

**Proceedings of the  
3rd International Conference on  
Tourism Research  
Universidad Europea de Valencia  
Spain  
27-28 March 2020**



**Edited by  
Dr. José Martí-Parreño, Dr. Roberto Gomez Calvet  
and Dr. Javier Muñoz de Prat**

**Proceedings of the  
3rd International Conference on  
Tourism Research  
ICTR 2020**

**Hosted By  
Universidad Europea de Valencia  
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## **Preface**

These proceedings represent the work of contributors to the 3rd International Conference on Tourism Research (ICTR 2020), hosted by Universidad Europea de Valencia on 27-28 March 2020. The Conference Co-Chairs are Dr. José Martí-Parreño, Universidad Internacional de Valencia and Dr. Roberto Gómez-Calvet, and the Programme Chair is Prof. Muñoz de Prat, both from Universidad Europea de Valencia.

ICTR is now a well-established event on the academic research calendar and now in its 3rd year the key aim remains the opportunity for participants to share ideas and meet the people who hold them. The scope of papers will ensure an interesting two days. The subjects covered illustrate the wide range of topics, from sustainable tourism to the use of social media in destination marketing, that fall into this important and ever-growing area of research.

The opening keynote presentation is given by Professor Enrique Bigne, from the University of Valencia, Spain on the topic of *Facing Uncertainty in Global Tourism: Threats and Opportunities*. The second day of the conference will open with an address by Chris Moon, Middlesex University, UK who will talk about *Sustainable Tourism: the place of eco-innovation*.

With an initial submission of 97 abstracts, after the double blind, peer review process there are 36 Academic research papers, 5 PhD research papers, 1 Masters Research papers and 3 work-in-progress papers published in these Conference Proceedings. These papers represent research from Albania, Brazil, Czech Republic, Ecuador, Egypt, Estonia, Germany, Italy, Lebanon, Lithuania, Oman, Poland, Portugal, Russia, South Africa, Spain, United Kingdom, USA and Vietnam.

We hope you enjoy the conference.

**Dr. José Martí-Parreño**

Universidad Internacional de Valencia

**Dr. Roberto Gómez-Calvet**

Universidad Europea de Valencia

March 2020

# Water and the City: Valorising Guimarães Water Heritage for Tourism

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**Abstract:** Water is the most important natural source of human existence and the main element of the socio-economic development of any industry. Water is an essential in meaningful experience of the visitors, who have an internal relation with this touristic resource as an attraction. As a cultural resource is associated with symbolic and artistic meanings. In urban areas where water is often ignored and its heritage elements are underestimated, the valorisation of its heritage elements and natural state is essential to create a safeguard and protection attitude towards this vital asset of life. To value is to recognise importance, to understand significance, to act towards conservation in both natural and cultural angles, particularly in cities where the conservation of water resources is critical and ignored in an urban development process. In this perspective, the present study attempts to analyse the water heritage state in the historical city Guimarães with the aim to valorise the water heritage resources linked to traditions and local historical narratives. Giving significance to those historical assets, aims to promote sustainable use and sustainable visit development. In this context, it is important to understand the residents' view about the water presence in Guimarães, to understand the local opinion about the valorisation of water heritage for tourism and to understand what could the city do in conservation and the implementation of sustainable attitude related with this vital resource.

**Keywords:** water resources, water heritage, tourism, heritage site, valorisation, cities

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## 1. Introduction

Water is the most important element of the world. It is the lifeblood of the environment, and essential to the survival of all living things. Water is also one of the most critical and the scarce resources for the tourism industry, at the same time UNTWO (2013) emphasises the tourism's significant role and contribution to water conservation. From historical point of view, the water resources (lakes, rivers, streams, springs etc.) play essential role in human society evolution and create unique environments. Historically and to date water resources are also used for various economic and cultural proposes (Deiminiat et al, 2014). As other cultural heritage assets, it is possible to identify aesthetical, historical, communal, scientific, social, among other values typologies (Dastgerdi and De Luca, 2018) that give character and identity to places.

In addition, the water resources attract travellers as a place to visit and enjoy, not only for its natural qualities but also for the symbolic importance for culture (Tuohino and Pitkänen, 2004). Prideaux et al (2009) recognise the rivers as charming natural resource and source of water for humanity's activities. Wilkinson (2015, p. 91) points out that water resources are widely used in marketing purposes by tourism destinations: "Open any travel marketing brochure or website and water is an integral element of most of the holidays offered and destination images". Indeed, all above-mentioned issues indicate the relevance of water resources for the tourism industry (Gössling et al, 2015). At the same time, it should be kept in mind that naturally, the water resources, let it be lakes, rivers, springs etc. are sensitive, therefore, monitoring and preservation of its state must be an important issue. In this sense, the importance of this topic increases with growing various human negative impacts on water resources. Therefore, it is a general interest in preservation water resources from a number of perspectives, as a natural, cultural and historical resource.

Heritage sites and cities are also concerned with the conservation of water resources, since it is a critical resource in operation and development of any city. Moreover, according to previous literature, urbanised areas account for around 60% of residential water consumption (Grimm et al, 2008). In the case of heritage cities, water landscape is in a risk due to the various factors such as, increasing demand for water resources, climate alteration, change in land use among others. A number of official organisations such as the United Nations Educational, Scientific and Cultural Organisation (UNESCO), the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), and the International Council on Monuments and Sites (ICOMOS) were established to protect the world cultural and natural heritage sites. It increases the

responsibility of local authorities, local population and other stakeholders in conservation of heritage sites and its water resources.

Water is a crucial cultural, natural and aesthetic element of the historical city Guimarães (Freitas et al, 2019). Preservation of this heritage is of great importance, as this historical site and landscape are characterised by non-renewable resources and needs to be protected (Malheiro and Costa, 2018), also to guarantee its sustainability for future generation (Council of Europe, 2000). For another perspective, the safeguard of the historical elements related to water, is a way of promoting the preservation of a non-renewable natural element essential to life - water. The valorisation and monitoring of the water is also one of the ways to conserve the historical assets and the local memory related with places, mores, historical behaviours and local traditions (Freitas and Silva, 2013). The conservation of the water heritage is crucial and can be as a solution to address water crises in many places (Sinha, 2019) and contributes for a sustainable and responsible tourism development (Urošević and Rakitovac, 2017).

Therefore, this research attempts to know the resident's perceptions and awareness of water heritage value, state and preservation actions in urban places. Guimarães, one of the rich historical heritage sites of Portugal, has been selected as a case study. This town is an ancient city of Portugal, which inherited a rich traditional urban heritage for many years and should effectively use its historical and cultural advantage to enhance its image. With growing numbers of the tourists to Portugal, a demand to its heritage cities such as Guimarães is also increasing. In this context, this paper discusses the state of various water resources, rivers, fountains, tanks as a natural, cultural and historical heritage from the perspective of local population, with a special attention on its nowadays' aesthetic and welfare element of the city as a touristic destination.

## **2. Review of literature**

Along with the cultural heritage, water and soil are key elements in the dynamics of territorial management and planning, conducted in many territories unalterably over centuries. As a fundamental element in life, its presence in any territory is an asset to conserve, monitor and manage in an integrated environment. In times of climate change and growing urbanisation, this anxiety is widening and planning is required to keep water in original places and in its natural conditions (Alley, 2001; Mrowiec et al, 2018; Rahmasary, et al, 2019). Rojas and Dávila (2019) emphasise that "if we take no action, freshwater resources will soon become scarce while cities and their massive demands for energy will continue to bleed natural resources from the landscape".

Water and its cultural and heritage elements are resulting from a symbolic social construction that occurred at a given historical moment which values the places and makes them more attractive. To understand heritage in its natural and cultural components, it is necessary to study its symbolic links (Freitas, 2014). Heritage goes beyond material; it is also immaterial and made of historical hints that allow us to know the identity and social dynamics. Here, the concepts of landscape and its heritage, which reflect the identity of places, must be integrated into the spatial and physical planning of territories (Tengberg et al, 2012). Safeguarding these elements is important for the conception of an analysis of the territory that can generate development when related with new territorial, economic and social dynamics. Undoubtedly, water has its role in this context. Residents has a deep relation with the environment surrounding and identity is embodied on the place identity experience (Bleam, 2018).

It is emphasised that water is a significant asset not only for its natural importance, but also for the material and immaterial values that typify it and which result, in bottom line, derived from the intervention of man over the time. Agreeing with Jigyasu (2015) who considers water to be one of the most critical elements of human life with which societies have forged strong ties, and can be seen from the numerous historical elements related to water. These intrinsic heritage values are essential in raising awareness of the importance of water and its preservation in the face of the nowadays' numerous risks (Van Schaik, 2015). Jigyasu (2015) goes even further, considering that knowledge of traditional techniques related to water issues and the conservation of their material and immaterial cultural elements creates societies more resilient to disasters and with responses that are more effective. As water is fundamental in the processes of sustainable management of places, particularly when the main concern will be to maintain water in its territory, the accompanying heritage elements, historical supply, drainage or simply decorative elements (fountains, laundries, pipes, aqueducts, cisterns, among others) are of equal importance and relevance. The use of these historical structures related to water allows its conservation in its natural state and could activate more efficient and sustainable systems. Reinforcing, heritage

in a world heritage site as Guimarães, its conservation is a real concern. The relationship between heritage managing and local planning, should be a priority (Janssen et al, 2017).

The preservation of these heritage resources helps to safeguard water and heritage structures of countless value in the rural and urban world that, if not protected, could be condemned to disappear due to the lack of use or by the replacement of new and more sophisticated constructions (Junqing et al, 2011). In addition, with these tangible assets, many other intangibles (traditional techniques, traditions, habits and social and community behaviours, among others) may vote for oblivion (Rudolff and AlZekri, 2014). Keeping the ecosystems alive, places are valued and their historical image is promoted. Similarly, knowing and locating water resources is a first step in safeguarding their value (Stewart, 2015) and preventing degradation, deterioration, forgetfulness and disappearance.

The heritage richness of water is intrinsically link to landscapes and nature and is a fundamental resource in the encounter of a sustainable model of local development. In places of nature, the importance of its presence in the attractiveness of visitors is unmistakable due to its duality of precious resource and attractive resource in routes, bird watching, river beaches or in thermal resorts (Folgado-Fernández et al, 2019). Its natural value associated with well-being, places this resource on the path of valorisation and economic exploitation.

Despite the importance of this topic, there is a few research in this field, namely on water resources connected with tourism industry. Thus, it is crucial to analyse and explore the potential of water resources for tourism, including exploration of historical evolution of water resources, which can also give an impulse to develop the entire destination.

In the urban world, in view of the growing number of inhabitants, water and its cultural and heritage elements become sensitive and strongly threatened. To the growing urban reality associated with planning and management that forgets water and its heritage elements (UNESCO, 2011b), on top of that are other risks such as climate change or the growing number of tourists and visitors entering cities increases water fragility as a natural resource (Mariano and Marino, 2018; Van Scahik, 2015).

Thus, monitoring water resources in tourism industry and the development of measures to its sustainability constitutes a key point to guarantee the availability of water resources of many regions taking in account that water-related tourism is the most popular and attractive for a people, water being use as a powerful tool in generating visits to a destination (Moreira, 2010). Water is a natural and cultural, material and immaterial resource, at the same time is an aesthetic, social, political, environmental and economic element in the urban places (Freitas et al, 2017) and “tourism can bring benefits to the national and local communities and support water preservation” (UNTWO, 2013).

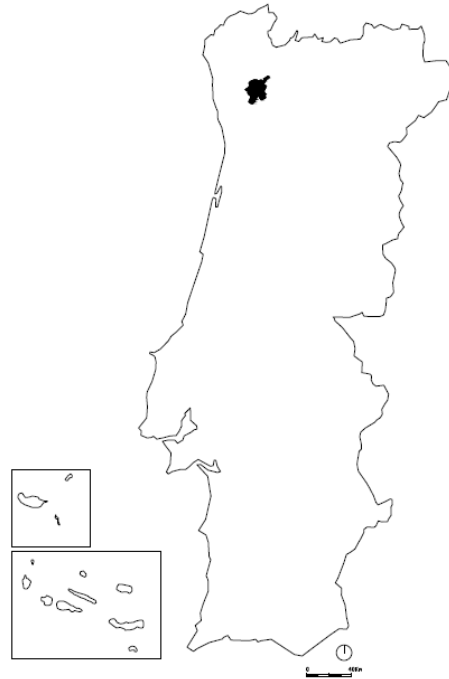
In historical sites and places classified as World Heritage, the conservation and appreciation of water landscape are certainly advantageous and much more important for developing tourism. There is a growing need of appropriate approaches to understand, address the 21 century’s water issues and develop effective management tools to preserve and explore the potential of the water resources from various perspectives. Hein et al (2019, p 2) add that “History and heritage matter when we design new relationships with water [...] they are relevant to the redevelopment, redesign, and reuse of existing and ancient water systems as well as to the design of new systems”.

Further, monitoring of human society’s and visitors demand for water is relevant to understand the water resources’ carrying capacity and preserve their future health. Some authors consider that social and economic development of any heritage site and its preservation can be achieved using a multidisciplinary approach, which is based on involvement of various stakeholders such as scientific communities, archaeologists, engineers, geographers, local communities (Masini and Lasaponara, 2006).

As stated by Ursino and Pozzato (2019), heritage-based solutions may be alternatives to the creation of local sustainability programs and efficient local water management. Restoring and safeguarding older water exploitation processes is a path to heritage protection, but it is also a sustainable way of enhancing this natural resource and protecting it for future generations.

### 3. Methodology

To analyse the resident's perceptions and awareness of water heritage value, state and preservation actions, Guimarães city has been selected. Guimarães is a city of Northern Portugal, implanted in the Region of Minho, genesis of Portuguese country, with a strong symbolic significance for Portugal. The historic centre of the city was included on the UNESCO World Cultural Heritage list in 2001, the city was European Cultural Capital by 2012 and European City of Sports in 2013. Chen and Han (2016) mention that 25% of the cultural World Heritage "sites identified as a site with water heritage or a site with water issue".



**Figure 1:** Map of the location of Guimarães

The natural landscape of Guimarães is characterised with a high presence of water, which is a crucial resource supporting ecosystems and economic development of the region. Historically the city Guimarães is recognised as a region with abundant water resources, favourable for the development of leather, textile, and metal, cutlery industries, which highly depend on large available water sources (Freitas et al, 2019). These industries were mostly located near the Couros, Selho, Vizela and Ave rivers. There are several public and private fountains and public water tanks in the city that also have been registered since the mid-19th century. Taipas thermal complex and Vizela thermal complex was an essential asset for the city, providing health improvement and well-being services for the population. The first one has been designed in the beginning of the 20th century (Salgado, 2017). From the second one we have references since the first century of our era with the exploration of the waters for thermal uses by the Romans. It indicates the importance of water as a natural and cultural resource throughout history.

In order to address the aims and objectives of the research, the face-to-face interviews have been conducted with local population with the intention to analyse their views and opinions regarding the state of water resources, awareness of water heritage, their support on usage and valorisation of water as a tourism attraction. As pointed out by Apaydin (2016), new approaches of heritage sites management should be directed towards sustainable development of local communities as well as promoting tourism as an effective economic driver of the region. The authors attempted to address the issue related to involvement of local people with the development of heritage management plans and their economic rights. It can be beneficial for heritage sites, since it will increase the awareness of the local people in heritage value and will contribute towards the sustainable protection of heritage sites.

The semi - structured interview type has been applied with a list of predetermined questions. The random sampling method has been applied to select individuals for the interviews, who inhabit in the historical city centre. The questions were related to the awareness of people on water heritage of the city, conservation

recognition of water heritage and the protection for the future, the role of local municipality in water conservation. Moreover, water issues in relation to tourism, availability of information about water heritage, cultural activities related to water were placed to the interlocutors, including the possibility of using water as a tourist attraction as well as the perception of water as a natural, cultural or aesthetic resource. The interviews have been started with questions that participants can answer easily and then proceed to questions that are more sensitive issues for the aim of the project. The answers were enshrined in the questionnaire form during the interviews. An overall of 46 potential respondents were personally contacted, as result a total of 25 completed and properly accomplished interviews were obtained.

The data gathered from the interviews were analysed by using a process of meaning condensation as described by Kvale (1996). Meaning condensation “entails an abridgement of the meaning expressed by the interviewees into shorter formulation” (Kvale, 1996, p 192).

#### **4. Results and discussion**

As has been discussed throughout the paper, the present project attempts to valorise and promote water heritage for the tourism development with a special focus on the perception of the local population. Moreover, as has been noted by previous research that social and economic development of any heritage site and its preservation can be achieved by involving of various stakeholders including local communities (Masini and Lasaponara, 2006). Yago (2019) developed a similar project in the case of Yecla (Murcia), which explores water landscape and tourism places and their potential for the local development. The researcher points out that the principal elements which can describe water landscape are sea, rivers, torrents, wetlands, lakes and lagoons, bridges, canals, mills, gardens, canals among others. In the context of our research the importance of conservation of water elements such as fountains, public water tanks, rivers were examined based on the interview analysis with the local population.

The first set of the interview questions, has the propose to analyse the relation residents and the water in the city and their opinions about the local water presence.

Regarding the question, “Do you know any water heritage resources in the city?”, twelve interviewed were able to identify and list the city water heritage elements: Chafariz do Toural, Fonte da Maria da Fonte, Fonte do Toural, Fonte da Alameda dos bombeiros, Tanque Campo da Feira, Rio Couros, Rio Ave, parques de Taispas, de Torcato, de Penha, Fonte das Ramadas ou Fonte das Oliveiras. The other interviewees (13) indicated that know traditional cloth washing tanks, dry beach that should be in operation in 2020, fountains, mills, leather washing tanks, thermal baths and municipal swimming pools. However, the respondents were not able to list them by names, only some water heritage typologies they can identify. Concluding, the water heritage in the city is not easily identified by local residents. It seems that some work should be done in the selection, identification and communication of the water in the city.

To the question, “What is the state of conservation of water heritage in the city?” five people consider that it is very well preserved, and 17 indicate good conservation state. Among others, some of the respondents consider that the good conditions are due to recent works for Guimaraes European Capital of Culture (2012).

While some of the respondents consider that good state of water quality due to the considerable work from the part of city council. Nevertheless, one interviewee had a negative view regarding the state of the rivers. City council should discover the best ways to improve the water quality of the rivers and constantly monitor its environment. It is important to notice that the city classification and the events participation is very important for the urban conservation and rehabilitation.

Regarding the question, “Should water heritage be protected in the city?”, all people completely agree that water heritage of the city should be protected, particularly it is crucial to protect drinking water from pollution, which is important for the health of the local population. Obviously, it is essential issue to protect water resources from generation to generation and raise public awareness on water issues. Although some of the interviewees recognised the importance of the environmental protection in achieving sustainable development of the city. Formations and educational courses should be organised for the local people and children in order to valorise and preserve water. The educational process should be started from the children. Historically water

has its special role and was used in leather production in the city. It is also cultural heritage, attractive resource in the parks and important part of the entire city.

Concerning the question, “How valuable is the water resources in the city for you (natural, aesthetic, historical)”. Seventeen interviewees appreciate water as a natural resource, for ten respondents it has a historical value, and seven people appreciate water as an aesthetic resource for the city. Appreciation of water as a natural heritage can be explained by the fact local population are concerned with the availability of potable water and its quality. The appreciation of water as a historical value can have a connection with the symbolic and cultural importance of water.

**Table 1:** Residents’ view of water heritage in Guimarães. Interview analysis by key sentences

Interview questions	key sentences analysis
Q1: Do you know any water heritage resources in the city?	<ul style="list-style-type: none"> <li>▪ Chafariz do Toural,</li> <li>▪ Fonte da Maria da Fonte,</li> <li>▪ Fonte do Toural,</li> <li>▪ Fonte da Alameda dos Bombeiros,</li> <li>▪ Tanque Campo da Feira,</li> <li>▪ Nascente de Penha Rio Covros,</li> <li>▪ Rio Ave, nearest beach located in 70 km</li> <li>▪ Parques deTorcato, de Penha,</li> <li>▪ Fonte das Ramadas ou Fonte das Oliveiras</li> <li>▪ Traditional cloth washing tanks,</li> <li>▪ Dry beach, fountains, mills, leather washing tanks, thermal baths and municipal swimming pools.</li> <li>▪ Water resources of Guimarães have a long-time historical value</li> </ul>
Q2: What is the conservation state of water heritage in the city?	<ul style="list-style-type: none"> <li>▪ Very well preserved</li> <li>▪ Good conservation</li> <li>▪ Good state due to recent works for Guimaraes European Capital of Culture (2012)</li> <li>▪ Good state due to considerable work from the part of city council</li> <li>▪ One negative view regarding the rivers state, which needs monitoring and improving water quality</li> </ul>
Q3: Should water heritage be protected in the city?	<ul style="list-style-type: none"> <li>▪ Water heritage should be protected</li> <li>▪ Drinking water should be protected from pollution</li> <li>▪ It should be protected for future generations</li> <li>▪ Increase people’s awareness of water issues</li> <li>▪ Environmental questions should be of great importance in the city</li> <li>▪ Formations and educational courses should be organised for the local people and children in order to valorise and preserve water</li> </ul>
Q4: Which value do have water resources of the city for you?	<ul style="list-style-type: none"> <li>▪ Water is an appreciated natural resource</li> <li>▪ Water has a historical value</li> <li>▪ Water is an aesthetic resource for the city</li> </ul>

Regarding the set of questions that appreciate the opinions about the local policies related to water management and conservation (Q5 “Does the municipality protect the water in its territory?”), in general all the respondents recognised the work of the municipality in water resources conservation. However, two interviewees mention that the rivers are dirty and ecological state must be improved. Another interviewee considers that protection of water resources by city municipality depends on the territorial characteristics of the places. For example, places where local people obtain drinking water are protected, but other places do not receive enough attention from the city council.

Regarding the request “Is there a concern for water resources in the city?” , despite recognising the work of city municipality, thirteen people consider that there is no concern for water in the city, because many people are not aware about the importance of water resources. Most people do not think much about water issues and how much water they consume. The interviewees stated that information related to access to safe drinking water should be available. It is interesting to note, eight people noted the water related concern in the

city, but it is mostly associated with the quality of potable water. The rest of the respondents did not will to answer to the mentioned question, explaining it by the lack of awareness.

With regard to the question, “Is there information available about water resources in the city”, twenty respondents consider that there is a lack of any available information in the region. Five interviewees mentioned that local water institutions provide all the water related information of the city, but there is no particular water information for tourism. Crossing those opinions with the touristic information and the municipality communication, it is possible to say that there are some gaps in touristic information and in the public communication approach. Local governance is working on this approach and is aware of the water management and planning as the document of the City Council “Application Form for the European Green Capital Award 2020” proves, but it is suggested to improve the knowledge and the communication about the water and its territorial elements.

**Table 2:** Local policies and the water significance. Interview analysis by key sentences.

Interview questions	key sentences analysis
Q5: Does the municipality protect the water in its territory?	<ul style="list-style-type: none"> <li>▪ Good work of the municipality in water resources conservation</li> <li>▪ Rivers are dirty</li> <li>▪ Drinking water is protected</li> <li>▪ Some places do not receive enough attention from the council</li> </ul>
Q6: Is there a concern for water resources in the city?	<ul style="list-style-type: none"> <li>▪ There is no concern</li> <li>▪ People do not think much about water issues and how much water they consume</li> <li>▪ More information is needed about the potability of water in each place related to water.</li> <li>▪ If yes, it is mostly associated with the quality of potable water.</li> </ul>
Q7: Is information available about water resources in the city?	<ul style="list-style-type: none"> <li>▪ There is a lack of any available information in the region</li> <li>▪ Local institutions provides all the water related information of the city, but there is no particular information for tourism and water</li> <li>▪ On the internet yes, but in the city guide there is no information about water</li> </ul>

Regarding the uses of water for tourism purposes, local people support the idea of using water resources as an attraction for tourism, they clearly mentioned: “tourism is highly important to the city, and will help to the development, it will help to increase number of the attractions”. The interviewees also consider that promotion of water heritage for tourism would have only advantages for the city, since improving natural and aesthetic state of water resources would lead to growing number of visitors to the city. Nevertheless, before promoting water resources, their ecological state and carrying capacity will have to be taken into consideration. Only four respondents were not able to answer to the questions explaining by the lack of knowledge in the field and role of tourism in the city.

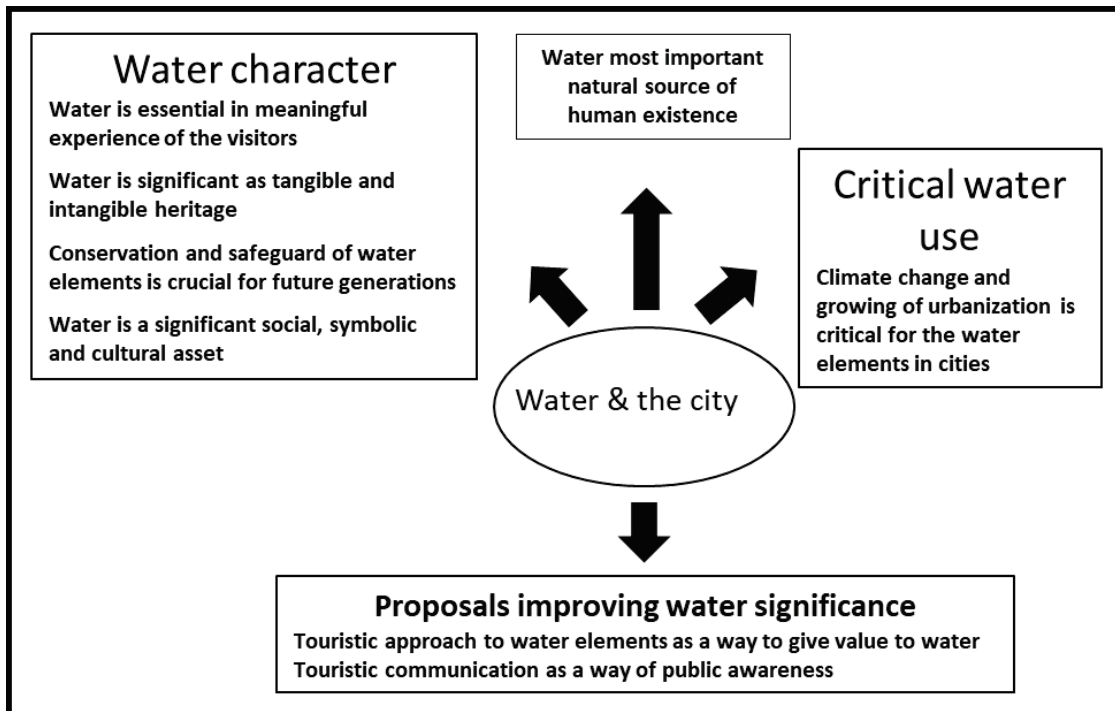
Related to question, “if there are any cultural activities in the city related with water and tourism” It is interesting to note, that sixteen respondents answered “No”. They are not aware about any practices related to tourism and do not know whether there are any cultural activities related to use of water heritage. Only seven people mentioned that the city council organises activities about the importance of water, interacts with the local population, and places advertisements on water. VIVA Science Museum organise some activities, however the respondents were not sure if those activities have a connection with water. Two of the respondents were concerned with the few activities delivered by the water organisations and supported the idea to promote more activities among children. Along with interview results, we analysed the tourism brochures of the city, provided by tourism offices. There is a lack of information related to water heritage. The tourism brochures refer only to the thermal and the old baths. On the web page of the City Council, the Couros area is identified; however, there is an absence of information referring to other water resources. Being a rare monument in its entirety in Portugal, the medieval complex of leather tanks with its water circulation structures are essential for the knowledge of the medieval industry. However, this information is not mentioned in both sources. The webpage of city council refers to the water park and lake of the city park and also mentions explicitly the Old and Thermal Baths. There is no any reference or awareness of water as a fundamental element of life that must be protected

or safeguarded. Some information can be found on water across the Ave river and its scenic interest. In Taipas Park, some problems are assumed with the water quality of the Ave River. In Selho Park there is a reference to a mini-hydro as a heritage element. As a natural resource there is, a concern associated with leisure and recreational nature parks. However, the heritage concern of water and its elements is not a priority for the municipality, only the concern with the 16th century fountain of Toural stands out.

**Table 3:** Touristic approach to water heritage. Interview analysis by key sentences

Interview questions	key sentences analysis
Q8: Do you support the idea of using water heritage as an attraction for tourism?	<ul style="list-style-type: none"> <li>▪ Tourism is highly important to the city, and will contribute to its development</li> <li>▪ Promotion of water heritage for tourism would have only advantages for the city</li> <li>▪ Improve natural and aesthetic state of water resources, ecological state and carrying capacity must be taken into consideration</li> <li>▪ The local people support the development of tourism and use of water heritage as an attraction to generate visits to the city</li> <li>▪ Tourism would contribute to the protection quality of water resources</li> </ul>
Q9: Are there any tourism and cultural activities related to water in the city?	<ul style="list-style-type: none"> <li>▪ The people are not aware about any water related practices in tourism</li> <li>▪ Local population do not know whether there are any cultural activities related to use of water heritage</li> <li>▪ The city council organises activities about the importance of water, interacts with the local population, distribute advertisements about water resources</li> <li>▪ There are some activities linked to the Remo in the River Taipas (River Ave)</li> <li>▪ The people do not know if there are some organised activities related with water</li> </ul>

In this context, it is proposed to improve the touristic approach to water heritage and public awareness of water safeguard, as a concern in sustainable and responsible touristic approach.



**Figure 2:** Water and the city through the eyes of residents

## 5. Conclusions

The paper demonstrates the importance of water resources both in safeguarding this natural resource and in the growth of tourism in the region, which ultimately requires a large amount and quality of water. In order to ensure a compromise between safeguarding of the city's natural resource and development of tourism, local authorities should take steps towards finding an equilibrium. Raise awareness among local people and the public on the contemporary values and uses of water-related heritage is relevant.

It can be considered that local population recognises a considerable work from the part of city council in maintaining quality of potable water, natural and aesthetic value of water heritage in urban planning and image. However, as from the interview results, it can be stated there is a lack of awareness and knowledge among local people on water heritage of the city for tourism. Support of local residents in tourism development have a huge importance. Therefore, improving knowledge around the water heritage is of fundamental importance for the sustainable development of tourism in the region. At the same time, the vulnerability, due to several factors, of this water heritage is critical. One of the possible explanations can be that a few attention is given to heritage in the global water or sustainable development context (Willem & van Schaik, 2015).

Water heritage has special relevance in rural areas, share and identity to keep alive the local histories. This project is also based on the knowledge that tourism can be a territorial advantage factor, since the demand for heritage and rural areas and their cultural elements is increasing (Stoffelen and Vanneste, 2015). As UNESCO (2011a) argues it is not possible to return to the traditional and historical ways of water planning and uses, but they should be considered in the new urban planning, management and land use. Thus, this study suggests the development of initiatives to increase the value of water heritage for tourism purposes in Guimarães without compromising the environmental state of water resources.

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