**THOUGHT LEADERSHIP ARTICLE**

Highlighting the importance of water equity on World Water Day

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**20 March 2024:** **A great tension exists in the water industry between the economic sustainability of water supply and the social responsibility of providing water as a basic human need. In other words, to ensure equitable provision of water the business of water needs to work.**

And to make the business of water work for all stakeholders, from government being the water services provider to the general public and business – that is, the customer – must be involved in the commercial and conservation aspects of water. In this article, we will describe what can be done to help, but first, we must explore water equity and its challenges.

**Why is water equity important?**

Water is a basic human need. Access to clean, safe water provides life and dignity, and in many parts of the world, is considered a human right. Globally, [water equity](https://uswateralliance.org/issue/water-equity/) remains a pressing concern, emphasising the importance of raising awareness. [World Water Day](https://www.unwater.org/our-work/world-water-day) on 22 March is a prime example of a public education campaign to raise awareness about water equity issues and promote water conservation practices. It empowers communities to advocate for their rights to clean water but also, and very importantly, encourages responsible water usage.

Disparities in access can exacerbate social inequalities and impact health, education and economic opportunities. Water equity is critical not only to address immediate water-related challenges, but also to foster inclusive and sustainable development that benefits everyone, regardless of their socioeconomic status or geographic location.

Water is not only essential for survival but in many cases thriving also. The need to purchase water at high prices or spend considerable time and effort collecting water from distant sources can strain household budgets and time, limiting opportunities for economic advancement. Women and children, who are often responsible for water collection in many communities, bear a disproportionate burden when water sources are scarce or distant. This can hinder their safety, access to education and economic opportunities, perpetuating cycles of poverty and inequality.

**What drives equity challenges and water supply issues?**

There is an array of key challenges to achieve equitable access to clean water globally. It is estimated that only 2.5% of the earth’s water can be considered fresh, of which only half can be sustainably sourced and treated using current technologies. Additional factors like climate change, population growth and ineffective water management worsen this scarcity and impacts communities downstream.

Unlike renewable energy where sun or wind power can be easily accessed as it is a free and unlimited resource for all, water is a scarce resource and often inaccessible. It is therefore imperative to note that although alternative water resources can be accessed by individuals, the primary responsibility for water supply lies with local, district and national government.

Many regions lack adequate capital and infrastructure for water supply and sanitation systems. This makes it difficult to ensure access to clean water for all, particularly in rural areas where there has been historic neglect or no commercial drivers to develop water supply. The considerable distances between water sources and development zones pose significant challenges, as exemplified by Windhoek in Namibia. This situation results in constraints on development due to the exorbitant expenses associated with connecting the water source to areas of demand. In addition, the spatial development of rural communities tends to be scattered, often located atop hills and plateaus. Consequently, the cost per capita for water distribution to a scattered population can be substantial.

Another concern arises from the tendency to develop water resources and supply infrastructure in areas with commercial advantages, potentially neglecting poorer communities due to the absence of such benefits. This limitation is compounded by constraints on payment for water, further marginalising these communities.

While affordability poses a genuine challenge for marginalised communities; maintaining free services indefinitely is currently not sustainable. Success hinges on political and social determination to undertake necessary actions, even if they involve unpopularity or resistance. Practices such as service charges can be **proportionally** implemented to cover capital and operational expenses.

For example, a tariff structure for consumers can be adjusted to accommodate the incremental costs of new projects and distribute the financial burden. Stepped tariffs also assist to reduce the costs associated with servicing basic human needs by increasing the charge per unit of water as usage increases.

Even in areas where water is available, ensuring its cleanliness and safety can be challenging. Pollution stemming from industrial, agricultural and urban sources can contaminate water sources, posing health risks to those who consume it. Marginalised communities are disproportionally vulnerable due to their lack of access to proper service provision.

As such, waterborne diseases and health issues such as diarrheal diseases, cholera and other waterborne illnesses are unfortunately common. They are also more likely to live in areas vulnerable to environmental degradation exacerbating water scarcity issues. Industries and development projects often affect these communities disproportionately, leading to land displacement, loss of traditional livelihoods and environmental injustices.

**What is needed to help achieve more equitable water supply?**

Effective governance and supportive policies are essential to address water access challenges. However, inadequate governance structures, weak regulatory frameworks and political instability can impede progress to ensure equitable access to clean water. Governments and policymakers have a pivotal role to promote water equity and have been involved through the development of various water and sanitation master plans, prioritisation of services delivery and funding development. The realities and challenges of water services in the current environment are significant and complex and would require water users, beneficiaries, the private sector and government, to come together to solve these challenges.

Governments can enact laws and regulations to ensure equitable access to clean and safe water for all citizens. This includes implementing policies to prevent water discrimination and to address disparities in access to water resources. Policymakers can and have allocated funds to develop and maintain water infrastructure in underserved communities.

It includes building and upgrading water treatment facilities, distribution networks and sanitation systems to improve access to water services. While the overall plans are commendable, future implementations need to be evaluated to ensure a thorough understanding of their long-term impacts and to guarantee sustainability, both environmentally and financially. Financial sustainability may include conducting a transparent evaluation of existing and proposed schemes, considering capital and operational expenditures, as well as scrutinising the sources and rationale behind funding allocations and revenue streams.

Cross-subsidising will always be with us, but willingness and ability to pay assessments in new developments are critical to increase the probability of success of a scheme operating sustainably. Educating the community is key for them to understand that access to water goes much further than just opening a tap. Contributing to this service and using it conservatively is key to ensure this service is available for future generations.

It is incumbent upon governments to not just set forth, execute and oversee measures for water access and quality, but also to uphold accountability. The absence of a clear vision and accountability can undermine even the most well-conceived plans. Identifying and prioritising tasks, including foundational work that might not garner immediate recognition or popularity, is essential to realise this objective.

It is worth considering integrating water awareness into the education curriculum, especially given the projected water scarcity in the future. Policymakers can collaborate with stakeholders, including community organisations, non-governmental organisations and international agencies to develop comprehensive strategies to address water equity challenges. By leveraging expertise and resources from diverse sectors, governments can implement more effective and sustainable solutions.

Human nature is such that we quickly forget about the last flood that destroyed infrastructure or the last drought that caused us to queue at ar truck for water. Continual education regarding the scarcity of water is therefore critical to ensure a culture of conservation is developed to avoid the vacillation between the excessive use of water during wet periods, which results in crises during dry periods.

Technology can contribute to water equity in the form of implementing advanced water management systems with sensors and IoT devices to enhance efficiency in water distribution, minimise leaks and ensure equitable access to water resources across communities. Utilising satellite imagery and remote sensing technologies allows for accurate monitoring of water sources, identifying areas with water issues (for example, contamination) promptly. This data can inform targeted interventions to improve water access in underserved regions.

Developing and deploying innovative technologies can help purify contaminated water sources, making them safe for human consumption. These solutions are particularly crucial in regions facing water quality challenges. Leveraging digital platforms and mobile applications can empower communities to participate in water management decisions, voice their concerns and access information about water availability and quality. This promotes transparency and inclusivity in water governance.

Investing in research and development creates cost-effective technologies to ensure that water equity initiatives remain financially accessible to all communities, including those with limited resources. Educational purposes such as online courses and interactive tools can enhance awareness about water conservation practices and promote behavioural changes that contribute to equitable water usage.

**What solutions have AECOM contributed in response to these challenges?**

Globally trusted infrastructure consulting firm [AECOM](http://www.aecom.com) has been involved with numerous projects within the African context to support clients and communities solving these problems. A public-sector company like AECOM can play a pivotal role in this regard by providing specialised technical knowledge and consulting services tailored to specific needs, such as engineering solutions, project management and sustainable development strategies. It can offer financial guidance for infrastructure projects, research initiatives and community development programmes.

AECOM has assisted in a number of studies to assist the Department of Water and Sanitation achieve long-term water security and short-term resource allocation with an aim to guide role-players in cooperative governance. It encompasses strategies for reconciliation, implementing interventions and delineating roles and responsibilities within the water sector to ensure long-term sustainable water supply for all users within a system or catchment area.

AECOM has also supported authorities with assessments of water resources to minimise less socio-economically significant water uses, thereby ensuring the preservation of critical supply and meeting basic human needs during periods of scarcity (drought). It has also been involved in major bulk and rural water schemes, extending access to water to underserved communities; and assisted private mining and industrial clients in evaluating their water requirements and exploring innovative water conservation strategies and alternative water resources.

AECOM’s cutting-edge work on wastewater reuse and mitigating the inherent health concerns, including dealing with contaminants of emerging concern, positions it to support private and public clients to investigate wastewater as a viable alternative water resource. Moreover, AECOM can collaborate with governmental agencies, non-profit organisations and local communities to develop and implement solutions to align with broader socioeconomic and environmental goals.

It can also engage in public-private partnerships (PPPs) to deliver essential services and infrastructure projects to foster economic growth and social progress. It can advocate for water conservation in the spaces we occupy by sharing realities and helping educate families, friends and communities about the challenges and dispelling misconceptions.

**What can you do to raise awareness about water equity and advocate for change?**

* **Educate yourself**: Start learning about water equity issues, including disparities in access to clean water and sanitation facilities around the world.
* **Spread awareness**: Use your platforms, whether it be social media, community groups or the workplaces to raise awareness about water equity issues and the importance of addressing them.
* **Support organisations**: Donate, volunteer or participate in advocacy campaigns.
* **Engage in dialogue**: Engaging in conversations with friends, family, colleagues, and policymakers about water equity to increase awareness and foster support for change.
* **Practice water conservation**: Reduce your own water consumption and contribute to efforts to ensure equitable access to water resources for all.
* **Advocate for policies**: Advocate at local, national and international levels for policies to promote equitable access to clean water and sanitation services.
* **Hold decision-makers accountable**: Hold governments, corporations and other stakeholders accountable for their actions and policies related to water equity, as this is essential to drive change.
* **Participate in community initiatives**: Get involved in community-based initiatives such as clean water projects or advocacy groups to make a direct impact and create positive change at the grassroots level.

***Ends***

**Notes to the editor**

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