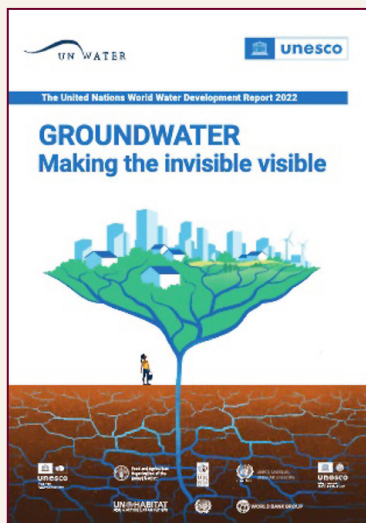




## “Making the invisible visible”



The United Nations World Water Development Report is a flagship report on water and sanitation issues, focusing on a different theme in each issue. The report provides insight on main trends concerning the state, use and management of freshwater and sanitation, and is launched in conjunction with World Water Day. The intent of this report is to provide decision-makers with knowledge and tools to formulate and implement sustainable water policies. Groundwater has always been critically important to human society and ecosystems, but it has not always been fully recognized as part of water security. The most recent UN World Water Development Report, launched on 21 March 2022, highlighted how countries with high water security risks should make groundwater the heart of sustainable development policymaking. Making the invisible visible was the key message as the UN and many other organizations globally marked World Water Day on 22 March 2022. The UNESCO report is available online (<https://unesdoc.unesco.org/ark:/48223/pf0000380721>).



According to the UN water report, groundwater accounts for 99% of all liquid freshwater on Earth, and has the potential to provide societies with social, economic, and environmental benefits and opportunities. Groundwater already provides half the volume of water withdrawn for domestic use by the global population, including drinking water for most of the rural population, who do not get their water delivered to them *via* supply systems. Furthermore, around 25% of all water withdrawn for irrigation is extracted from groundwater sources. It is noteworthy however that this natural resource is often poorly understood, and consequently undervalued, mismanaged and even abused.

While South Africa is not listed as one of the 30 driest countries in the world, there are significant water challenges in the country. Rankings aside, there are regions where there is water stress due to regional climate and climate variances. This vulnerability to water distress was particularly in the spotlight during the drought that caused Cape Town's water crisis in 2017, with many residents of Cape Town lining up day and night to fill containers with water from the city's few natural springs. After months of warnings through an anomalously long drought, Cape Town was on the verge of becoming the world's first major city to run out of water. Freshwater dams had dipped below 25% of capacity, and levels continued to fall. If the dams fell to 13.5% of capacity, the municipal water network would shut down, and millions of residents would face severe water restrictions. The dams fortunately never reached that critical 13.5% level, dubbed Day Zero. Four months later, the rains returned, and dam levels rose. The shadow of Day Zero however still lingers over Cape Town, and the memory of this continues to impact the city, with the average daily water use in the city still between 700 and 800 million litres, about half what it was in 2014 ([www.technologyreview.com](http://www.technologyreview.com), 23 December 2021). But even if consumption remains low, the next drought could yet again challenge the city's continued efforts. Scientists believe that Cape Town will face more sustained droughts over the next 100 years

## **President's Corner** *(Continued)*

because of climate change. The drought of 2017 serves as a great example of the impact climate change can have on society and how crucial it is to plan for these impacts. Cape Town's planned mitigations include diversifying water sources to include groundwater from wells and boreholes, but also includes recycled stormwater, treated wastewater, and household grey water, which could be reused for gardening and other applications. There are also plans for more desalination, controls on water use, leak reduction, and infrastructure investment. All of these coming at a significant infrastructure investment cost.

In the driest, and more remote parts of South Africa, groundwater may be the only water people have access to, and it is crucial to integrate groundwater management into our water plans, both as policymakers and as an industry. Despite being invisible, the impact of groundwater on our daily lives is visible all around us. Our drinking water and sanitation, our food supply and natural environment all rely on groundwater stability and quality. A healthy and stable groundwater system is also critical in the balance of ecosystems, such as wetlands. In deltas and coastal areas, groundwater ensures the stability of the ground and prevents seawater intrusion underground.

The new UN report highlights that groundwater is therefore seen as central to the fight against poverty, and key to food and water security on a global scale. Reliance on groundwater will only increase in the future, mainly due to growing water demand by all sectors, combined with an increasing variation in rainfall patterns. The report describes the challenges and opportunities associated with the development, management, and governance of groundwater across the world, and is worth reviewing as we remind ourselves of the importance of water.

Understanding the role that groundwater plays in our daily lives and how we can use this largely available, yet fragile resource sustainably is critical. Unfortunately, human activities frequently overuse and pollute groundwater, and, in many instances, we do not even know how much water is down there.

Groundwater is out of sight, but it should not be out of mind. What we do on the surface matters underground and will matter tomorrow.

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