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Museums for the Past and Future Meaning of Water

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In recent decades, a technologically driven water management paradigm has fostered a model of "domination over nature" with an unsustainable footprint. This paradigm has also alienated people and communities from their environment and from historical practices and forms of knowledge that involve managing and engaging with water directly. There is a need for a paradigm shift in managing water in a way that reconnects individuals to aquatic environments and water-related heritage and reflects the extraordinary transformation in our understanding of the need for biological diversity to sustain human life. The Global Network of Water Museums aims to stimulate a change of mindset toward long-term visions of water governance and heritage by reshaping contemporary thinking through education. With more than 80 members in 33 countries, this growing network promotes a better understanding of water history to build a "new culture of water" and inspire people to adopt more forward-looking uses of modern technology applied to water governance.

KEY THEMES

< Fig. 1 The freshwater basin of Tapi Bhavadi: a lesser-known stepwell in the old city of Jodhpur, Rajasthan (Source: Bhawani Singh, 2021; Mehrangarh Museum Trust – Living Waters Museum, India).

The chemical formula H_2O is not "water."
H_2O is a liquid deprived of both
its cosmic sense and its "genius loci."
It's a formula that is opaque to dreams.
Ivan Illich (1992)

Introduction

The rich sedimentation of water history and of diverse hydraulic cultures inherited from the past has left fascinating testimonials of what we can think of as distinct "water worlds" – that is, unique socio-cultural practices and conceptions aimed not only at using and managing water, but also simultaneously enjoying and celebrating it. Indeed, symbolic and sacred values have always been associated with the precious liquid element worldwide (Bachelard 1942; Eliade 1948; Barthes 1957; Tölle-Kastenbein 1990; Teti 2003; Eulisse 2010; Strang 2023).

However, ancient water cultures inherited from countless generations have been too often obliterated by the paradigm of standardization and "development at all costs" that characterizes the consumer society. In the name of modernity and progress, rivers and aquifers have been poisoned with tons of plastic and pollutants that weigh most heavily on the poorest people. At the same time we can ask: in places where drinking water has become available in every house in unlimited quantities, who still perceives the value of the drop that comes out of the tap? In recent decades of fast development, water has been made increasingly "invisible" – that is, far from people's awareness and interests.

Need for a Paradigm Shift: The Diplomatic Turn

In the Anthropocene, while freshwater biodiversity is plummeting, the preservation of biological diversity and historical water heritage is threatened by general indifference and growing apathy. Consider the rhetoric of greenwashing that sees an increasing number of even virtuous companies reducing the minimum percentage of plastic in their products to better advertise themselves under the banner of "sustainable development" and the new fashionable "green painters" taking a selfie next to an electric car for the sole purpose of self-promotion in political elections. Meanwhile, there is an overall failure to take effective measures to resolve the growing problems of managing an increasingly polluted and scarce resource (Illich 1992; Franzin 2005; Holst-Warhaft and Steenhuis 2010; Eulisse 2010; Tickner et al. 2020; Pileri 2022). Today most people ignore – or do not know enough about – how the health of rivers, aquifers and aquatic ecosystems affects human lives and well-being. Humanity seems not only to no longer be directly involved in water management but also, broadly speaking, to have lost a perception of the natural cycle of water.

Perceptions and attitudes that feed indifference are the consequence of a consumer society that has obliterated water history and the rich semiotic structures of historical cultures strongly permeated by the awareness of a needed coexistence with water in all its manifestations. Indeed, the current global water crisis appears tied to a loss of ancestral imaginaries and values linked to the liquid element. This is a condition that makes multiple water-related heritages more vulnerable than ever (Pileri 2022; Strang 2023; Wantzen 2023; Eulisse, Vallerani, and Visentin 2023).

In this radical change of human awareness of the crucial value of water, as Michel Serres has pointed out (2018), the "new Nature" that is born from the hubris of the Anthropocene and that is leading to mass extinction of biological diver-

sity is inseparable from consequences for the health of people and future societies. For this reason, we need to collectively experiment with alternative ways of inhabiting the planet within a framework no longer based on the concept of "security" but on concepts of "vulnerability" and "mutual care": "a diplomatic turn towards Peace with the Earth provides such an opportunity" (Degeorges 2021, 4). A new partnership with the Earth is the post-environmental paradigm that needs to replace "the unsustainable and predatory paradigm of economic growth based on the ideology of performance and optimization" that characterizes present-day societies (Degeorges 2021, 4).

The predominant development paradigm of consumer societies assumes that efficient (and "sustainable") water management can take place only with major hydraulic infrastructures that devour energy and leave a huge ecological footprint. In this frame, contemporary challenges to more forward-looking water uses require a change from the current cultural paradigm of "domination over nature" to one of "ecosystem sustainability" of the territory and its resources. Such a paradigm shift is a long-term and demanding task that requires education, training and engagement (UNCCD 2005; Global Network of Water Museums 2019; Treviso Manifesto in Defense of Water 2021; Wantzen 2023).

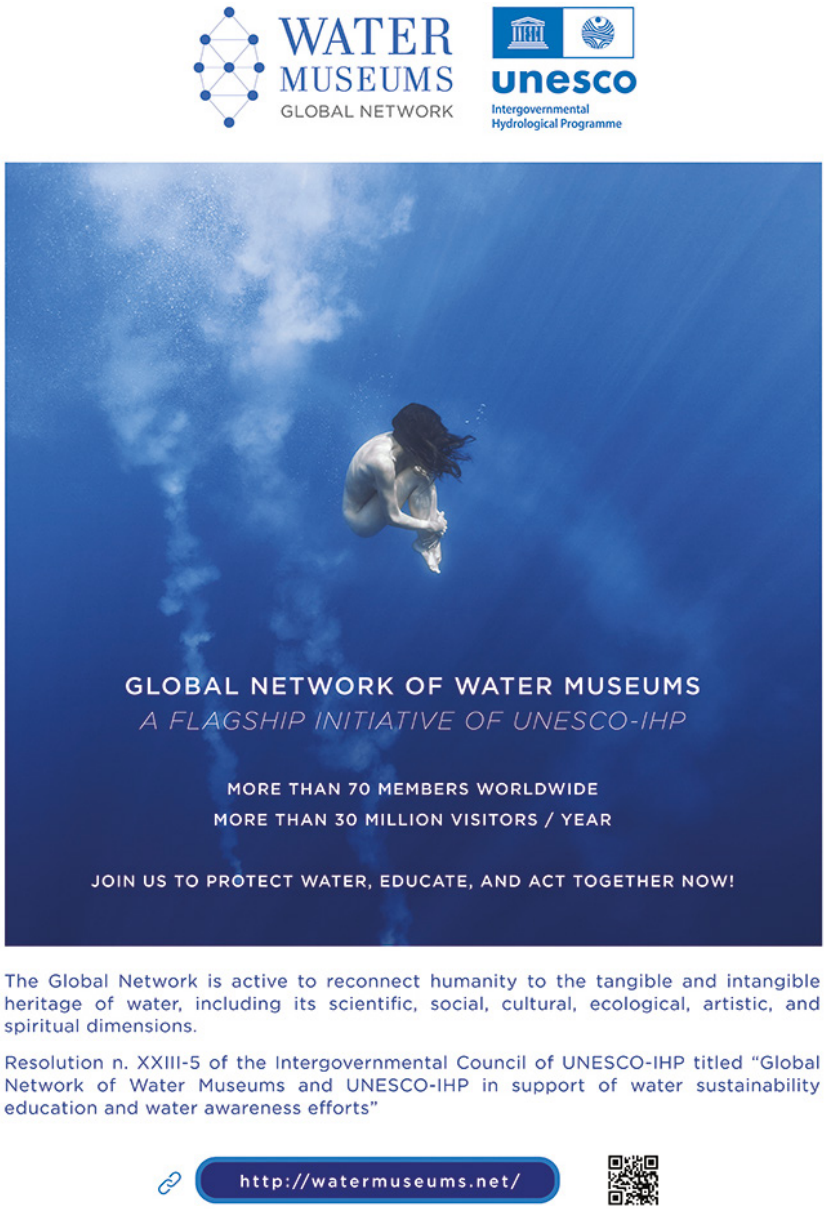
A closer look at historical water cultures offers a better understanding of the ancient ways of living in close relationship with water and its many manifestations. Although past generations only had basic empirical knowledge available and limited tools, we find that in many places our forerunners often managed water with more far-seeing vision when compared to the present day. Concerns about over-exploitation of common resources were shared in discussions and decisions that reflected learning by trial and error. Most efficient local solutions considered the limits imposed by nature, involved people directly in water governance and handed the resulting social practices down through the generations (UNCCD 2005).

For this reason, today it is crucial to know water history better and reconsider how past societies could manage scarcity in extreme environmental conditions by developing models of more forward-looking water management. Indeed, ancient water cultures reveal an essentially empirical character but simultaneously also holistic visions that incorporate intangible aspects and values associated with water to preserve it in the long run. This approach also led to natural coexistence with other species in diverse ecological contexts. In contrast, the consumer society thrives on a distorted knowledge of nature and pays little attention to its own footprint.

How Water Museums Can Stimulate Paradigm Change

In rediscovering ancient practices of human coexistence with the liquid element, what lesson can we apply to improving sustainability education and citizen awareness concerning the fragility of water? Water museums play an important role in this process, as has been stressed in a few declarations and in the Strategic Plan of the 9th Phase (2022–2029) of UNESCO's Intergovernmental Hydrological Programme (UNESCO-IHP 2022, 119).

In fact, museums can address water-related heritage of all kinds – whether natural, cultural, tangible or intangible. They can also foster key and fresh approaches to reconnect us with ancient practices and values of farsighted water management. Indeed, museums worldwide display outstanding features of water knowledge



^ Fig. 2 The poster of the founding Manifesto of the Global Network of Water Museums.

and heritage that can be vitally important in reconnecting individuals with water and in preserving the biological diversity of ecosystems.

This is a crucial contribution to the UN Sustainable Development Goals (SDGs), since in many parts of the world multiple water assets and heritage sites have been obliterated by the illusory availability of unlimited quantities of water – as implied by the functional ideology of consumer

societies. In this context, it is important to stress that more farsighted management of local water no longer requires only fundamental notions of hydrodynamics, technical management and efficient resource allocation to consumers. To find solutions to the challenges of water scarcity, policy makers must be sensitized to and properly trained about the need to also consider the ingenious visions and farsighted practices of past water management approaches. Concrete examples of these solutions were developed for the exhibition *Valuing Ancient Water Cultures* organized for the UN-Water Summit on Groundwater at UNESCO by the Global Network of Water Museums (2022). Ancient visions of managing water show how to benefit from low-cost and zero-emission practices that have simultaneously modeled waterscapes over the centuries. Such good practices and underlying models must be better combined with innovative technologies to protect freshwater ecosystems and face the impacts of climate change and water scarcity.

This perspective must be promoted further to better protect pristine waters, aquifers and water bodies – thus, preventing the further artificialization of riverbeds and enhancing freshwater ecosystem services. To reach these objectives, museums and visitors' centers – not to mention a growing number of exhibitions focusing on water vulnerability and involving several institutions, companies and artists – can inspire people to learn more and think about innovative solutions with long-term goals and with greater respect for non-human species that live in aquatic environments.

Changing people's minds and lifestyles is the mission of the Global Network of Water Museums (WAMU-NET), a network aimed at establishing a new relationship with our vital element (fig. 1). Indeed, while bringing renewed attention to ancient socio-cultural practices and perceptions related to water, the mission of WAMU-NET also focuses on present-day common behaviors, perceptions and attitudes involving water. In this perspective, the WAMU-NET Charter stresses the need to build a new "culture of water" – a culture that must take more account of our inherited "watery past," that is, the experiences and worldviews exhibited in water museums (Global Network of Water Museums 2019).

Museums can help transform individual behaviors, change paradigms and reestablish deeper connections with water. To do this, however, museums and related institutions must be better supported at all levels in order to promote new skills and pedagogical models. Education systems must respond to current water challenges by fostering fresh perceptions and awareness of values related to past liquid heritage.

In this sense, museums can be considered key drivers of the needed "diplomatic turn" in water governance and uses. They can inspire people, including the younger generation, with long-term visions and paradigms rooted in more farsighted wisdom linked to water. The more we look at ancient water knowledge, values and visions that gave rise to forward-looking management models as part of an educational process, the more it is possible to imagine more equitable and sustainable futures.

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