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Thirst for change: securing a water positive future

August 2023



waterwise

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Foreword



Martin Townsend
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Water is one of our most precious and undervalued resources. We need it to maintain good health and a biodiverse environment, to grow food and across every industry. Access to clean water is at the forefront of building a more equitable society, which is why the UN included this in the Sustainable Development Goals.

However, recent events have challenged the perception that drought and flooding are rare. As the climate crisis intensifies, communities are increasingly facing challenges arising from too little and too much water. Effective management of water has never been so important.

In some countries, water conservation is a key priority. But globally we do not always recognize this to the same degree as other environmental issues such as emissions reduction, where we have seen a willingness to partner and innovate. In fact, the two are intrinsically linked - water provision and use contribute around 10% to global carbon emissions¹.

This research aims to support a move from ambition to action on water stewardship. The good news is that the world is aware of the benefits of managing water better. In BSI's research², we found that two-thirds of consumers and 80% of small business leaders identified clean water and sanitation as part of the important debate on a sustainable future, while half of the former placed it in the top five issues to focus global resource and effort on.

With a growing, increasingly urban global population, we are placing greater demands on resources. Yet we have a finite amount of water to draw on. We have seen that drought and flooding often come at an enormous societal cost. Learning to manage water differently and applying strategies to move towards a water-positive future can benefit us all.

There are both supply and demand side considerations. Water usage has specific drivers for commercial and domestic purposes. We drink water to stay alive but choose to use it as consumers. Likewise, distinct actions can be taken in response, led by utility companies. This can include everything from Sustainable Urban Drainage Systems to water efficiency labelling and, more broadly, embedding a water-saving culture. Standardization and global collaboration can also play a role.

We are grateful to Waterwise for their collaboration to help to draw attention to a fundamental global challenge. By collaborating to address water security, we can accelerate progress towards a water secure future and a sustainable world.

Foreword from Waterwise



Nicci Russell
CEO, Waterwise

Water is fundamental to life. We need it to grow the food we eat, the coffee we drink and the cotton T-shirt we may wear. We need it to hydrate us and for our bodies to be healthy. It improves our quality of life and connects us to nature. It is therefore no surprise that civilizations are built around water. It deserves to be valued and used wisely.

Yet we face huge challenges across the globe in ensuring water is available for people, business and the environment. The United Nations reports that a quarter of the world's population already live in countries under water stress and over three and half billion people have inadequate access to water for at least one month per year. These shocking figures are predicted to get much worse and it is increasingly clear that we can't go on as we have been. It is just not sustainable.

A key part of the solution is making sure that we use the water that we do have wisely in our homes and workplaces; avoiding water wastage. By doing this we can help ensure that we adapt to the impacts of the climate emergency; reach net zero emissions; secure water supplies for people and businesses and protect and improve the environment. Our Vision at Waterwise is for water to be used wisely every day, everywhere, by everyone and we are delighted to have worked with BSI on this important project.

Introduction

It could be easy to believe the only barrier to securing a sustainable future is carbon reduction, given the prominence of the issue and the weight of the challenge. But in fact there are numerous other stresses and strains placed on the environment and society, all of which present an opportunity for us to adapt and respond to them.

Carbon emissions reduction had a starting point and, although we still have a long way to go for all organizations and countries to become net zero, progress has been and continues to be made. This did not happen overnight, and we can learn from it when we identify and address other concerning trends.

Water is one of earth's most fundamental and precious resources and the importance of conserving it is real.

Currently, while water availability may have been a focus for a long time in regions like the western US or in certain countries, the global conversation about water security appears to be sitting where carbon emissions was more than two decades ago. That's when organizations began thinking seriously about their role and how they might have been contributing to the acceleration of climate change.

Water stewardship is gaining more attention, with investors and business leaders giving it more focus³ as it becomes apparent how shortages affect our daily lives as individual consumers, organizations and society as a whole. This is not about moving away from the journey to net zero. In fact, these opportunities are interlinked – carbon emissions and water use impact each other and it is vital that we adapt and respond to them both.

BSI partnered with Waterwise to collate credible, referenced and traceable data related to water availability, water use and water efficiency/wastage from a number of countries. The resulting report covers the UK, US, Japan, China, Australia, France and Germany, noting that these are high water consuming countries, while also looking at the role of specific sectors, including retail, healthcare and the built environment. Where possible the information gathered is comparable between countries. In addition, we have created the BSI Water Security Indicator – a tool created in partnership with Waterwise which is a new high level indicator of how we are using water at a country scale. The Indicator considers seven factors including availability, use, risk and wastage to derive an overall score for each country.

It is important to note that water availability is a serious challenge around the world, not least in the Middle East and North Africa. Access to water in low-income countries, many of which are already heavily impacted by climate change, is a key challenge with geo-political ramifications. This report does not focus on addressing the specific challenges facing these countries but recognizes that addressing water security will need global solutions and collaboration across every country.

Executive summary

Water is one of earth's most fundamental and precious resources and the importance of conserving it is critical. BSI partnered with Waterwise to obtain and collate credible, referenced and traceable data, covering the UK, US, Japan, China, Australia, France and Germany.

A Global Challenge

Whilst water is abundant on Earth, only between 1-3% is freshwater, of which approximately 0.5% is considered accessible⁴. Water use has increased eightfold in the last century and is expected to grow through to 2050, driven by a combination of rising population, socio-economic development and changing consumption patterns⁵.

Although definitions of water stress vary, increasing demand for water is putting available resources under greater and greater pressure.

The Blue Thread

Using the water we have efficiently, together with minimising wastage, can:

- Make us more resilient to climate change and drought
- Meet the rapidly increasing demands of a growing, more urban population
- Support economic growth, as water is essential for the production of raw materials, for agriculture and industry and for worker welfare
- Bring biodiversity gains
- Help ensure equity and affordability

Broader Insights and Trends

Leakage – Leakage from water supply networks and other sources is a significant issue both in terms of lost revenue and wasted resources.

Good design – This is critical for any water saving measure, as the examples of dual flush toilets and water-efficient showers demonstrate.

Smart water metering – The data from this could be an opportunity to reduce leakage and water consumption and a way for governments to drive change on a societal level.

Inefficient products and water efficiency labelling – Unlike with energy, in most countries it is challenging for domestic and business customers to make informed choices. Improved water labelling could be a key tool to reduce water use.

Embracing circularity – Reusing water provides a huge opportunity. This includes rainwater harvesting (RWH) systems, as part of a Sustainable Urban Drainage System (SUDS). Another potential technical solution is the use of desalination to remove salts from seawater.

Water neutrality and water positivity are emerging approaches – The former essentially means that the additional water demand on the environment arising from an activity is zero. Some organizations are going further and looking to use the approach to deliver a net gain to the environment – known as “water positive”.

Conclusions

It is not sustainable for demand for water to continue to rise without action to ensure we are using it wisely⁶. Doing so can bring important benefits, including:

- Making us more resilient to climate change and to drought
- Reducing carbon emissions
- Meeting the needs of a growing, more urban population
- Supporting economic growth
- Protecting precious habitats and species
- Enabling equitable global access

Recommendations

01 Recognize water wastage as a serious challenge

Visible and meaningful effort by water utilities around the world to reduce network leakage, driven by government action to incentivize change, can have a direct impact and persuade individuals and organizations to acknowledge their own role and act to reduce wastage at homes and in workplaces.

02 Ensure it is easy to choose water saving products

If more countries facing water stress embrace mandatory water efficiency labelling, this could be helpful in accelerating progress towards a sustainable world.

03 Get smart when it comes to saving water

Embrace innovation and make better use of data. Smart water meters have the potential to be a game changer – through steps such as legislation, regulation, use of standards, enhanced funding and upskilling workforce capability, governments can facilitate progress so that water saving becomes the norm.

04 Encourage a water saving culture

We can effect change if we step up efforts to prioritize addressing water availability challenges and encourage a positive water saving culture amongst individuals, organizations and society, at home and in the workplace, and across different sectors.

05 Close the loop

Applying a circular economy mindset to the water security challenge can help tackle some of the key drivers of the issue. Reusing water provides a huge opportunity to reduce freshwater withdrawals/abstraction and to address rising water demand.

06 Collaboration is king

Water is the blue thread that connects our world. Collaborative effort across a wide range of players can help us address the growing challenges around water availability.

End notes

About this report

Waterwise compiled this report on behalf of BSI, drawing on data sources and documents together with engagement with the following organizations:

- International Water Association – Global including Asia
- Alliance for Water Efficiency – US
- The Water Conservancy – Australia

The report was produced between June and August 2023.

About Waterwise

Waterwise is the leading independent voice in the UK for using water wisely, for the benefit of people and the planet. Our vision is that water is used wisely every day, everywhere, by everyone. We are the UK's conscience on water efficiency, on behalf of people and the planet, and are experts in water efficiency policy, regulation, research, behaviour and campaigns. Waterwise is a people-led organization which prioritises the wellbeing of its staff.

Forewords

- ¹ [Global water industry net zero commitments top 72 million people served](#), Water UK, November 2021
- ² Research carried out by Malvern Insight and Yonder. Consumers: Data based on 1,020 interviews (514 UK, 506 USA) with nationally representative sample of adults, conducted 16 – 18 May 2023. SMEs: Data based on 223 interviews (120 UK, 103 USA) with decision-makers within SMEs (up to 249 employees), conducted 16 – 18 May 2023

Introduction

- ³ [Wall Street is paying more attention to the business risks posed by water](#), Quartz, May 2023

Executive summary

- ⁴ [Water security is a national security issue: What's needed now](#), World Economic Forum, accessed July 2023
- ⁵ [Are We Running Out of Water?](#), Earth.Org, accessed July 2023
- ⁶ [UN World Water Development Report 2023](#), UNESCO, March 2023



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