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NOTES

International Conference Water as Heritage. 27-31 May 2019, Chiayi, Taiwan

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ABSTRACT

The 2019 *International Conference "Water as Heritage"* took place 27-31 May 2019 in Chiayi, Taiwan. Organized by the Taiwan International Institute for Water Education, the International Council on Monuments and Sites (ICOMOS) Netherlands and the Leiden-Delft-Erasmus Centre for Global Heritage and Development, it brought together key water-focused organizations and heritage groups with a concern for water-related heritage in order to develop networks and build working relationships across the diversity of sectors and disciplinary fields. With participants from 25 countries and six continents, the conference explored the mutual benefits arising from such collaborative efforts. A key issue of the conference was the consideration of water-related heritage as an essential element in addressing current and future challenges of water management.

KEYWORDS

Water Heritage; Sustainability; Heritage For The Future; Climate Change; Waterscapes; Waterways; Hydropower.

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Water is not only an integral part of the natural environment and necessary for all life on the planet, it is also an essential prerequisite for all types of cultural development. Without a well-organized supply of water or a decent protection from water, no settlement could persist and no cultural achievements could be made. Thus, in a broad sense, all cultural heritage is more or less related to water. Besides that, all over the world a multitude of tangible or intangible heritage is directly linked to water. This heritage comprises objects, practices and traditions that facilitated human development over millennia by ensuring biological and cultural needs associated with water, which is not only essential for drinking, farming and agriculture, but also enabled transportation and energy generation, and is integral to the worldviews of all human societies. Strangely enough, in today's world these heritage dimensions of water are typically treated separately from functional aspects. During the 20th century, novel engineering approaches brought reliable water supply and created highly efficient ways regarding e.g. land reclamation and protection from water. Older systems were replaced or in a few cases preserved as heritage – in that sense as remainders of historical developments and nowadays outdated technologies. But in large parts of the world, local communities still refer to old traditions and technologies regarding the use of water. In some cases, these cultural practices collide with modern legislation and technology. In other cases, the latter caused harm because they interfered with local circumstances concerning water reserve or access and changed them for the worse while historical approaches proved to be sustainable for centuries. These issues form the starting point for the *Water as Heritage* conference: Overcoming current and future water-related issues by combining modern technology and expertise with the knowledge and experience embedded in water related heritage. The conference had three main objectives:

1. To encourage dialogue between organizations and communities concerned with water from a functional and historical point of view. Currently there is little interaction between cultural heritage groups dealing with the cultural heritage of water, groups promoting the natural heritage of water and other actors active in the water sector.
2. To bring together a wide range of practice communities to explore ways of working together and with communities of interest.
3. To communicate and continue the work on the formation of a scientific group dealing with water and heritage for the future.

How can heritage contribute in a meaningful way to tackle with water issues in a world of mass population, characterized by fast pace and waste of resources? And how can science and traditional knowledge come together to increase resilience to and adapt to a rapidly evolving and changing world? First of all, the answer lies in a renewed understanding of heritage and in a better communication between the heritage world

and the water world. In this respect, the core concern of the conference is the intensive exchange of information between the two sides, which was aimed at through the wide-ranging involvement of relevant organizations and committees. In addition to numerous representatives of various ICOMOS National Committees and ICOMOS International Scientific Committees, various international cultural heritage institutions such as the Centro Internacional de Água e Transdisciplinaridade, The International Committee for the Conservation of the Industrial Heritage, the International Working Party for Documentation and Conservation of Buildings, Sites and Neighbourhoods of the Modern Movement were also represented as the contemporary water world through representatives of e.g. the International Water Association, the International Commission on Irrigation and Drainage or the UNESCO Institute for Hydrological Education. In this unifying character the conference is linked to a series of activities aimed at better connecting heritage organizations and wider water sector industries, regional interests, and communities. It is the third in a series of conferences concerned with the broad topic of “Water and Heritage for the Future.” The first conference, *Protecting deltas: heritage helps!*, took place in Amsterdam in 2013 and the second, *Water and Heritage for the Future*, in Delft and Fort Vechten in 2016.¹ Moreover, it further promotes the topic of water related heritage that will also be addressed at forthcoming events, such as the World Water Week in Stockholm (Sweden, 25-30 August 2019, Theme: “Water for society – Including all”), the 20th ICOMOS General Assembly in Sydney (Australia, 1-10 October 2020, Theme: “Shared Cultures – Shared Heritage – Shared Responsibility”) and the 9th World Water Forum in Dakar (Senegal, 2021, Theme: “Water Security for Peace and Development”).

Contents of the conference

The conference was launched with welcoming addresses by Hsiao Tsung-huang, the deputy culture minister of Taiwan, Huang Min-hui, the mayor of Chiayi, Lee Hung-yuan, the rector of TIIWE, and Diederik Six, vice president of ICOMOS Netherlands. A subsequent introduction to the contents by the program chairs was followed by keynote addresses from Shy Gwo-long, Director-General of Taiwan's Bureau of Cultural Heritage, and Henk Ovink, Special Envoy for International Water Affairs for the Kingdom of the Netherlands, emphasizing on the importance of water-related heritage in addressing current challenges to climate change and equitable societies. The subsequent statements by representatives of water and heritage organizations, as well as national ICOMOS committees, gave an overview of the different degrees of importance of water related heritage for spa-

1. Willem Willems, Henk van Schaik (eds.), *Water & Heritage – material, conceptual and spiritual conceptions* (Leiden: Sidestone Press, 2017). Carola Hein (ed.), *Adaptive Strategies for Water Heritage – Past, Present and Future* (Berlin: Springer, 2019).

tial planning, water management and policymaking in various areas and regions. In Australia and the Netherlands, for example, the inclusion of heritage in water management seems to be a matter of course, in other countries it is regarded far less as a potential contributor to tackling the challenges ahead.

The panel sessions were programmatically structured into five parts: *Water for Service*, *Waterscapes*, *Water for Power/Power of Water*, *Waterways*, and *Worldviews on Water*. These themes mark key areas where the link between water and cultural heritage will be crucial in the near future. Case studies and best practice examples were presented in all five sessions, ranging from historical investigations of ancient water systems, renaturation measures, revitalization of inner-city river banks and flood strategies to the role of water-related heritage in the development of ground-breaking technologies and in addressing the increasing climate emergency.

The first session, *Water for Service*, focused on linking water with human needs and settlements, both for the supply of drinking water and irrigation and as a means for waste disposal. Throughout human history, management or mismanagement has been critical to human survival, and the systems that have performed best today serve as models for sustainability. The papers addressed the cultural, technological and administrative aspects of water supply, with the geographical framework stretching from ancient Greece to India, Iran, the Philippines, and Taiwan. Participants discussed different effects of the protection of heritage objects. On the one hand, the entry of numerous Qanats in the World Heritage List has ensured their preservation and promoted this ancient technology a sustainable alternative to widely used diesel-powered water pumps and their catastrophic effects (Semsar Yazdi, Golnoosh Mozafari, Mohammad Esmaeil Esmaeili Jelodar). On the other hand, the World Heritage status of places like the rice terraces of the Philippine Cordilleras has created streams of tourists, which are contributing to the decay of social and family structures, and abandonment of ritual practice (Stephen Acabado). Papers by Taiwanese speakers emphasized the relationship between people and their historical water systems (Yu-Chuan Chang, Da-Wei Kuan, Chung-Hung Chen). The contributions showed the rich wealth of experience in dealing with the origins, cultural associations and adaptations to the community and indigenous practices in the light of the worldwide tendencies towards centralization of water supply and in very different cultural milieus.

Waterscapes include natural or man-made, maritime, coastal, rural or urban areas where water is a dominant feature. In this session, the term water landscape has been used to refer to large-scale landscapes and marine landscapes that are relevant to their historical values. A particular focus was the question which lessons can be learned and how to learn

from traditional or historical water systems, infrastructures and management in the creation of new and technologically modern water sharing projects. The contributions made it clear that Waterscapes designate a large part of our environment, also in urban and arid areas. The papers examined water landscape systems in all parts of the world and reflected specific problems. Best practice examples and guidelines provided an outlook on the possibilities of applying the knowledge associated with historical waterscapes to current problems, such as the deindustrialization of river banks (Yue Lu) and adaptive strategies for floodplains (Ding He). Many papers emphasized the topicality of centuries-old organization of waterscapes and underlined that the historical aspects of these areas are inextricably linked to their present manifestations (Mariano Castellanos Arenas, Ansari Taha, Sahdev Singh/Prachi Sharma, Mikkio Ishikawa, Mozhgan Khakban).

The broad variety of water-based transport routes, from rivers to canals, water towns and even defenses was subject of the session on *Waterways*. It had a strong focus to future developments, highlighting the continuing relevance of waterways while pointing out the potential of historical experience for these important transport routes. Case studies in the Netherlands, India, Japan and China (Masaaki Okada, Hans Suijs, Zahida Quadri, Harry den Hartog, Bart Heinz, Peter Ros) and a report on the educative aspects of the global network of water museums (Eriberto Eulisse) were supplemented by future perspectives on heritage waterways and strategies of adaption for water heritage (Carola Hein, Piotr Lorenz). In addition to maintaining waterways for transport, in the near future the upgrading of urban banks for residential, leisure and business purposes as well as the renaturation of river courses will play an important role. It became apparent that the latter has to be carried out against the background of increasing flood risks and that, in addition to protective measures, strategies for living with this phenomenon are also indispensable.

Water for Power was dedicated to the oldest renewable energy source used by humans. Hydropower has been used for around 5000 years and has taken numerous forms and received various improvements in the course of history. In the context of the transformation of energy systems, the destructive construction of large dams is often referred to and the possibilities for using hydropower on a small scale are insufficiently considered. The session addressed, through European case studies, problems of current legislation that limit the meaningful use of historical waterwheels for energy production due to inadequately adapted environmental legislation - a paradoxical situation (Edmond Staal, Catarina Karlsson). The fact that heritage aspects can also play an enriching role for large energy companies was demonstrated by a revealing insight into the Taiwan Power Company's relation to its own heritage facilities (Chin-Hsing Chien). Andrew Potts underlined the contribution of historical water wheels and their conversion to energy production in relation to the SDGs.

He emphasized that a key impact of climate change is and will be on the water cycle. For example, the numerous historical waterwheels that still exist in the world could make a significant contribution to local energy production. Furthermore, historical techniques can also provide inspiration to develop new types of generators that do not require barrages. It has become clear that this does not have to happen to the suffering of aquatic animals, nor does it have to involve drastic changes in the course of rivers.

Worldviews on Water addressed the spiritual aspects, religious and indigenous perspectives (Hee Sok Lee, Urtnasan Norov, Mona Polacca, Oscar Rivas), which all too often are considered only incidentally, but must by no means be neglected with regard to a meaningful and viable utilization of heritage for shaping the future. Several papers argued with the importance of considering cultural specificities related to water and water bodies when it comes to water quality, access to water, flood protection and energy production. Only by involving as many stakeholders as possible can consensus be reached and sustainable and equitable water management be achieved. This necessarily includes historically grown and still valid relationships with water. Dave Pritchard, Meisha Hunter and Queenie Lin gave examples of how to integrate stakeholders and the opportunities and challenges of embedding water worldviews into policies and management principles. In particular, the session demonstrated that numerous regional peculiarities exist that are repeatedly brought into conflict situations by reckless interventions and regulations. It is time to pursue a more balanced use of water as a resource as well as the basis of all life and culture, in order to ensure equal use for all and to better protect water in all its aspects.

The conference was rounded off by evening sessions, task force meetings, field trips and thematic poster presentations. The evening sessions of Hans Bleumink, Peter Ros and Mao Chia Chen gave an insight into how heritage can be understood as a planning element. In this sense, the concept of heritage goes beyond historical and cultural aspects, because heritage takes on a significance for designing the present. Bleumink discussed an approach by Dutch colleagues that takes account of the changing relationship between heritage management and spatial planning, and transferred this development to water-related cultural sites. He explained that from the monument as a cultural asset to be preserved, the development went via the inclusion of the monument environment into the current approach, which understands cultural assets as the core and inspiration for planning and new developments. In conjunction with the Taiwanese approaches and the discussion that followed, it became evident that cultural heritage has a huge potential to positively support spatial planning for long-term sustainability. However, cultural heritage is often still seen as an obstacle to shaping the future. The reason for this is that sometimes there is still little willingness to learn from cultural heritage and, in addition, a planning culture geared to short-term concerns.

The excursions on 30 and 31 May were devoted to the conference topics related to Taiwan and its different population groups. Several museums (Baileng Tachichai Hydropower Museum, Kaohsiung Museum of History, National Museum of Taiwan History), water facilities (Tachichai Hydro Power Plant, Huludun Waterfront, Xinle Interception Pumping Station, Babao Canal) and cultural sites (Cheng Mei Culture Park, Niumatou Site Cultural Park) were visited. The participants had the opportunity to visit unique water heritage sites, to learn about regional peculiarities and to talk to local authorities.

Outcomes

In a concluding round, the results of the five sessions and internal meetings were presented, together with some points of departure for future actions. The guests had the opportunity to critically examine the program as well as give suggestions. The worldwide case studies and the broad spectrum of interdisciplinary reflections on the topic inspired and motivated many participants. The final discussions focused on how to effectively demonstrate the importance of water-related cultural heritage to water planners and policy makers. Several issues have been identified that need to be addressed. These include strategic communication of the present and future potential of cultural heritage between cultural heritage experts and water experts, better involvement of communities/stakeholders, adaptation of knowledge about water and cultural heritage and the revitalization of (abandoned) water heritage. In addition, in many places adjustments to the legal framework are indispensable in order to create fairer social conditions. A key aspect for these tasks is the involvement of emerging professionals and quality education on water-related heritage.

A significant outcome of the conference was the agreement to continue working on the topic of water and heritage for the future. During two meetings with invited experts, concrete steps for further effective work in this field were discussed. It was decided to strive for the creation of an international platform for networking, education and dialogue on the importance of water heritage in the form of an ICOMOS International Scientific Committee. This proposal was first put forward at a meeting of the ICOMOS Scientific Council in Delhi, India, in December 2017 and has since received widespread support.² The aim is to achieve better water futures through the inclusion of water heritage in community engagement, engineering and policy making. On top of the necessary formal steps, a contextual focus has been placed on the following aspects: (1) the development of specific methods that are a basis for developing guidelines and design

2. ICOMOS 19th General Assembly 2017, Delhi, India, Agenda item 5-3, Meeting of the ICOMOS Scientific Council, 10 December 2017.

processes that address the importance of cultural heritage in the water world; (2) the presentation and promotion of best practice examples for water heritage management, and finally, (3) the discussion and development of communication and links between water managers, designers, planners and relevant organizations. With this perspective, the conference has promised a solid basis for continued work on this issue and for its further development.

The publication of selected conference papers is foreseen.

Tino Mager is a Postdoctoral Fellow at the Delft University of Technology. Tino's main interests include heritage conservation and cultural heritage theory. In addition, he has published on post-war modernist architecture and its preservation, on Japanese architecture and the transnational education of artists in the 19th century. As part of the ArchiMediaL project, he is working on the development of methods for the use of artificial intelligence in architectural historical research.

Website

<http://www.water-as-heritage2019.org.tw>

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