



Capacity Development and Cultural Heritage: Toward a New “Culture of Water”

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In 2020 UN Water, the entity coordinating the United Nations’ work on water and sanitation, identified capacity development as one of the five accelerators required to achieve the Sustainable Development Goal on Clean Water and Sanitation (SDG 6). In today’s practical application, capacity development is mostly financed to deliver a product specified in advance, not to arrange a longer time frame and process to structurally learn from various activities and discover sustainable development paths (Alaerts and Zevenbergen 2022). The inclusion of traditional knowledge and cultural heritage in our joint-learning efforts will help us enlarge capacity for a more sustainable culture of water.



KEY THEMES



Introduction

Capacity development may be defined as a process in which people, organizations and society as a whole unleash, strengthen, create, adapt and maintain capacity over time to achieve development results (e.g., OECD 2006). Capacity is often defined as the ability of people, organizations and society as a whole to manage their affairs successfully. Capacities and their development can be grouped in three levels:

1. Individual – improving individual skills, knowledge and performance through training experiences, motivation and incentives.
2. Organizational – improving organizational performance through strategies, plans, rules and regulations, partnerships, leadership, organizational politics and power structures and by strengthening organizational systems, processes, roles and responsibilities.
3. Enabling environment – improving policy framework to address economic, political, environmental and social factors, including economic growth, financing, labor markets, political contacts, policy and legislative environment, class structures and cultural aspects in a current and mutually reinforcing fashion.

Current Approaches

Although educating and training people to increase the capacity to maintain and reestablish heritage sites and traditional practices is essential, for the water sector the combination of awareness and the presence of a sustainable water resource is priceless. This importance is clear from the UNESCO-Intergovernmental Hydrology Programme (IHP) resolution XXIII-5 (2018). This resolution to establish a Glob-

al Network of Water Museums (WAMU-NET) demonstrates the importance of awareness raising and education regarding the value of traditional habits and heritage as well as of a forward-looking approach to see how traditional knowledge can help address contemporary and future challenges, especially those related to climate change. As the WAMU-NET (n.d.) charter states, “Today it’s essential to reinstate a new relationship between humanity and water: a new ‘sense of civilization’ which helps to reconnect people and water in all its dimensions – including social, cultural, artistic and spiritual connections.”

A clear example of the usefulness of traditional water knowledge may be found in water harvesting. Because the severity and extent of water scarcity has increased in recent decades and is expected to continue to increase in the decades to come (IPCC 2022), water harvesting has been rediscovered. A simple search on ScienceDirect using the keywords “water harvesting” shows a total of 1,528 hits, and an increasing interest from 94 hits in 2012 to 573 hits in 2022. One study (Thapa et al. 2022) identified the main factors affecting the adoption of rainwater harvesting for household uses in the Kathmandu valley of Nepal: individual willingness and awareness, individual awareness of the future water shortage and the use of rainwater to conserve groundwater. Besides contributing to the present-day sustainable use of water, cultural heritage sites and water museums play an important role in increasing awareness of the importance of water. That it is not always easy to revive indigenous water systems is clear from the work in Yemen by Aklan and colleagues (2022). They conclude that next to awareness, local policy plays an important role in realizing the return of traditional water harvesting. In a personal communication (Aklan 2023), one of the authors explained the ease

of use of groundwater was hampering the revival of traditional water harvesting techniques, even with the awareness that groundwater as a resource was unsustainable. The latter shows the importance of the second level of capacity development, the organizational level. In this specific case, current political structures should regulate the exploitation of scarce resources such as groundwater to stimulate the use of traditional techniques.

Current and Future Challenges

Similar to what has been described in Nepal and Yemen, around the world we can find other cases with similar challenges and the increasing awareness of traditional systems and of institutionalizing the maintenance and operation of these systems. Consider India with its stepwells in Gujarat, Oman with its Aflaj water supply system, Morocco with its khattaras near Marrakech and Chile with its socavones in the Atacama Desert.

These examples show the value of ancient water cultures for our present-day water challenges. Capacity development at all three levels is required to overcome these challenges and incorporate these traditional systems in our contemporary life. Cultural heritage including traditional knowledge can play an important role at two levels of capacity development: at the level of individuals and at the enabling environment level. One may ask why traditional knowledge is not already a stronger part of the capacity development at the individual level, for example, in our present-day education system. To answer this question, the development of our education system is of interest. Power (2015) discusses the history of education: from education for all, to equitable quality education for all and from learning as the treasure within to reimagining

the future. The latest development is the Sustainable Development Goals, particularly SDG 4: "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all." In the water sector, engineers play an important role. Their education and training must change to prevent the past tendency of engineers to operate in their own world, developing technical solutions that sometimes did not take into consideration the views and concerns of all stakeholders (UN Water 2020).

The Sixth International Symposium on Knowledge and Capacity Development (Alaerts and Zevenbergen 2022) showed that currently knowledge capacity development activities are still too often set up and financed for short term and pragmatic purposes with the expectation that well-described capacity solutions get developed instead of studied. One of the conclusions from the symposium concerns the short-sighted outputs of current capacity development activities. Although knowledge and capacity development should set up learning processes for and within institutions and society, today's practical application of knowledge and capacity development activities are mostly financed for delivering a predetermined product. In other words there is no encouragement to adopt a longer time frame and process so that we can learn from these activities and discover sustainable development paths. To prevent short-term, often unsustainable solutions, we need to develop local capacity and be able to learn and discover sustainable paths forward. However, funding education and training for such capacity is often neglected.

The present multifaceted problems that are part of our contemporary world including the water sector call for a different capacity. At the moment capacity development efforts are often top-down, technocentric and short-term. To



^ Fig. 2 The wickedness of water challenges, symbolising the almost compulsory need to approach water problems from different perspectives, including those of marginalised groups and the past (Source: Eddy Moors).

find inclusive and sustainable solutions there is an increasing need to enrich and pluralize our current knowledge base and create space for joint learning. Including traditional knowledge and cultural heritage will open an often-forgotten source of knowledge. Education institutions for water professionals such as IHE Delft with a strong tradition of peer-to-peer learning can play an important role in integrating knowledge of the past in both technical and social solutions for the future.

Conclusions and Future Approaches

UNESCO's resolution on the Global Network of Water Museums shows clearly the value of awareness raising and education of young people, both in terms of the value of traditional habits and heritage as well as the value of a forward-looking approach to perceive how this traditional knowledge can help address capacity challenges, especially those related to climate change. Understanding religion, culture and the traditional handling of water may help to greatly increase the awareness of all end users of water and by that the acceptance of more sustainable uses of water. Creating a teaching environment of joint learning and enriching and combining traditional knowledge and methods with contemporary knowledge and tools may lead to the more sustainable use of water. It will be important that such developments will be implemented within the Capacity Development Accelerator Initiative by the UN Department of Economic and Social Affairs and UNESCO.

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