United Nations Educational, Scientific and Cultural Organization

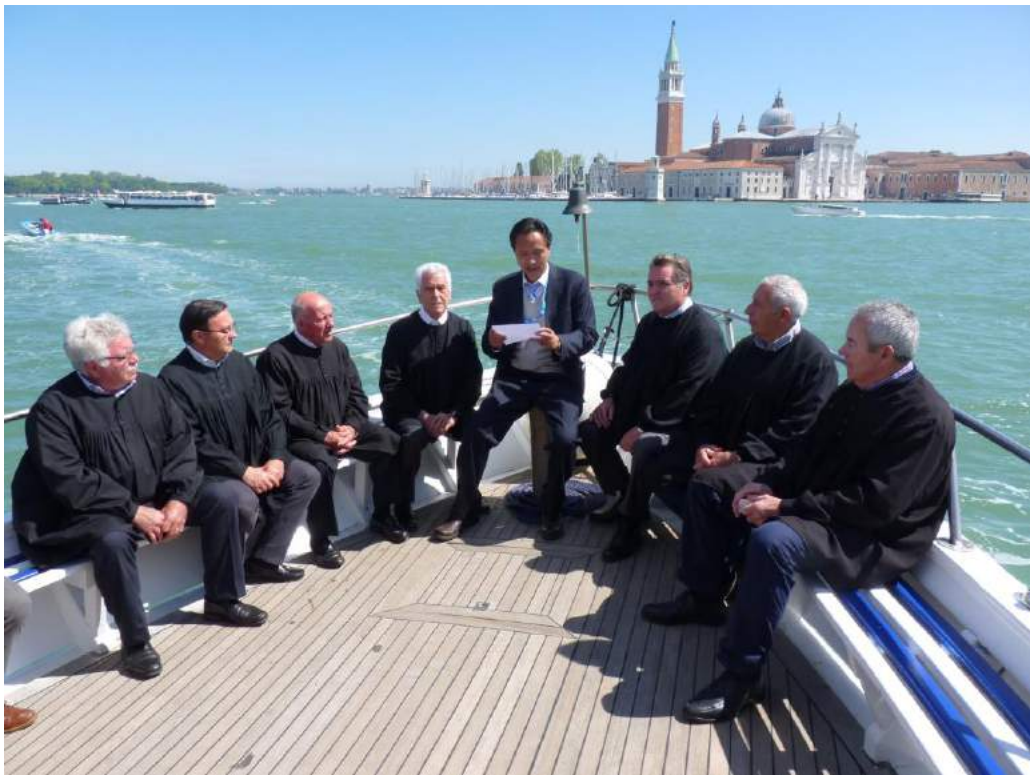
Regional Bureau for Science and Culture in Europe

International Hydrological Programme

Towards a Global Network of Water Museums

A common heritage for a sustainable future

Palazzo Zorzi Venice, Italy. 2-4 May 2017



Workshop Report

In cooperation with

Civiltà dell'Acqua
CENTRO INTERNAZIONALE

Endorsed by

Università Ca'Foscari Venezia

THE CLUB OF ROME

FOREWORD

The international workshop titled ***Towards a Global Network of Water Museums*** was held in Venice, between 2 and 4 May 2017. It's main purpose was to organize a first meeting among some Water Museums which are already engaged in disseminating to worldwide audiences issues related to water civilizations and more sustainable water uses, also in connection with the Agenda 2030.The meeting was very successful in terms of participants' feedback and proved to be a unique opportunity to explore the possibility of creating a Global Network of Water Museums, in order to consolidate shared visions, inspire future common actions and, not least, enlarge the network itself.

The workshop was organized by the UNESCO Regional Bureau for Science and Culture in Europe (Venice) and IHP, in cooperation with Civiltà dell'Acqua International Centre and with the participation of the Water Museum of Venice. It was endorsed by the Ca' Foscari University of Venice and the Club of Rome (the detailed programme is given in Annex 1).

In total, 29 museums, interpretation centres and institutions (represented by 40 persons) took part to the Venice workshop from the following countries: Austria, Burkina Faso, Canada, China, Cyprus, Ecuador, Germany, Greece, India, Iran, Italy, Mexico, Netherlands, Portugal, Qatar, Romania, Spain, Tunisia, and United Kingdom (see list of participants in Annex 2)[1].

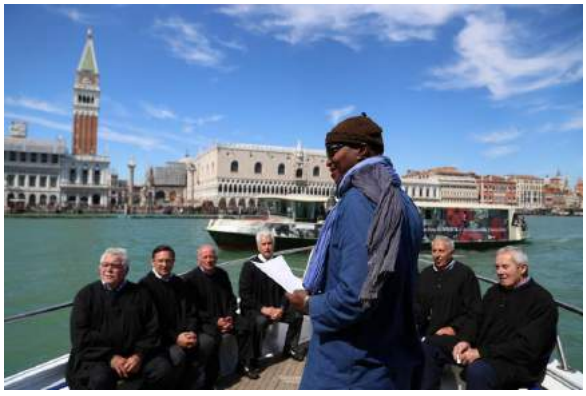
The 3-day workshop focused on the presentations of different participating institutions (displays, activities and educational programmes of each museum) and to exchange ideas on the Network's possible future actions.
Among the participating museums, a considerable difference in terms of size, staff availability, organizational and financial capacity was noticed, for e.g. on the one hand, the large National Water Museum of China (Hangzhou), the National Waterways Museum of Ellesmere Port and Gloucester (England), and the Yaku Parque Museum of Quito (Ecuador); and, on the other, the Musée de l'Eau (Burkina Faso), the Museum of River Navigation in Battaglia Terme (Italy) or the Living Waters Museum (India). While several museums operate as single physical structures, others have evolved a network approach or are being developed as online (virtual) platforms.

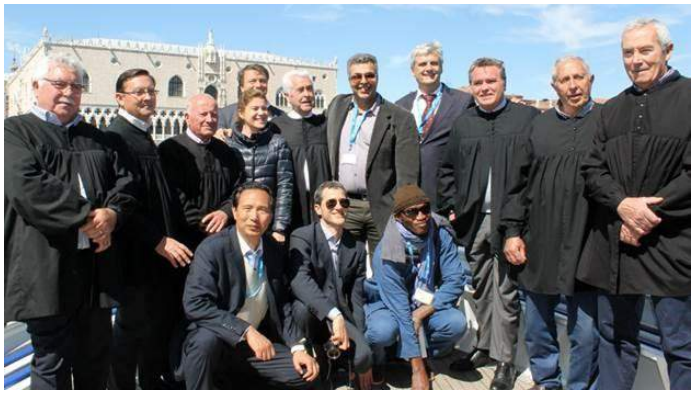
The considerable variety of exhibits and issues displayed and interpreted by the different water museums taking part to the workshop (from natural science to archaeological museums, from industrial and cultural heritage to historic aqueducts and landscape open-air museums) was considered by all participants as an added value for the purpose of creating a Global Network (henceforth GLONET). Their history, forms, and exhibitions are quite varied, and such a diversity was understood as a richness of the Network, and not a limitation, but an added value to disseminate SDGs to larger audiences worldwide.
Because of such a variety and of the intention to contribute to stimulating an international debate on water, its historical heritage and its future uses and management, it was decided to explore further the concrete possibility to create a worldwide Network of water museums, aimed at

[1] Out of approx. 60 Water Museums initially censored through the web and invited to Venice, 29 answered positively to take part in the workshop, motivating their participation through a formal Manifestation of Interest (MoI), and a SWOT analysis related to their own institution. Additional 12 Water Museums confirmed their interest in being involved in the future developments of the Network, since they could not join the Venice workshop for other pending institutional engagements.

achieving common goals/undertakings and disseminating a new, shared vision of sustainability and water justice.

During the workshop, a public ceremony with the representatives of the Valencia Water Tribunal was held on a boat in front of the Duke Palace of Venice. A formal Preamble of the Global Network was read in 5 languages (English, French, Arab, Chinese, and Spanish) by the representatives of different water museums (the preamble is given in Annex 3).





1-2. Venice, 2 May 2017. Public reading (in French) of the Preamble of the Global Network of Water Museums, with representatives of the Musée de l'Eau de Ouagadogou (Burkina Faso) and of the Tribunal of Waters from Valencia (Spain).

Finally, the workshop gave us the opportunity to involve all participants in two field visits aimed at showing the sites included in the virtual and open-air Water Museum of Venice, which is a network of 38 physical water museums, sites and institutions coordinated by Civiltà dell'Acqua in the Province of Padua. Its online platform and the preliminary network of sites related to water civilization may be considered as a sort of model to develop a similar website dedicated to the Global Network.

In consideration of the need to consolidate the Global Network among the participating museums and to foster simultaneously further networking activities, three institutions in Venice (Ca' Foscari University of Venice, Venice Municipality and Civiltà dell'Acqua) committed to join their forces to coordinate the next 12 months of activities, also by exploring the possibility of creating in Venice a UNESCO category 2 Centre.

Additional information can be found here

1. OBJECTIVES OF THE VENICE WORKSHOP

The workshop was aimed at strengthening the visibility and coordination of existing water museums at the global level, with a view to increasing their communication potential on sustainable water uses and their impact on policy makers, stakeholders, researchers, educators and the public at large.
In addition, the workshop had the specific aims of:

- Facilitating an exchange of experiences and good practices among water museums having common features and/or issues to address (water resources management; water rights and social equity; climate change; education, etc.);
- Strengthening skills, management abilities and knowledge of water museums, with a view to enhancing their managerial capacities, especially in less developed countries, while addressing the current emerging challenges for more sustainable water uses;
- Laying the ground for possible common actions, exhibitions and projects dealing in particular with the promotion of new models for more sustainable and equitable water uses inspired at good practices of our water civilizations.

All participants contributed with different perspectives to discuss possible ways to formalize the establishment of a future Global Network of Water Museums under the auspices of UNESCO-IHP, providing the network with the necessary coordinating mechanism and tools.

3. Running of educational programmes at Yaku Parque Museum, Quito (Ecuador).

2. PRELIMINARY RESULTS

Each participating museum was invited to present both its own structure and main activities, and its ongoing projects having the potential to contribute to achieve SDGs (indicating also source of funding and which specific activities could be developed in conjunction with other Water Museums or strengthened through the network).

A SWOT analysis was carried out, stressing in particular the need and opportunity to:

- Strengthening both hard and soft skills of museum staff (through summer schools, staff training, exchange of expertise), and sharing experiences to improve quality standards and added value to each museum;
- Developing common "products" and projects (exhibitions, installations, educational tools, publications, movies, etc.);

- Fostering shared research and communication activities (also resulting in publications, and printed materials);
- Advocating in international arenas to consolidate the Global Network of Water Museums (through ICOM, GWP, IWI – Inland Waterways International, etc.);
- Networking with other water/education related institutions and organizations;
- Involving additional water museums in the network;
- Taking common actions for fundraising.

Also, specific inputs were given by all museums on how the Global Network could be structured and managed, and how their institution may contribute to it (by developing common temporary exhibitions, communication activities, and educational programmes).
Two round tables allowed participants to further discuss single proposals.

4-6. Scientific, experiential and ludic approaches: how to educate young people in three different water museums (Lisbon Water Museum; Musée de l'Eau de Ouagadougou; Yaku Parque, Quito).

3. ROLE AND ACTIVITIES OF WATER MUSEUMS WORLDWIDE

Water museums interpret and display a unique repository of different and specific water civilizations all around the world, with the aim to preserve, exhibit and promote the water heritage, both tangible and intangible. Many of them exhibit an outstanding hydraulic heritage made of artefacts, techniques, and oral knowledge passed down from generation to generation. Indeed, every civilization has passed down to new generations an invaluable knowledge and heritage related to water.

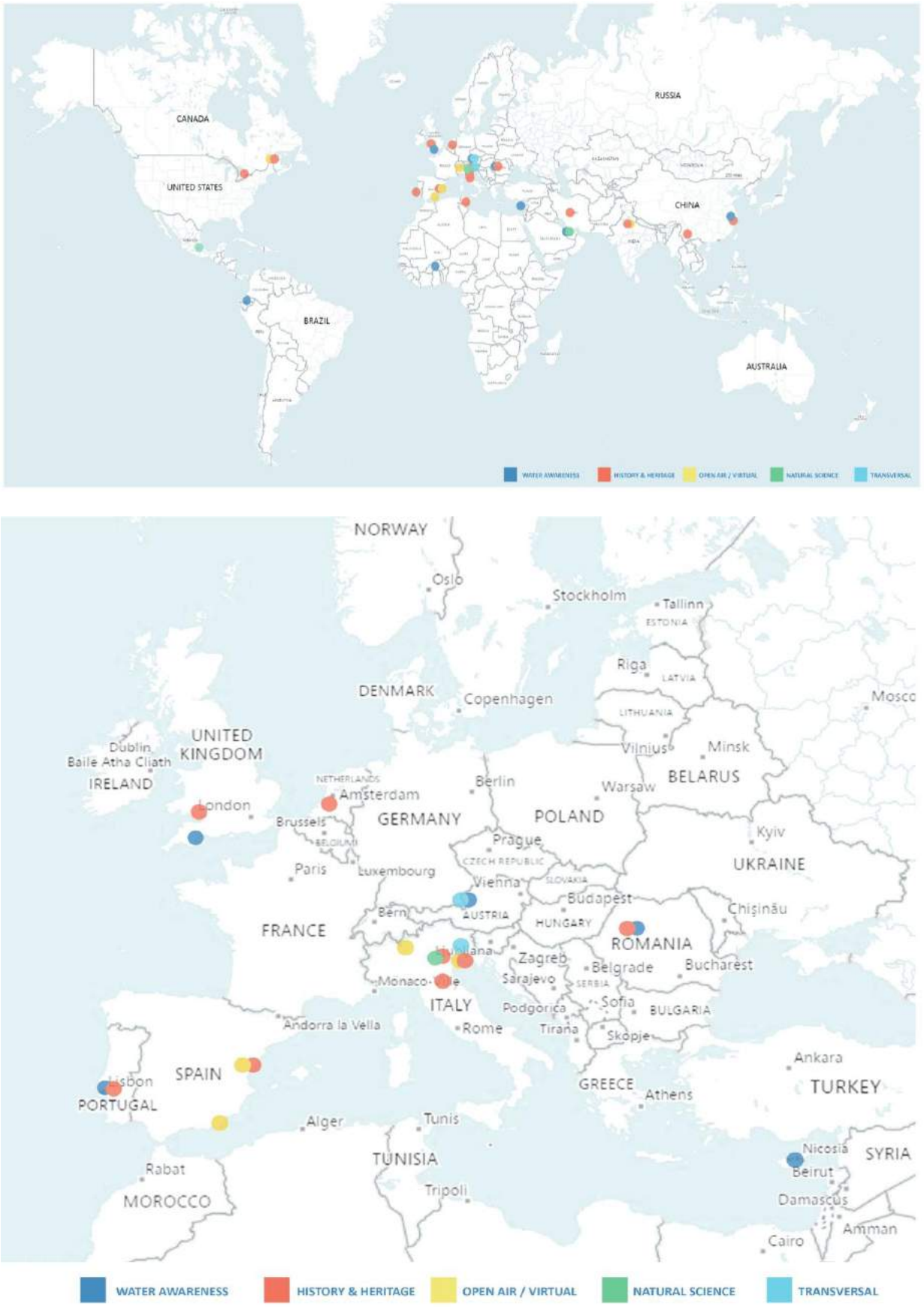
A number of water museums focus their attention on past human water uses, while others focus more on natural sciences, or technology. Some display and interpret also relations of power linked to water uses, reflecting on important issues related to water justice and more equitable uses. However, science and culture cannot be separated in the new paradigm of sustainability which potentially can be shared and promoted through new, common exhibitions.

A number of museums dealing with specific water issues (e.g. among the participating museums: Lisbon in Portugal, Ellesmere in the United Kingdom, Hamilton in Canada, Suzhou in China, Zaghouan in Tunisia, Puebla in Mexico…) display many archaeological and historical devices and works for collecting, conveying or managing water. At the same time, they explain how some solutions have been conceived and designed within particular contexts to convey an intrinsic sense of beauty linked to water; as such, a number of specific places must be considered for their unique aesthetic relation within a particular landscape, and to an intrinsic *genius loci*. Many of those water places are preserved today, also by local communities, as an important part of a common cultural heritage deeply linked to water and its historic management.

As a consequence, water museums must be conceived as institutions which do not limit their exhibits in specific buildings, but may try to preserve and promote their water heritage within a traditional landscape. In line with modern visions of museology, there is a tendency to develop open-air museums (or eco-museums), where local communities (e.g. irrigators in Valencia, Spain, or women's self-help groups, in Mexico) play an active role within local water museums. Today, the cultural and natural water heritage that water museums and local communities tend to protect is very often in danger of disappearing, in spite of the fact it has generated unique waterscapes all around the world (from terraced fields and oasis built for agricultural uses to waterways for inland navigation; from aqueducts, fountains, step wells and ancient rain harvesting techniques functional to civil and agricultural uses, to water mills and other proto-industrial water uses).

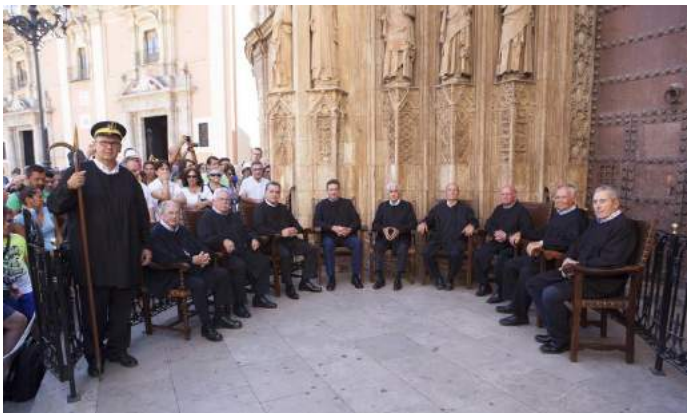
In conclusion, if the concept of "water museum" may seem to some extent inadequate to introduce a new typology or category of museums, it is useful to condensate a vast range of exhibits, topics, issues, and local practices/experiences, from water uses and techniques still practiced by local communities to intangible heritage. To define and structure water museums concur a number of different disciplines including history, archaeology and hydraulic engineering (historic and/or modern dams, navigable canals, sewage treatments), art and architecture (urban planning, waterfront design), geology and natural history (from rock formations to ecology and ecohydrology), technology and physics (from the physics of quantum to the new frontier of "water memory"), sociology and anthropology. Indeed water is not only a technical matter related to technological development, but is also related to life, sex, racism, power and politics, spiritual and symbolic values, and in this sense it forges and has been forging for centuries cultural identities. Anthropology focuses on those specific cultural attitudes, behaviours and perceptions towards water which have been shaped all over the world within specific socio-historical contexts, thus creating unique "water worlds", which are symbolic of different, local and unique ways "living with water". Water museums are crucial institutions which may help to interpret and understand the "water worlds" from the past which are necessary today, more than ever, to project our liquid futures.

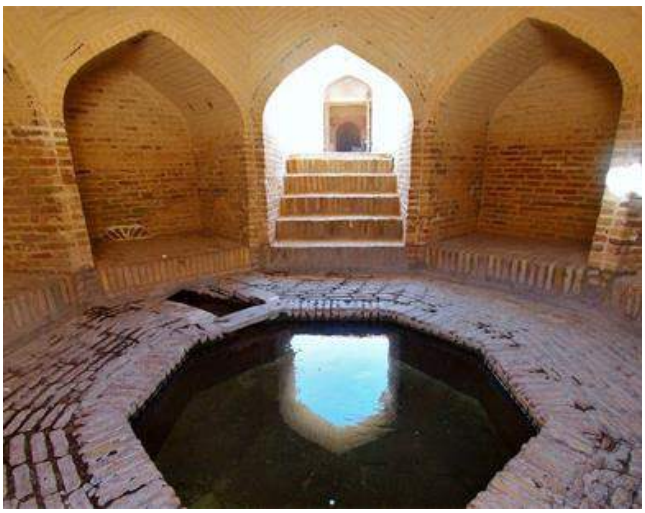
Instead of focusing on the possible refinements of different categories to classify the specific nature and scope of the water museums which took part to the Venice workshop (see illustration 7 and 8), or which have been censored all over the world by the workshop's organizers, all participants agreed that commitment to common and shared goals linked to sustainability, equity and preservation are far more important than reflecting on conceptual categories. A thorough classification of water museums may be the object of future research.

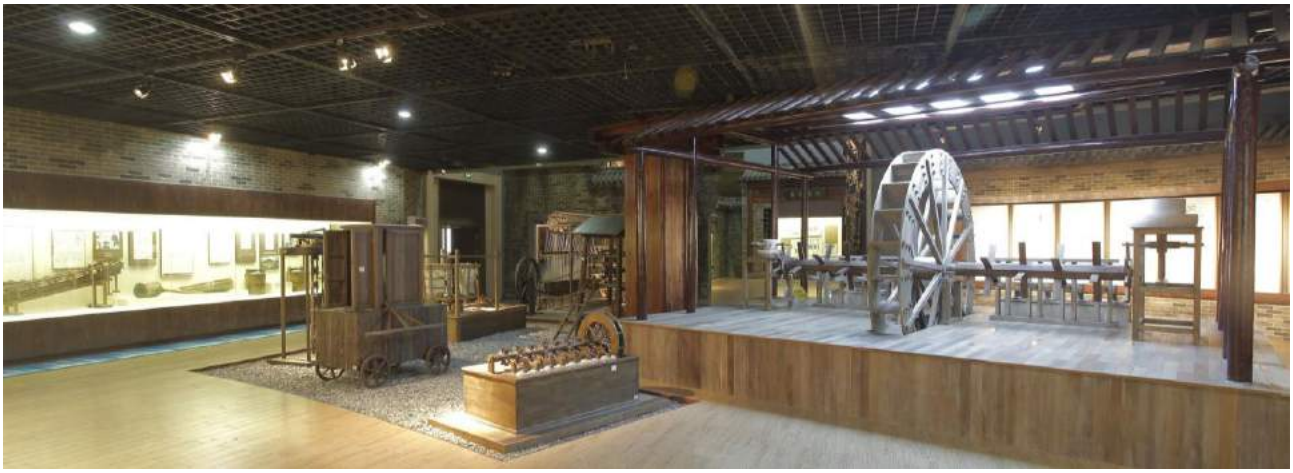


7-8. Location and preliminary classification of the different water museums which took part to the Venice workshop.

In building their displays, a number of water museums is already making reference to crucial issues which call for inter-disciplinary approaches and multipurpose solutions to the global water crisis: from climate change to growing water scarcity and pollution; from flooding to increased hydraulic risks linked to urbanization; from new models of cooperation to issues linked to gender and social equity. Other museums have not developed such displays yet, but confirmed their interest to do so, in particular if done in collaboration with new partners. **9-13. The water heritage displayed by some of the museums participating to the Venice workshop. From left to right: the Tribunal of Waters of**







Valencia, the "living heritage" performing in front of the city cathedral, and the traditional 'huertas' (irrigation canals) on which they exercise jurisdiction; cistern and water harvesting technique at Yazd Water Museum (Iran); the aqueduct of the Lisbon Water Museum (Portugal); hydraulic artefacts at the National Water Museum of Hangzhou (China).

4. FUTURE ROLE OF THE GLOBAL NETWORK TO ALLEVIATE THE GLOBAL WATER CRISIS, THUS CONTRIBUTING TO ACHIEVE SDGs.

The 29 water museums which attended the Venice Workshop reach together, every year, around 2.5 million visitors. Taking into account the additional water museums which may be included in the Network, and the average number of people that visit them every year, it appears that millions of people can potentially be reached worldwide by this new project.
In this sense, it was stressed that water museums can play today a crucial role as "agents of transformation" for future water uses, and that the creation of a Global Network of Water Museums (GLONET) may help to strengthen the role and achievements of single museums both at national and regional level, involving more closely the local communities.

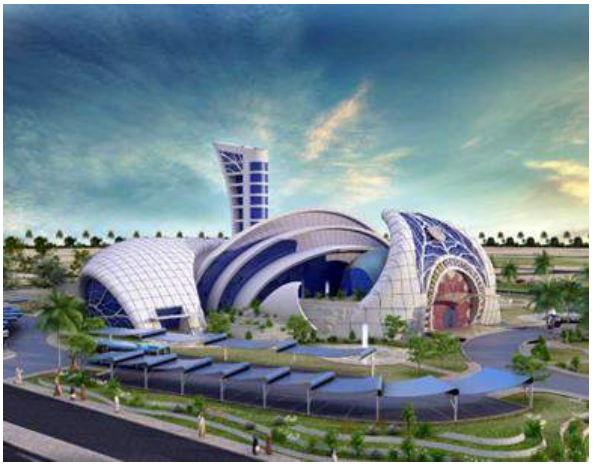
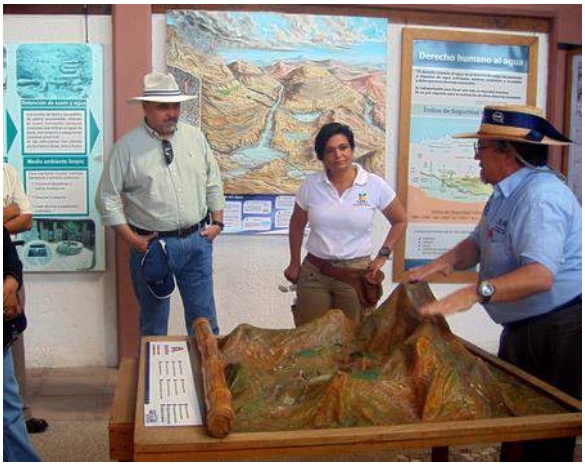
There is today an urgent need to communicate to the largest possible audience the great water challenges we are facing on a global scale, as well as their possible solutions, combining past and present models and paradigms of sustainability in order to attain SDGs (in particular SDG n.6, but not only), without prejudice towards the so called "traditional water heritage", and avoiding ethnocentric approaches.
Water museums which develop exhibitions and educational activities around the concept of "sustainable water uses", combining the ludic and scientific approaches, have a great potential to communicate the present-day water challenges and the possible innovative solutions to large audiences, thus positioning themselves as "agents of transformation" towards more sustainable and equitable practices of water resources use and management.
Today, the common heritage of humankind displayed by water museums, both physical and virtual (or online) museums, is in danger of further disappearing under the homogenizing effects of globalization, as well as of approaches which are merely technocratic. The dominant and simplistic perception of what water is and means in the present century is overwhelming and the risk is to obliterate past (and often richer) water cultures. For this reason, all participating museums agreed that the emergence of a new paradigm of water management requires an ideal combination of water paradigms and visions inherited from the past with new technologies and technocratic approaches, in the view of securing more sustainable water uses for future generations.
Indeed what we consider today as "traditional" (i.e. "obsolete") knowledge and/or techniques, should be seen in a historical perspective, that is, as a truly "innovative" solution, which was adopted at a particular time to respond to specific human needs, and which sometimes demonstrated to be successful across many centuries (and often more sustainable environmentally than many other modern solutions). Similar "traditions" represented, in many cases, the best answer developed to face specific environmental and societal challenges, and contributed to make those societies highly resilient and adaptive to change. At the same time, given that access to and control of water is determined by social relations of power, whether customary practice or dictated by law (water rights), not all traditional water management systems were necessarily egalitarian. In learning from the past and adopting or promoting innovative and resilient water solutions, the Network is equally acknowledging the differential impacts of water use and management systems on more vulnerable and marginalised communities.
During the workshop, it was agreed that water management models and know-how inherited from the past as well as new ethical principles reflecting on justice and social equity, are both necessary for an improvement of our technocratic approaches.

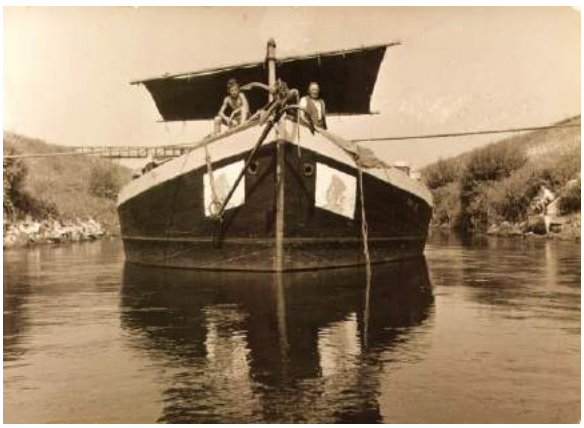
The repository of good practices and models displayed by water museums should be better understood and promoted as a source of inspiration for the development of innovative water management solutions to face the global water crisis.

Growing water scarcity, resource exhaustion, water pollution as well as desertification, glaciers melting and recurrent floods due to climate change, with the consequent dramatic reduction of biological and cultural diversity, and the exodus of entire populations, are not resolvable only through a technocratic approach.
The new water paradigm which may be fostered and disseminated by water museums implies the need to reverse, wherever possible, many present-day myopic misuses of water as an "un-limited resource", as well as misconceptions towards the miraculous application of new technologies to solve all water management and related environmental issues. This is the case when, e.g., the uncontrolled use of new and powerful technologies, such as those for water extraction, are accessible to everyone and as such may be the cause of the depletion of aquifers and environmental pollution, particularly in the developing world.
In this perspective, the water heritage and the management models inherited from the past and displayed by many water museums prove to be a truly inspiring repository for conceiving new and more sustainable solutions to face the global water crisis.

The creation of a Global Network of Water Museums can give a valuable impetus to the emergence of truly new perspectives concerning water sustainability, connecting past, present and future water uses, that is, paving the way for a change of paradigm in water management and for achieving SDGs.
Despite unprecedented technological progress - or perhaps, rather, because of this - water today is increasingly imperiled by pollution, waste, quality degradation, climate change, and even indifference. Within this context, the Global Network of Water Museums is an initiative addressed to authorities and citizens who believe wholeheartedly in preserving water - whether surface or underground - together with its cultural and historical dimensions, which still evocatively narrate the special and unique relationship of humanity with this most precious source of life.
The need to reinterpret our inherited and multiple "water worlds" is extremely challenging. The creation of a Global Network could give a valuable impetus to the emergence of new perspectives concerning water sustainability, connecting past and present water uses and management practices with future needs; that is, paving the way for a change of paradigm in water management, in line with the principles of Sustainable Development Goals.
In consideration of this potential impact and the important role that GLONET can play in contributing to achieve the goals of the Agenda 2030, and alleviate the global water crisis, during the workshop it was decided to test the ground of common interests for future actions and consolidate, among all participants, a shared vision on common objectives.




14-20. Entrance of the National Water Museum of China (city of Hangzhou) and related waterfront / waterways system; the Kharamaa Water Awareness Park at Doha, Qatar; guided tour at the "Agua para Siempre" Water Museum (Puebla, Mexico); water management in the oasis of Tozeur (Tunisia); the River Navigation Museum of Battaglia Terme and the Botanical Garden of Padua (Italy).

Among the many proposals related to future and common activities of the network, it was suggested that the GLONET should organize an annual conference. Thus, the workshop experience should be transformed into an annual conference (representatives from the Netherlands and China already offered to host the next one in 2018). A UNESCO Centre cat. 2, or a UNESCO Chair, could be created to coordinate such a network in the future.
In addition, an award for young scientists to look for innovative solutions inspired from ancient water management models to tackle the global water crisis was discussed. Also artists should be invited to explore innovative languages not only at the premises of water museums, but also at major contemporary art exhibitions, such as the Venice Biennale.
The representatives of water museums managed by universities (Padua, Venice, Yunnan, Laval) also proposed the creation of dedicated summer schools and internships across the network. Development of a common web platform and of joint exhibitions / installation / communication materials related to the SDGs were also discussed.
In this frame, many participants suggested that a coordination centre should be in charge to facilitate twinning activities, partnerships and internships among different museums and universities, joint initiatives, as well as local conferences and workshops.

5. CONCLUSIONS

Water museums prove to be powerful "agents of transformation" for the future, acting as communicators/incubators/innovators and, as such, could be considered as strategic allies to educate and promote the implementation of SDGs in the present-day society (SDG 6 and not only). Water museums are also actors of economic development in their territory. They work to reach local communities and have the authority to push them into action, as they are often considered as a reference point to inspire new behaviours. While they care to keep a living track of knowledge and artefacts from the past, in all kinds of water related cultural landscapes, they are also active to suggest/encourage new behaviour and management approaches for more farsighted water uses and management, in a watershed/territorial perspective (territory to be considered for active involvement of local communities).
Water museums are crucial institutions* which may help to *build a bridge between the past and the future, reflecting more equitable and sustainable water uses. A Global Network of Water Museums should be considered a powerful "agent of transformation" to better disseminate SDGs to large audiences.

5.1. A possible coordinating structure

It was decided for the moment not to create "heavy" structures consuming the energy and killing the spontaneity and creativity of the network. A voluntary based way of working was wished for. Therefore it was agreed that for the next 12 months any participating water museum/member may lead specific initiatives to keep alive the network, working in parallel tracks, also through bi-lateral, multi-lateral and multi-stakeholders cooperation. In a frame of continuity, Civiltà dell'Acqua International Centre and Ca' Foscari University of Venice offered on a voluntary base to have a coordinating role for the next 12 months (with the support of UNESCO Venice Office), until the next conference/workshop will be held (in 2018). Their main tasks will be of:

- Developing a web platform to present all present members of the Global Network;
- Helping single museums to liaise with UNESCO bodies at national level;
- Fostering communication among network's members and finalising the "Venice Charter";
- Developing new relations with other international organizations (such as ICOM).

5.2. Looking for UNESCO-IHP's endorsement

Civiltà dell'Acqua and Ca' Foscari University of Venice have also offered to approach the UNESCO-IHP Bureau in June 2017, in order to report about the outcomes of the workshop and explore with them the way which could lead to an official endorsement of the initiative through the possible submission of a resolution on the Global Network of Water Museums which could be discussed by the IHP Intergovernmental Council (in June 2018). In this view, they have already started to discuss with local stakeholders the possible establishment in Venice of a UNESCO Category 2 Centre, expressly devoted to coordinate the future Global Network of Water Museums, with the aim of facilitating cooperation among members and joint activities and projects.

5.3 Following-up activities

Participants agreed upon a series of activities to be implemented in the next 12 months:

- Development of the web platform of the Global Network (Civiltà dell'Acqua);
- Next global conferences (The Netherlands and China hosting them in 2018 and 2019);
- Inventory of water stories (story telling model from the Living Waters Museum, India);
- Internships and summer schools across the Network (both universities and museums);
- Joint exhibitions/activities/communication materials;
- Research projects and publications (Suzhou-Venice and Yazd-Venice research projects);
- Thematic/parallel workshops/conferences (Canada and China);
- Development of common educational materials;
- Water Art project at the Venice Biennale (concept, search for sponsors and spaces in the Arsenale with Municipality of Venice, by CCANW UK and Civiltà dell'Acqua);
- Expansion of MIO-ECSDE's virtual museum in the Mediterranean;
- Possible membership of single museums to ICOM, with the aim of creating a special ICOM committee on Water Museums (coordinated by Eco-museum of Martesana, Italy)

The web platform of the Network should be conceived as a visit card of the Network itself with introduction of each member, links to museums' web pages, short survey and description of what they may offer to the Network (expertise, tools, installations), as well as what they expect from it (mapping of resources).

Finally, it was suggested that each water museum will contact its own National Commission for UNESCO, and/or IHP National Committees, in order to inform them about the Global Network initiative and look for their support. In this sense, to be more effective, it was stressed the need to stimulate and coordinate such efforts through a more structured institution, in charge of monitoring and coordinating the entire process.