



Clean Water

Combating water scarcity:

Sustainable water solutions for a better future

May 2021

Water scarcity is not news but has become a more urgent and critical issue that we need to care about. Rapid climate change nowadays has caused worsening droughts. The imbalance between water supply and demand has affected water scarcity. To help humans have cleaner and safer water, more and more companies have been dedicating to developing sustainable water solutions.

The first sinkholes were exposed in the 1980s and over the years the number has increased rapidly. Now there are more than 3000 sinkholes on the banks of the Dead Sea. In the last three decades, the Dead Sea's level has fallen by almost 100 feet. The drying Dead Sea has revealed a serious water shortage. Drought also contributes to the wildfires in Australia and North America.



The sinkholes of the Dead Sea are caused by the loss of water from the giant salt lake.

Source: iStock, 20 April 2021

Water Challenges

Water is essential and it matters to our life. During the Covid-19 pandemic, one of the most effective ways to prevent exposure to the coronavirus is to wash our hands. However, 40% of the global population still does not have access to clean water and soap in their homes.

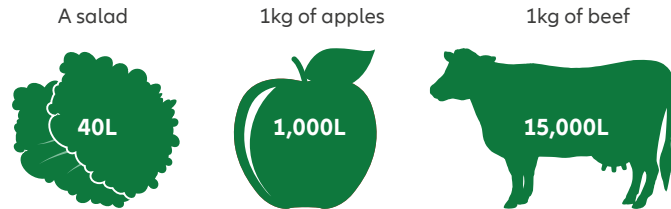
Key takeaways

- As near as you may remember, there were several water crises in recent years, including drying Dead Sea in Jordan and water shortages in the US, India, Turkey and Taiwan. Water crisis is in the top 5 of global risks in terms of impact to society¹ as water is essential for life.
- Human bodies are made up of 60% water and a person needs 2-3 liters per day. However, there are 785 million people lacking access to safe water in the world or 1 out of every 9 people.²
- Demand for "Clean Water" is increasing. Today, more solutions and technologies exist to help ensure safe water and connect water-rich with water-scarce regions, or to improve water usage efficiency – and also to align with the UN's Sustainable Development Goal 6 to "ensure availability and sustainable management of water and sanitation for all".

Water is essential

- 70% of available water is used for agriculture.
- One hamburger takes 1,700 litres of water to produce.³
- Utilities lose USD 9.6 billion p.a. on water leakage.⁴
- Smart water networks can save utilities up to USD 12.5 billion p.a.

How much water (Litres) is needed to produce?



The growing imbalance between water supply and demand is driven by multiple factors: population growth, rising living standards, industrialization and electrification of emerging markets and higher irrigation needs for intensive farming. **The UN's Sustainable Development goal is to "ensure availability and sustainable management of water and sanitation for all" by the year 2030 (Goal 6). Many investments to help balance the supply and demand for water have already started.**

In developed markets, much of the ageing water and waste infrastructure has been neglected for decades and is due to be replaced or upgraded to meet higher regulatory standards. In emerging markets, water and sanitation demands must be met by new infrastructure and local resources, including water saving and water generating technologies.

Sustainable Water Solutions

While rainfall comes "for free", clean water out of the tap does not. Providing a city or a farming region with water requires major investments along the entire water supply chain – this is where the value is.

Only a few countries have achieved the level of sophistication where water is routinely safe to drink or can be released back into the environment, leaving a lot of investments yet to be completed, especially in emerging markets.

A Christian-based nonprofit organization, Lifewater, has been helping emerging countries to access clean water. They work with local experts to develop software and hardware solutions. Software solutions involve behavioural changes that result from raising awareness through appropriate communications, while hardware solutions address problems using appropriate water and sanitation technology developed by engineers. Those sources continue to provide safe water access to communities that didn't have water before.

Reducing water waste is also important. Around 70% of available water is used for agriculture; an eco-friendly system can also help to use water effectively. The European Institute of Innovation and Technology also launched an initiative to find solutions to water scarcity, with a special focus on Southern Europe. There are 6 solutions,⁵

- High-tech irrigation systems
- Drip irrigation systems for poorer regions
- Storing water in dry regions
- Recycling wastewater
- Aquaponics: combining agricultural techniques
- Regenerative agriculture: focusing on soil

Collection wells, pumping stations, filtration solutions and the treatment of sewage water are only a few examples of the equipment needed to operate the complex system of fresh and waste water. Components that reduce water loss and further improve its quality in the delivery chain ensures that clean, dependable water can be provided at affordable rates for everyone.

Companies offering these technologies stand to benefit, and will have a positive impact on the lives of billions of people.

Clean water solutions align with multiple UN Sustainable Development Goals (SDGs)



Environmental and social pressures force industrial and agricultural users to reduce the amount of water they consume, as well as the level of water pollution and contamination produced. Companies addressing the consumption efficiency challenge enjoy fundamental, secular, social, and political support to ensure ongoing demand for their products and services.

Investors are in a unique position to invest in and influence businesses in a manner that creates positive change. Given that success in delivering the SDGs can trigger economic growth, this will also appeal to participants in the equity capital markets.

There is a growing supply of sustainable business opportunities, for example - the companies that offer

technologies or provide solutions, can help achieve the SDGs. These enablers are more resilient to macroeconomic and political volatility and benefit from regulatory tailwinds. This presents an opportunity for investors to contribute in a way that not only triggers sustainable growth, but also helps them pursue potential attractive financial returns.

About the United Nations Sustainable Development Goals (SDGs)

The UN's Sustainable Development Goals are 17 goals that were adopted by all UN Member States in 2015 as part of the 2030 Agenda for Sustainable Development, which set out a 15-year plan to achieve the goals. The SDGs address a range of social needs, including education, health, social protection and job opportunities, while tackling climate change and environmental protection. They serve as a framework to promote prosperity while protecting the planet to achieve a better and more sustainable future for all.



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¹ Siwi.org, 15 Jan 2020
² Water.org, April 2021
³ Ecolab, Closing Keynote Presentation from the Financial Times Water Summit from Doug Baker, CEO of Ecolab. Emerald Edible, Water, Waste & Energy. Converted US gallons to litres, rounded to nearest 10 litres, May 2019
⁴ cdn.ymaws.com, May 2019
⁵ Streetroots, 24 March, 2021

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