



The New World of Water

Growing Scarcity, Complex Hydro-Politics
and the Major Threat to Global Business

'Water set to become more valuable than oil'. What does this mean for talent and leadership?

Water set to become more valuable than oil.¹ Where did this extraordinary new paradigm come from? Does it mean water will become a tradeable commodity?

For years, global political and business leaders have wrestled with energy security and food security. Now water security is top of mind. Water? Our most precious resource, the very basis of life. Have we so radically altered the natural order of things? Yes. Global economic and population growth have put extreme pressure on water security.

For Jean-Louis Chaussade, Chairman of French utility Suez, who as CEO made this prediction, water security is one of the biggest challenges facing industry, across the developed and developing world.

Boyden works with business leaders across many industries who are having to address the impact of this new reality. This article sets the scene and launches the Boyden *'New World of Water'* Series, which will share discussions with leaders of industry, and explore how leadership, talent and a change of mindset are the keys to survival. Not just the survival of business, that must adapt and find solutions, but indeed to humanity.

1. How Pressing is Water Security?

As much as 40 percent of the world's population is forecast to live in areas facing water scarcity by 2035:² half a generation's time.³

Today, governments, NGOs, public and private companies are faced with providing energy, food and water for growing populations in parts of the world already under extreme pressure. Agriculture accounts for 70 percent of global water consumption, industry 23 percent and municipal utilities 7 percent.⁴

By 2050, feeding 9 billion people will require a 70 percent increase in agricultural production.⁵ Where will the water come from? And how will industry compete with people and farming for shrinking water supplies?

In 2018, Cape Town in South Africa nearly became the first of the world's big cities to run out of water and in 2014 São Paulo in Brazil had narrowly missed the same fate.⁶ The United Kingdom is now projected to run out of water in 25 years' time, unless water wastage is addressed.⁷

While demand for water escalates, climate change adds a dose of irony, bringing water damage through floods and storms, while droughts and heat-waves lead to wildfires across parched landscapes.

At a corporate level, the impact on assets, infrastructure and just-in-time supply chains is a major concern. Global analysis by Schroders estimates that properly accounting for physical climate risk could shave on average 2 to 3 percent off the value of the 11,000 listed global companies in their analysis. Other sectors could be hit harder, with utilities and oil & gas potentially losing 4 to 4.5 percent.⁸ Ratings agencies are beginning to include this risk in their scores, with downgrades reducing insurance options and access to finance.

“Physical climate risk could shave on average 2 to 3 percent off the value of 11,000 listed global companies”



Paola Mazzoleni
CHRO, Tenaris

These pressures are driving key trends in water management.

For example, water technology company Xylem, historically a provider of water pumping systems and water infrastructure, is investing heavily in measurement and control of water, a major strategic shift in the business.

Lidia Messellod, Vice President HR, Global Supply Chain at **Xylem**, explains, “Over the next three to five years, measurement and control will see huge growth. The leadership perspective we look for today is both local and global. Local in terms of regulatory awareness and global in terms of knowing where water could be a problem in a country, and the ability to anticipate issues. Historically a ‘comfortable’ business, water sector leaders now have to take a 360-degree view, and adapt their approach and ways of working to a fast-changing world.”



Lidia Messellod
VP HR, Global Supply Chain,
Xylem

Paola Mazzoleni, CHRO at **Tenaris**,⁹ a global supplier of pipes to the energy industry, comments, “A major trend in industry is the shift from product, to services and added value, as companies operate in more complex areas, both geographically and commercially. This is changing the whole approach to leadership and talent pipelines, with much broader competencies required alongside technical capabilities and a more formal approach to recruitment and retention. For Tenaris, this is underpinned by our very strong strategic vision for leadership and management.”

“As an industrial company, we are very conscientious about our water consumption. For example, at our state-of-the-art seamless facility in Bay City, Texas, we recycle 95 percent of the water consumed during our operations. The same concept was also applied in our new facilities in Colombia and we have invested more than twenty million US dollars to improve the water management systems at mills like Siderca in Argentina,” she added.

Tom Zay, Managing Partner of **Boyden United States** in Houston and Global Leader of Boyden’s **Energy** Practice, sums it up. “From the standpoint of business viability, if a company’s leaders are not thinking about water availability and wastewater management, they are exposing the company to major risk and environmental scrutiny.”

2. Water Resource Management and Investment

Insufficient funding for water resource management could decrease national growth rates by as much as 6 percent of GDP by 2050

In water resource management – sourcing, transporting, reusing, recycling and managing waste – the lack of data and analytical frameworks to facilitate decision-making and investment is a major challenge.

Without key data punctuating the water supply chain, governments are unable to shape robust water policies due to the difficulty in predicting demand and supply, what the gap is, how to address it and how to incentivise users to change their behaviour.¹⁰

Limited economic data also detracts from investment. With investors deterred by the absence of frameworks for economically rational decision-making, the potential consequences run far and wide. The World Bank Group warns that insufficient funding for water resource management could decrease national growth rates by as much as 6 percent of GDP by 2050.

Private Equity & Tech Start-Ups



Tom Zay
Managing Partner,
Boyden United States

There is one area where investors are not wary: technological disruption. Water-tech and agri-tech companies have emerged to recalibrate water management in agriculture, industry and utilities. America and Israel are leading the way in agri-tech investment. With water scarcity, pressure on farmers with plummeting livelihoods, start-ups in agri-tech are proliferating, with as many as 960 in the United States. Attracting major investment, large funding rounds are providing the foundation for the first wave of agri-tech start-ups to have the potential to be valued at \$1 billion.¹¹

In Israel, the government has invested in venture capital funds and directly in start-ups. Agricultural parks using Israeli technology have mushroomed across China, while Indian and African officials have visited Israel to seek inspiration.

“The water sector is ripe for those who excel at spotting opportunity – private equity firms,” comments Boyden’s Zay. “This form of investment is growing, with an emerging sub-sector specialising in water.”



Francesca d’Arcangeli
Global Leader, Boyden’s Industrial
Practice and a Managing Partner,
Boyden United Kingdom

Advances in technology have long played a role in agriculture, and now digital is revolutionising farming and farmers’ livelihoods. Farmers Business Network is an example. Dubbed ‘Google for farmers’, the platform provides crop, seed and agronomic data, enabling better yields and lower costs in the face of increasing challenges to the industry.

The importance of technology to water management is clear throughout the supply chain.

Patrick Decker, CEO of **Xylem**, a water technology provider, maintains, “Smart water is the next disruption.”¹³ Xylem¹⁴, launched nine years ago in the United States as a spin off from the water-related businesses of ITT Corporation, has the largest market capitalisation¹⁵ of the nine companies in MSCI’s Global Sustainable Water Index.¹⁶

“Expertise and disruptive innovation will be bought in from other sectors and we have begun to see a wave of acquisitions from bigger corporates to drive solutions and stay ahead,” emphasises Boyden’s **Francesca d’Arcangeli**, Global **Industrial** Practice Leader and a Managing Partner of **Boyden United Kingdom**.

Xylem has made breakthroughs in Asia by utilising this approach. Lidia Messellod says, “In Singapore we acquired a small tech company that now enables us to see, on screen, detailed measurement of all the water in the city. It’s a long path and involves working closely with our customers because they want to help shape the solutions they need.”

Public–Private Partnerships

Some governments have solved investment through privatisation, whilst others are adopting a kind of public-private partnership. For example, in Denmark water companies are owned by municipalities, and bring in private software and other consultancies such as EnviDan to leverage innovation and cutting-edge digital capabilities.

Morten Fjerbaek, CEO of **EnviDan**, private-equity owned, Nordic water consultancy, says, “Regulators in Denmark insist on two percent annual efficiency gains for utilities, so we help water companies optimise operations using artificial intelligence, machine learning and the Internet of Things. This isn’t confined to water, but the water sector is very keen now, monitored by pressure groups, government and think tanks. Efficiency is part of a bigger picture, with sustainable development goals driving the whole market, particularly recruitment.”



Morten Fjerbaek
CEO, EnviDan

3. Emerging Talents



Asit Biswas
Water Expert, Lee Kuan Yew
School of Public Policy

“Water management is a significant issue so it’s important to have the right team in place to address this challenge,” explains Paola Mazzoleni. “Companies need to put this and all aspects of sustainability on their agenda, as we build our future leadership teams.”

Asit Biswas is a water expert at the [Lee Kuan Yew School of Public Policy](#) in Singapore. He takes a hardened view on the subject of water resource management in the public sector. “Lack of money, scarcity and so on – they’re all excuses. The problem everywhere is bad management.”

This is echoed in conversations with water experts in the corporate world. There is a growing consensus that leaders and their successors require a particular combination of skills and capabilities. Political and geopolitical awareness plus strong stakeholder management is key, in tandem with strong technological capability and vision.



Anders Lindholm
Managing Partner, Boyden Italy

“Energy, utilities and agricultural companies have complex needs because they operate against a complex socio-political backdrop,” notes **Anders Lindholm**, Managing Partner at [Boyden Italy](#). “Therefore, today’s leaders need political awareness, technical understanding and a very keen sense of how and where technology will have the most impact in their business.”

For *The Economist*, ‘The fundamental problems are neither the resource itself...nor are they technical. They are managerial, or more precisely, how to withstand economic, cultural and political pressures to mismanage water.’¹⁷

One solution to this is ‘hydro-politics,’ also called ‘water-diplomacy,’ which sits at the intersection of politics, regulation and technology.



Ram Aviram
Retired Ambassador
Israel’s Ministry of Foreign Affairs

Retired ambassador, **Ram Aviram** came to water as a diplomat, having served in [Israel’s Ministry of Foreign Affairs](#) for 25 years. He now runs multi-disciplinary consulting agency BIT,¹⁸ and explains, “An inter-disciplinary approach is crucial in water. You need a good understanding of politics, both local and international, you need to know what is required for managing water resources and the supply cycle, and you need technological tendencies because tech is something from which you cannot estrange yourself.”

For leaders and senior managers, Aviram cautions, “Most of the world’s water utilities are in the political system, so if you don’t understand the politics behind a CEO appointment at a water utility for example, you will not be able to do your work. You need to understand the variety of stakeholders on different sides of water resources, the balance of power and the personalities involved. Then you know what to look for.”

With technology, Aviram asserts, “The whole issue of water management is changed by technology. It’s true of everything, but very true of water. It goes to almost every stage of the water cycle and across the supply chain. It’s a huge world of technologies that leaders have to understand.”

The issue of water resource management is well-placed to attract the next generation of talent as well. The UN’s sustainable development goals (SDGs) to 2030 offer an ideology that resonates with Millennials seeking to make a difference in the workplace. Saving the planet and its people are defining goals, with water a major part of the equation.

EnviDan’s Fjerbaek explains, “In order to recruit the best people into water and not have them seduced by oil or finance, you have to have a purpose and sustainable development goals are a great frame for this purpose.”

4. Leadership in the New World of Water



Allan Marks

Global Leader, Boyden's Infrastructure & Transportation Practice, and a Managing Partner, Boyden Australia

Boyden's agriculture, industry and utilities clients come to us for board level, C-suite and senior level search, as well as culture change, designed with our Leadership Consulting experts.

From a talent perspective, trends in water sector transformation mean more global searches and a keener focus on multi-disciplinary experience, covering geo-politics and diplomacy, Sustainable Development Goals, regulation, technology, investment flows, branding and attracting executives and engineers into tech-driven opportunities.

Allan Marks, Managing Partner, **Boyden Australia** and Global Leader of Boyden's **Infrastructure & Transportation** Practice, explains, "Our search work is increasingly global because we are looking for remote skill sets. As well as sector experience, it is essential that executives demonstrate modern thinking around management. Some high potential executives come from consulting, others possibly from government, where they have some affinity with energy and utilities. It is important they can apply practical experience to make a worthwhile contribution."

The fluid nature of the water sector makes recruiting more challenging, particularly in large, mature markets. The best candidates are in high demand, fielding opportunities from direct suppliers and distributors from all sides of the supply chain.

Fjerbaek at EnviDan asserts, "The most sought-after people are highly skilled professionals who understand environmental processes, IT and data possibilities. They are keenly innovative, so always challenge the current solution in order to keep moving. This is why the sustainability context needs to be properly understood".

Branding and marketing are key to acquiring the best talent, and effective hiring means positioning opportunities in a global context. "It is not only younger generations that are attracted to a higher purpose, but older generations keen to talk about CO² reduction, global climate change, overheating and so on," adds Fjerbaek.

With such major issues facing the world, "We must change our business and ways of working," says Lidia Messelod. "It is really key for us to have leaders with change in their DNA. We take them out of their comfort zone, use formal development plans and drive continuous improvement using live challenges."

Boyden brings a multi-disciplinary approach to water through deeply specialised conversations. "The greater the engagement, the more we can talk about the wider market, such as issues around customers, sustainability, infrastructure spend, government policy and so on. Companies have to be competitive and run between market pricing forces, regulation and the customer. There are a lot of pressure points. Add to that disruption and you have a different, more dynamic ball game that requires an intricate, knowledgeable conversation," explains Boyden's Marks.

5. When it comes to water, we are all in the same boat

Water security concerns NGOs, government and business leaders in developing and developed countries; company directors in agriculture, industry and utilities; and consumers, those with current access to clean water and the millions without it.

In order to thrive, the world's growing population depends on global collaboration in the sustainable and equitable use of water resources and climate resilience.

Human need, geopolitics, technology and leaders with the determination, knowledge and skills to tackle critical complex issues, will continue to transform the water sector. To avoid the threat to business, we must all become ever more sophisticated in understanding this multi-discipline sector, its stakeholders and the nuances involved.

Sources

¹ Financial Times headline quoting Jean-Louis Chaussade, then CEO of Suez

² United Nations University, Global Water Crisis: The Facts

³ A generation is approximately 30 years

⁴ The World Bank

⁵ The World Bank Group on Land & Food Security

⁶ The Economist, 2nd March 2019

⁷ Business Insider, sourced from the UK Environment Agency

⁸ Reported in The Economist, 23rd February 2019

⁹ Tenaris is based in Luxembourg and has a presence in more than 30 countries worldwide. It had revenues of \$7.7 billion and 23,500 employees in 2018

¹⁰ The World Bank's 2030 Water Resources Group offers data analysis and toolkits for more informed decision-making

¹¹ Financial Times, December 2018

¹² The Economist, January 2019

¹³ Xylem In Focus series <https://www.xylem.com/ru-ru/making-waves/water-utilities-news/xylem-ceo-patrick-decker-smart-water-is-the-next-disruption/>

¹⁴ Xylem had global revenues of \$5.2 billion in 2018 across water infrastructure, applied water and measurement & control solutions. It has 3,000 employees and 37 brands

¹⁵ \$13.78 billion. The next in the Index, Beijing Enterprise Water, has a market cap of \$2.9 billion

¹⁶ MSCI Global Sustainable Water Index tracks companies that derive at least 50 percent of revenues from products and services in sustainable water

¹⁷ The Economist, 5th March 2019

¹⁸ www.bit-consultancy.com

About Boyden

Boyden is a premier leadership and talent advisory firm with more than 65 offices in over 40 countries. Our global reach enables us to serve client needs anywhere they conduct business. We connect great companies with great leaders through executive search, interim management and leadership consulting solutions.

Experts in Boyden's global industrial team understand the impact our industrial clients have on communities in both developed and emerging markets, and share a sense of responsibility in our role as leadership advisors.

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