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BORDER AHEAD
حدود أمامك
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Water, Culture and International Institutions

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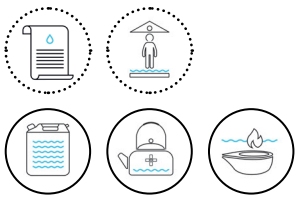
This article focuses on the integration of different values of water, ranging from intrinsic to emotional, in international treaties and transboundary organizations. After introducing the "four worlds of water" (Wolf 2017), we discuss the increased recognition of locally based cultural and spiritual values of water in global conventions, international freshwater treaties and regional river basin organizations. Global conventions generally use more technical and broad formulations and international treaties tend to focus on small geographic areas and the need to protect water, and environmental resources associated with water, while the cultural impacts of water management decisions on local communities are most apparent at the governance level of regional organizations.

KEY THEMES



< Fig. 1 Christians taking baptism in the Jordan River (Source: Aaron Wolf, 2019).

The Four Worlds of Water

Compared to other natural resources, water is unusual in the multiple layers of importance it holds for both human and non-human uses.[1] Agriculture, transportation, energy, and basic ecosystem functioning and services all rely on water. These uses are examples of the "physical" values of water. They involve the water we see, touch and move; but also "mental" water – consideration of its efficiency or price. Focusing on these values of water is common in mainstream water management, which is heavily influenced by the industrialized West in global governance institutions, such as the United Nations. These institutions more often than not focus on what can be quantified and located precisely on a map, unlike emotional and spiritual associations, as described below.

In contrast, many local, culturally specific, spiritual and Indigenous traditions also value water for its "emotional" and "spiritual" element. The concept of "emotional" water refers to its connections to history, sovereignty, power and justice. "Spiritual" water stems from the aspects of water that focus on connections and relationships with some form of "other"– other people and their needs, the water resource itself, or, if it is part of one's theology, the Divine (Wolf 2017, 47). In many traditions, springs, wells and rivers are the homes of deities, have divine healing powers and enhance processes of spiritual transformation.

These four "worlds" of water – physical, mental, emotional and spiritual – are often conflated or confused, especially as water management tends to favor those aspects we can measure – physical and mental waters. This rift became more prevalent with what has become known as the "Enlightenment" of the eighteenth–century Western world, when it was argued that public policies should be informed only by "rationality," as exhibited by whether a metric is quantifiable or not. The comparatively recent and geographically specific result has been that, in management and negotiation settings, we are often comfortable talking about the waters that we can measure – physical and mental waters – while the real heart of the issue at hand may relate more to emotional or spiritual waters.

Patterns where the four worlds of water described above appear occur in three layers of water management: global conventions, regional international treaties concerning freshwater resources and local transboundary river basin organizations. These three layers of water management each interact with the four waters (physical, emotional, mental and spiritual) differently, based on the values prioritized at different levels of governance or those overlooked in policymaking. The Transboundary Freshwater Disputes Database at Oregon State University collects information about these three layers of water governance, with documents dating back to 1820. We surveyed the database to note that, over the course of its 200-year record, there are signs of increasing interest in recognizing values for water based on local, cultural and spiritual aspects.

Global Conventions

Documents that guide ethics at the global scale, by their nature, need to be quite general. As such, these documents are often disconnected from local values, resulting in occasional setbacks in the global community's approach to broader and more inclusive values when man-

1. Material in this article draws from: Porta and Wolf (2021).

aging shared water resources. As an example of how these documents can be limited, the 1992 United Nations Economic Commission for Europe (UNECE) Water Convention focuses on water quality but in quite technical terms. It focuses on encouraging signatory countries to work together on the "physical" aspects of water, typically in the form of the creation of joint bodies around water quality and quantity monitoring and research. The only two real exceptions are "effects on the cultural heritage," and "sustainability" is defined as meeting the needs of the present generation, "without compromising the ability of future generations to meet their own needs" (UNECE n.d.).

At the national scale, some "Western" countries have increasingly been reaching out to Indigenous communities for language to describe the emotional and spiritual dimensions of water. The New Zealand National Water Policy (Government of New Zealand 2014) was developed in 2014 with close participation of the Maori community, resulting in explicit language referring to the spirituality of water and a powerful example of how the four worlds of water might be united:

> All things in the natural world have *mauri* (life force) and *wairua* (a spiritual dimension). Respect for the spiritual integrity of the environment and the *atua* (God) that created it will ensure that the *taonga* (treasure) can be protected and passed on to succeeding generations.

International Freshwater Treaties

The layer of water management "below" global conventions, such as the 1992 UNECE Water Convention, is the layer of agreements between states which share international water resources. Moving from the global level to such regional international agreements, we can see that specific patterns of leadership in expressing emotional and spiritual values of water continue to emerge in some regions. Treaties help states organize their interactions over shared water resources. These documents also communicate governments' shared goals, needs and values (Dinar et al. 2019). Over the last two centuries, the "spiritual" and "emotional" dimensions of water slowly found space in international treaties. Values associated with the spiritual and intrinsic dimensions of water first proliferated in international agreements beginning in the 1950s. The 1980s saw a sudden transition to an intensive, long-term concern for water and interconnections between hydrological, social, cultural and economic cycles and systems (Porta and Wolf 2017). These activities are,

^ Fig. 2 Ablution fountain before the Dome of the Rock in Jerusalem (Source: Aaron Wolf, 2022).

^ Fig. 3 A sacred spring in Laos (Source: Aaron Wolf, 2013).

in most cases, associated with specific water resources, and therefore would not apply to all waters of each member country to the agreement. These patterns build on established literature based on work conducted at Oregon State University, which identified the power of water resources to be points of cooperation rather than conflict (Wolf 2008). Key issues from the agreements in place for specific resources include intergenerational water justice, measures to monitor or prevent localized pollution and concern or protection, for local ecosystems or non-human needs for water. This recent trend indicates a building support for values associated with the spiritual and intrinsic dimensions of water, reflected in policies that seek to address these issues.

Different cross-border groups of neighboring countries approach spiritual and emotional elements of water in distinct ways. In the Global North, one or two countries in a region tend to be peer-leaders in their concern for these issues. In Europe, for instance, Finland, Ireland and Georgia are the regional leaders in integrating the "mental" and "emotional" aspects of water in international water agreements (Porta and Wolf 2017). These connections manifest in documents that strongly feature issues of sustainability and equity, and discuss managing ecosystem functions in specific basins in order to protect downstream or related ecosystems and biodiversity for their intrinsic value, in contrast to agreements which manage water for specific industrial or economic purposes. These agreements also tend to focus on small geographic areas such as specific channels, groundwater resources or reservoirs forming borders between countries, or on regulating specific sectors of the local economy.

In the South, there is regional support among neighboring countries for the recognition of emotional and spiritual water values among neighboring countries. Agreements in the Global South/East speak generally about sustainable development and equitable resource access alongside environmental protection and conservation. In Africa, for example, the 1987 Agreement on the Action Plan for the Environmentally Sound Management of the Common Zambezi River System, signed in Harare, addresses both intrinsic values of environmental integrity that need to be protected alongside improving equitable human access to environmental resources in the river system. These protections for the inherent value of the Zambezi system and the communities with social ties and cultural heritage associated with the environment are an example of a more complex recognition of spiritual and physical dimensions of water. The 1991 treaty between the Re-

public of Uruguay and the Federal Republic of Brazil for the use of natural resources and development of the Cuareim River basin thematically focuses on economic development that also conserves resources in the river basin for future generations. These are two documents out of dozens that mention a need to protect water and environmental resources associated with water for the intrinsic value of the resources, the ecosystem and its inhabitants.

River Basin Organizations

The third layer of water management interacting with the four worlds of water are river basin organizations (RBOs). RBOs are institutions with broad mandates in which representatives of countries located in the same international river course or river basin manage shared surface water resources (Schmeier et al. 2016). These organizations are diverse in structure and purpose. Some are knowledge-sharing spaces between countries and economic sectors, such as the Lake Tanganyika Authority (Porta and Wolf 2017). Others can help advise regulators in different countries on sensitive issues, such as the Finnish-Swedish Transboundary River Commission (FSTRC) (Porta and Wolf 2017).

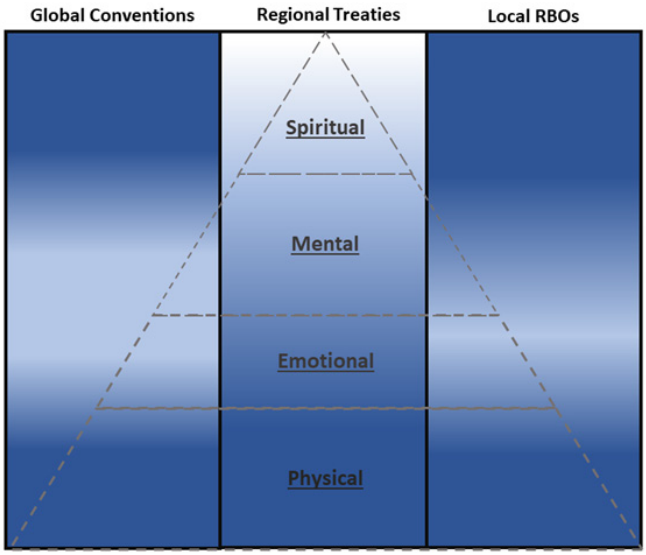
Even at this scale, directly acknowledging the link between culture and water is rare in RBOs. This is a more common practice in African organizations. The Lake Tanganika Authority, the Zambezi Water Commission and the Lake Victoria Basin Commission all acknowledge the cultural heritage of, and intergenerational need for, protection of local water resources in their work. The FSTRC also focuses on protecting the rights of Indigenous groups in Finland and Sweden. The Commission specifically protects the traditional fishing practices of these groups.

Conclusion: Cultural Values and Water Management

In treaties and RBOs in the Global North and South, there is a concern apparent both for the cultural values of water and the physical management of water. However, RBOs address this dual priority more directly than comparable international treaties. The duality in these documents indicates two possible trends to utilize for the future of water. In one arena, countries negotiating treaties are expanding their vocabularies and acceptable priorities to include culturally based protections of water. In the past, concerns about water that were based on connections between physical water and cultural, spiritual water were harder for states to recognize or commit to publicly. The increased presence of these values in treaties then influences the second trend emerging in RBOs. Now and in more local-level management, these connections often become realities for the RBOs established by treaties and the on-the-ground work carried out by these organizations. Thus, treaties may not express values focused on cultural, human-environmental and hydrological connections, but these connections tend to become unavoidable and manifest when managers must implement projects.

Fig. 4 is explained as follows:

Gray text and dashed lines indicate the four worlds of water (physical, emotional, mental and spiritual). The size of respective pyramid layers reflects the order of the four worlds as described in Wolf (2017), and the relative frequency of these worlds being addressed in water management layers. For example, the wider "base" of the physical world represents its dominant representation across all water management arenas, whereas the narrow spiritual "top" shows the rarity that these topics are addressed overall.



^ Fig. 4 Conceptual figure summarizing trends in manifestations of the four worlds of water across the three international water governance layers discussed (Source: Lynn Porta, 2023).

Specific trends of the four worlds manifesting with relative frequency to each other within each water management layer (global conventions, regional treaties and RBOs) are represented in blue-gradient blocks overlayed above the pyramid layers, wherein the darker shading indicates more frequent representation of the values associated with each world as present in a specific water management layer.

Global conventions, which need to be more general in nature, address the broadest concerns of the physical and spiritual/cultural values of water that the global community can consent to addressing. Regional treaties historically focus on the physical and mental worlds of water, with recent trends also supporting a growth in addressing emotional and, to a lesser extent, spiritual values associated with shared water resources. Local RBOs, where practical management meets localized values and culture, have a more even distribution of marrying all worlds of water, albeit with some regional variation.

There are lessons for each layer of governance from looking specifically at how cultural awareness can enhance water management. In treaties, states express generalized values regarding environmental protection and sustainability, and the physical needs of their constituent populations in relation to water supply and quality. RBOs are forums that more frequently recognize the cultural impacts of water management decisions on local communities and their ability to practice long-held fishing, agricultural and social traditions. These are also spaces where local communities can be important influencers, particularly concerning the value of water with cultural or spiritual connotations (Porta and Wolf 2021, 17). Local scales of management and actors can thus be a source of ground-up leadership regarding the voicing and incorporation of these concerns into scaled-up international institutions. At the local level, wisdom from local sources and knowledge can be brought to the fore of water management.

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