks to the project (see for example the visualisation of the roadmap towards implementation of the Monnegre Green Corridor, Fig. 17). The first, tangible results are there: changed policies, urban regeneration plans and perspectives that integrate water-related heritage, actual restorations of heritage elements, and recognition of the contribution of urban scouts in making the values of former brownfields known and familiar for the public. More results will be visible in the coming years. It is encouraging that the European Parliament and also the different national and regional authorities across Europe recognise more and more the necessity to invest in water, green, and biodiversity. Their support is definitely needed to attract the necessary private investment.

4.2 Can Europe also surf the WaVE?

In the programmes funded by the European Regional Development Fund there is a growing attention for water and water-related subjects. Improving the water quality in polluted European rivers was one of the first water issues tackled by the EU and is still an urgent challenge. Water quantity got more attention after the flooding of many European cities in recent decades

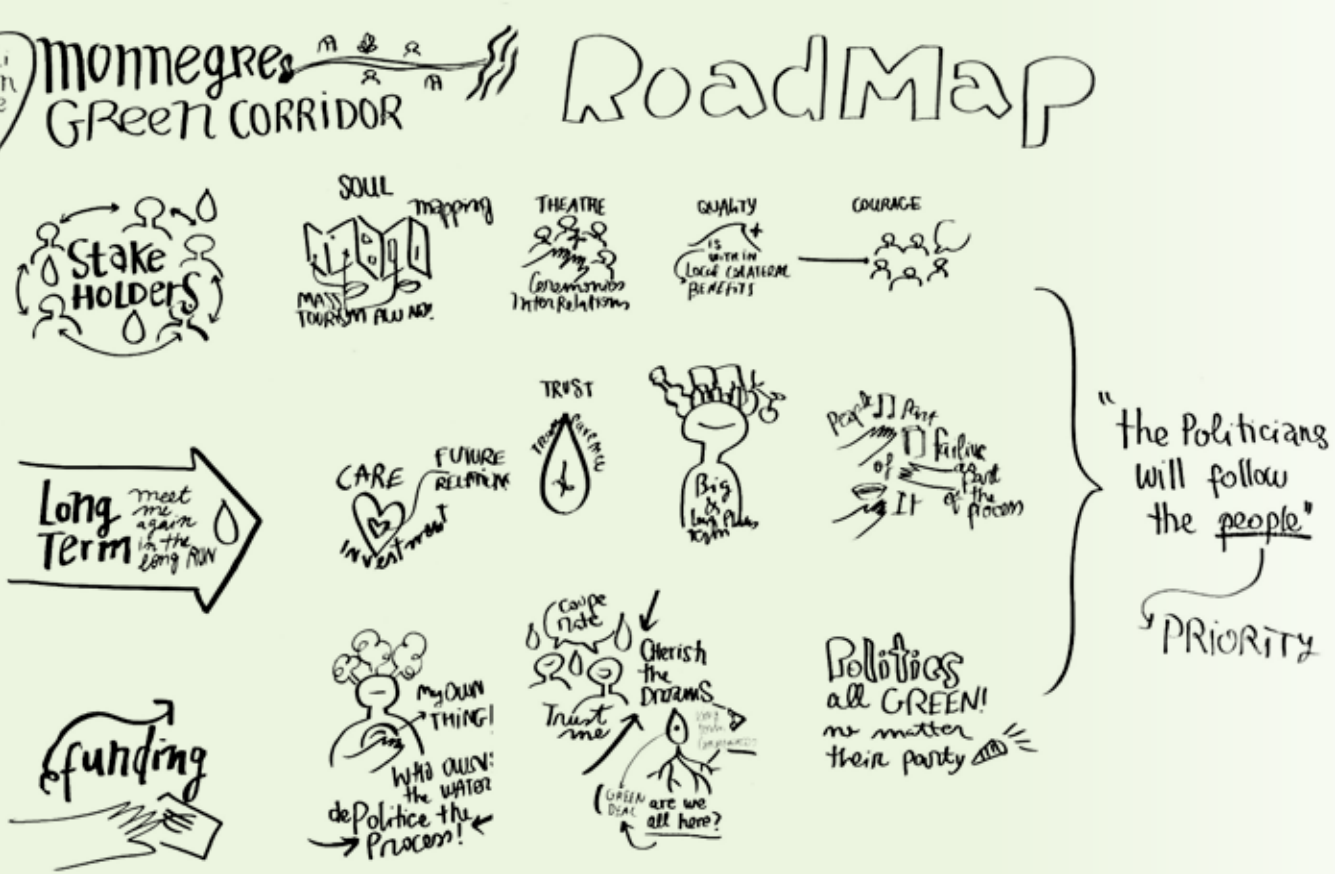

Figure 22 Visualisation of the roadmap toward the implementation of the Monnegre Green River Corridor in Alicante Province (Image: Chari Cámara)

due to heavy rainfall. Over the years, the awareness grew that it is not sufficient to build all kinds of defence works against flooding, but to see the water issue as part of a bigger picture, this was stimulated by the fact that measures are necessary to slow down and even stop the climate change in the world. By creating more flexible space for the rivers and the reopening of former harbours and urban waterways, water is regarded not only as a dangerous element, but also as a strong force for high-quality sustainable urban regeneration.

The health issue is also becoming more and more important: greening of urban areas is not a luxury anymore, but a necessary action to cool down the urban living environment in the face of heat stress risks. Water is an important element in this movement: old or restored waterways are not only important for cooling down, but are also crucial for connecting ecological axes across urban areas. Experiments like the European Urban Innovative Action project "Green Quays" in Breda, which investigates the possibility to bring back nature to the quay walls and the quays themselves are very promising in this sense.

Also, in order to address the challenges related to the transition of urban systems like mobility, energy, and water can play an important role. In different European cities waterways are used for (public) transport and for the import of goods in increasingly difficult-to-reach inner city areas. Aquathermia (heat and cold exchange) is a very promising part of local and regional energy strategies.

In the WaVE project partners investigated the relation between water and water-related heritage. This relation has many dimensions, as we saw in the course of the project. The water issue was the basis of the oldest democratic institutions: people had to make agreements on keeping the lands dry, or, conversely, taking care of the necessary irrigation in dry seasons. Rivers were canalised for transport reasons. Industries were realised along the river to use the water for the transport of goods, cooling down of machines, and unfortunately for a long time and sometimes still for urban sewage or wastewater. Agriculture is largely dependent on effective water management. A lot of this history is still recognisable in all kinds of territorial elements: urban and regional landscape, water management installations like dams, dikes, weirs, mills, furthermore different kinds of real estate (industrial, transport and transfer, military, agricultural, bridge, etc.). In fact, we can learn a lot from our ancestors when we are looking for more nature-based solutions for actual challenges. And we need to cherish the actual material and immaterial relics of past times and integrate them in the plans and perspectives for water-related transformations and transitions.

It is good that the European Union pays more attention to this aspect of European history, character and identity - as illustrated by the New European Bauhaus initiative for instance - and connects the issue to the actual challenges in promoting a more circular way of living and using nature-based solutions. The alternative is that we lose contact with our common history and that the valuable heritage along the rivers and harbours is destroyed to seek more profitable land functions.

We should prevent a massive monofunctional 'residensification' of the European riverbanks and go for multifunctional regeneration with a defined relation with the water, and integration of the remaining water-related heritage. For better or worse, Europe is united by water, and the related challenges need a European action perspective. With the recent initiatives of the European Union within the framework of the **Green Deal** or the New European Bauhaus, we are on the way towards placing water much higher on the policy agenda, but promising and acting are still two different things. Let us take care of the water-related heritage and seize the opportunities it brings, harnessing its power of water to address the burning urban challenges of today!

> ***Young as rain is the river eternally.***

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For more information you can visit the website **https://projects2014-2020.interregeurope.eu/wave/action-plans**

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