

Liquid attractions: why water matters and how you can invest in it

Regnan Sustainable Water and Waste Strategy

PRIMER

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Key take-aways

- Water is essential for life on earth and is a precious, yet underappreciated and undervalued resource.
- Water is used in nearly all forms of economic activity including food production, industrial manufacturing, textiles, energy production and materials extraction – put simply ‘there is no economy without water’
- Water is intrinsically linked to many of the Sustainable Development Goals (SDGs)
- Water use continues to increase rapidly, driven by: population growth, urbanisation, rising wealth and consumption and an ageing infrastructure – these same factors make water an attractive area for investment
- Companies from across the water value chain can offer steady returns, and are less sensitive to the economic cycle than other infrastructure investments.
- Investing successfully requires specific expertise to understand industry evolution and technical details, political and regulatory changes and specific company fundamentals including accounting details and sustainability research.

Regnan Sustainable Water and Waste Strategy

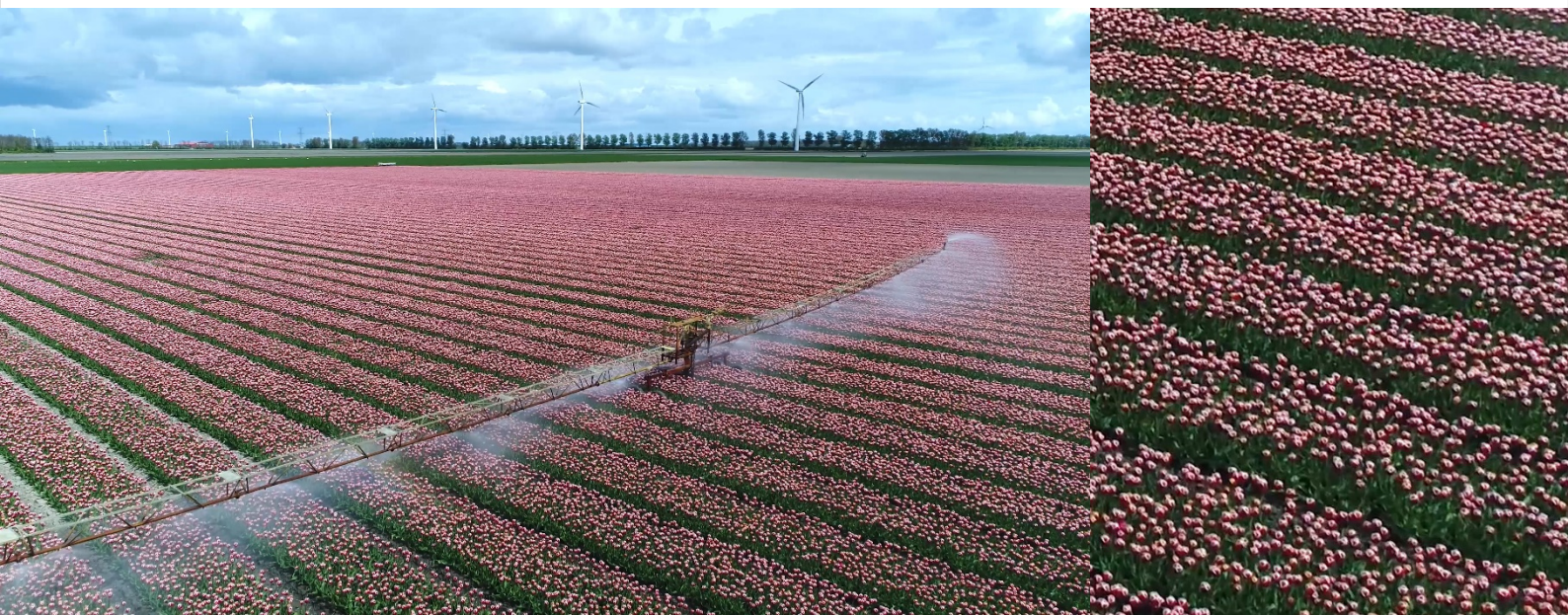
Our Thematic Investing team joined Regnan in April 2021 ahead of the launch of the Regnan Sustainable Water and Waste Strategy in September 2021. Combining exposure to both water and waste-related companies makes this strategy a distinctive thematic investment proposition with diversification benefits.

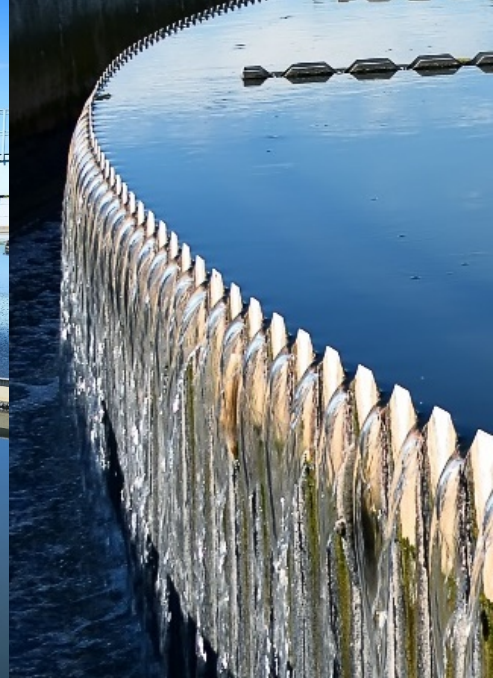


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Water is everywhere and in everything

Life on earth is dependent on water. When humans first started to build cities about 10,000 years ago, the first thing they did was to look for a body of water to build their city around. Proximity to water provided them with a reliable source of drinking water, seaborne transportation and improved access to trading routes. That story has not changed in millennia and never will.

Water is not only essential for the production of food but is also extensively used in all forms of economic activity including industrial manufacturing, textile, energy production and materials extraction. A simple way of thinking about it is – there is no economy without water.

The graphic below highlights the water footprint of various products.



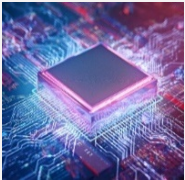



The water necessary for cleaning, cooking and washing typically amounts to around two hundred litres a day. Yet our water footprint can sometimes reach ten thousand litres a day.







Water is often seen as a free resource due to its necessity for life, but access to safe and clean water is not. The price we pay for water is the price of cleaning and transporting it to our point of use. This price therefore varies greatly depending on where you are in the world, the state of the infrastructure, its age and efficiency.

On average, tap water is still typically at least one hundred times cheaper than premium bottled water brands.

As the population becomes wealthier it consumes more water intensive resources

Water footprint – how much water?

Beer	Mobile Phone	Microchip	Jeans	Cotton Shirt	Shower
					
75 Litre	1,000 Litres	30 Litres	7,979 Litres	2,494 Litres	264 Litres

Bread	Apple	Coffee	Chocolate bar	Leather Tote Bag	Beef
					
60 Litres	125 Litres	130 Litres	1,700 Litres	17,128 Litres	15,400 Litres

Source: Regnan; Interactive tools – product gallery – waterfootprint.org, 2021; 'Let's be water-wise' – downtoearth.org, May 2020; Water scarcity. The key challenges in meeting the demand, Credit Suisse, January 2020.

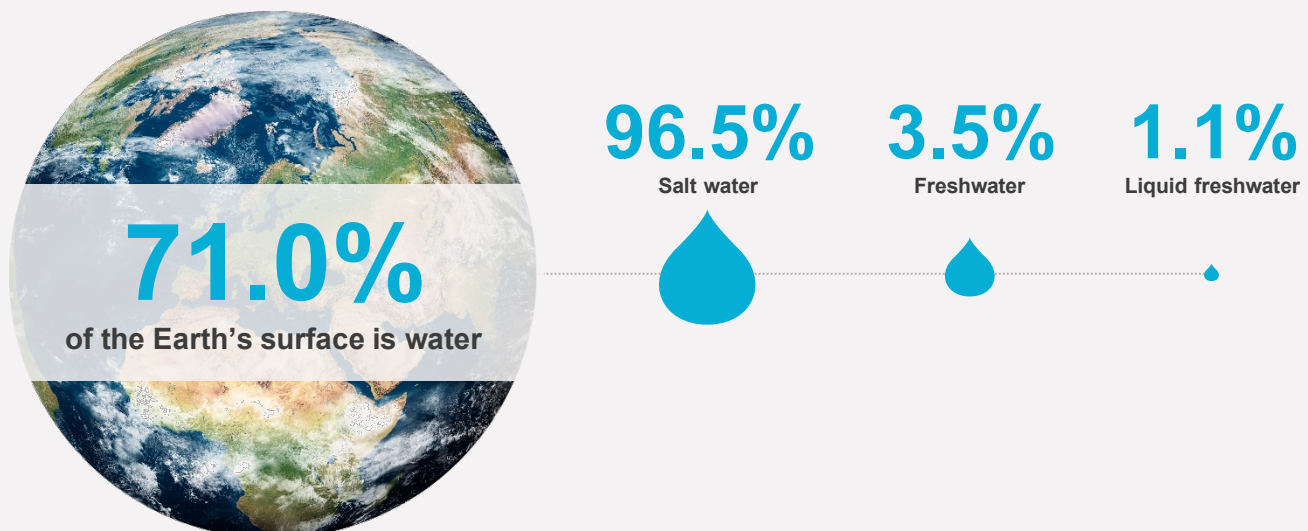
Limited supply and rising demand

Water covers about 70% of the earth's surface. However, only around 3.5% of the earth's water is freshwater, most of which is unavailable as it is locked up in glaciers and polar ice caps. The paucity of freshwater coupled with the exponential rate of water consumption has amplified the severity of water problems. Population growth, higher levels of urbanisation, increased wealth and consumption, and an ageing infrastructure are a few of the many factors that have contributed to the rapid increase in water use in recent decades. Furthermore, these drivers are expected to persist for the foreseeable future, highlighting the direction of travel for water consumption.

According to the United Nations, by 2030, water demand will exceed supply by 40%, and close to half the world's population will be living in water-stressed areas.¹

Business as usual cannot continue, and we could be heading into a global water crisis if we do not tackle the challenges. However, there are various solutions available to address the issue, which brings a massive opportunity for companies that are involved in the water value chain. Investments and innovation in this area at this critical moment can have a significant impact on how the future unfolds.

How much water is on Earth?



Source: <https://phys.org/news/2014-12-percent-earth.html>

Our unquenched thirst for water

The United Nations estimates that water use has grown at more than twice the rate of population growth in the last century.² Currently, agriculture accounts for roughly 70% of global water withdrawals, primarily consisting of irrigation apart from water for livestock and aquaculture. This ratio can reach up to 90-95% in some developing countries. Industry, including energy and power generation, accounts for c. 20% and domestic consumption accounts for the remaining c. 10% of water withdrawals globally.



Water use by economic sector – agriculture's thirst

Globally, 70% of freshwater is used for agriculture

Share of freshwater withdrawals by sector (%) in 2014



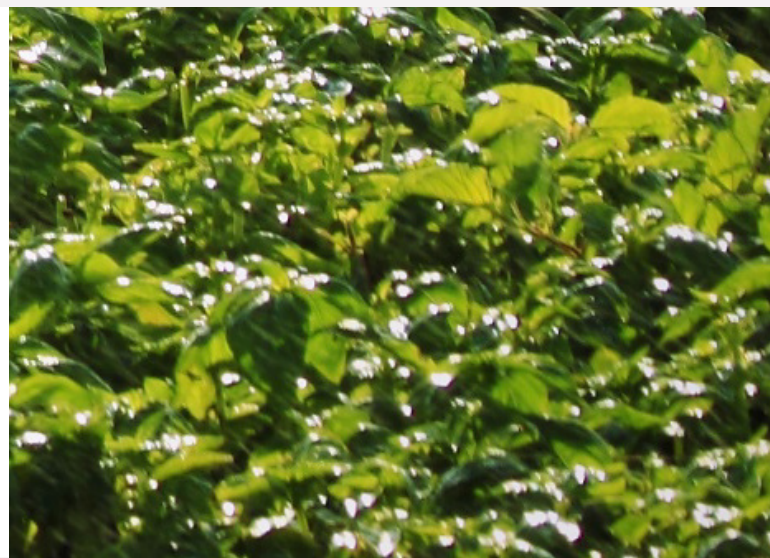
Source: <https://blogs.worldbank.org/opendata/chart-globally-70-freshwater-used-agriculture>

Looking ahead, there have been multiple attempts at estimating future trends in water demand. Burek et al. (2016) estimate water use will continue to grow at an annual rate of about 1% per annum, resulting in an increase of 20-30% above the current level by 2050.³

It is widely estimated that future growth in water use will be driven by increasing demand by the industrial and energy sectors, as well as by municipal and domestic uses.

²National Geographic, Freshwater Crisis, United Nations

³The United Nations World Water Development Report 2021; Burek, P. et al. Water Futures and Solution: Fast Track Initiative.



Water and Sustainable Growth

Water and the economy

Water is an essential component of our economies and is required to create and maintain jobs in every sector of the economy. The importance of water is spread across the primary sector including agriculture, mining and extraction of natural resources, and animal husbandry; secondary sector uses include the processing of goods, electricity production and heavy industry; and in the services sectors including tourism and leisure.

The International Food Policy Research Institute (IFPRI) estimates that if we carry on as before, roughly US\$63 trillion or 45% of total estimated global GDP will be at risk due to water stress by 2050.⁴ Nevertheless, if sustainable behaviours and practices are adopted, more than 1 billion people and approximately US\$17 trillion of GDP could escape exposure to risks and challenges from severe water scarcity.⁵ Therein lies a huge opportunity for investors able to identify businesses leading disruption and innovation across the water value chain.

Future global water demand (km³/year)

Global water withdrawals	Curmi et al (2014)	Water Resources Group	OECD	Hejazi et al. (2014) Pop6/ MDG-	Hejazi et al. (2014) Pop9/ MDG+
	Current	2030	2050	2050	2050
Municipal 	382	900	790	666	859
Electricity 	470		1,386	390	485
Primary energy 				15.2	22.2
Manufacturing 	314	1,500	1,195	288	439
Agriculture & livestock 	2,672	4,500	2,094	4,837	6,555
Total	3,838	6,900	5,465	6,196	8,360

Source: Citi Research. Curmi et al, Water Resources Group, OECD, Hajazi et al.

Note: Pop6/ MDG- scenario assumes population peaks and then declines to 5.5bn by 2050 (i.e. not linear). Pop9/ MDG+ assumes the global population stabilises at 9.1bn. Curmi et al assumes population of 7bn.

⁴IFPRI, the future of water requires a sustainable, blue path (Farming Portal) (Link)

⁵Veolia, IFPRI, Finding the Blue Path for A Sustainable Economy (Link)

Water and the Sustainable Development Goals (SDGs)

'There is no economy without water', and we certainly cannot sustain the current trajectories of water consumption without significant investments in water.

The central role water plays in life and the global economy is highlighted by the fact water is a prerequisite for almost every one of the 17 Sustainable Development Goals (SDGs).

There is a clear and direct link to water in the following SDGs:



SDG #6, Clean Water and Sanitation, specifically reflects the critical importance of water in its own right, ensuring availability and sustainable management of water and sanitation for all.

There is also growing recognition of the crucial contribution of water-related investments to climate resilience and to delivering on the Paris Agreement.

Current practices are not sustainable, and an impending water crisis will affect communities, industries, food production and the environment. Sustainable water management practices will bring opportunity for companies operating throughout the water value chain. A few standout opportunities include: water infrastructure (mainly maintenance and upgrades in the developed world and new builds in developing economies); water treatment and recycling (only 3% of water is currently recycled), incentivising and a more prominent role for private players; and related technological advancements (smart meter and big-data integration).



The investment opportunity

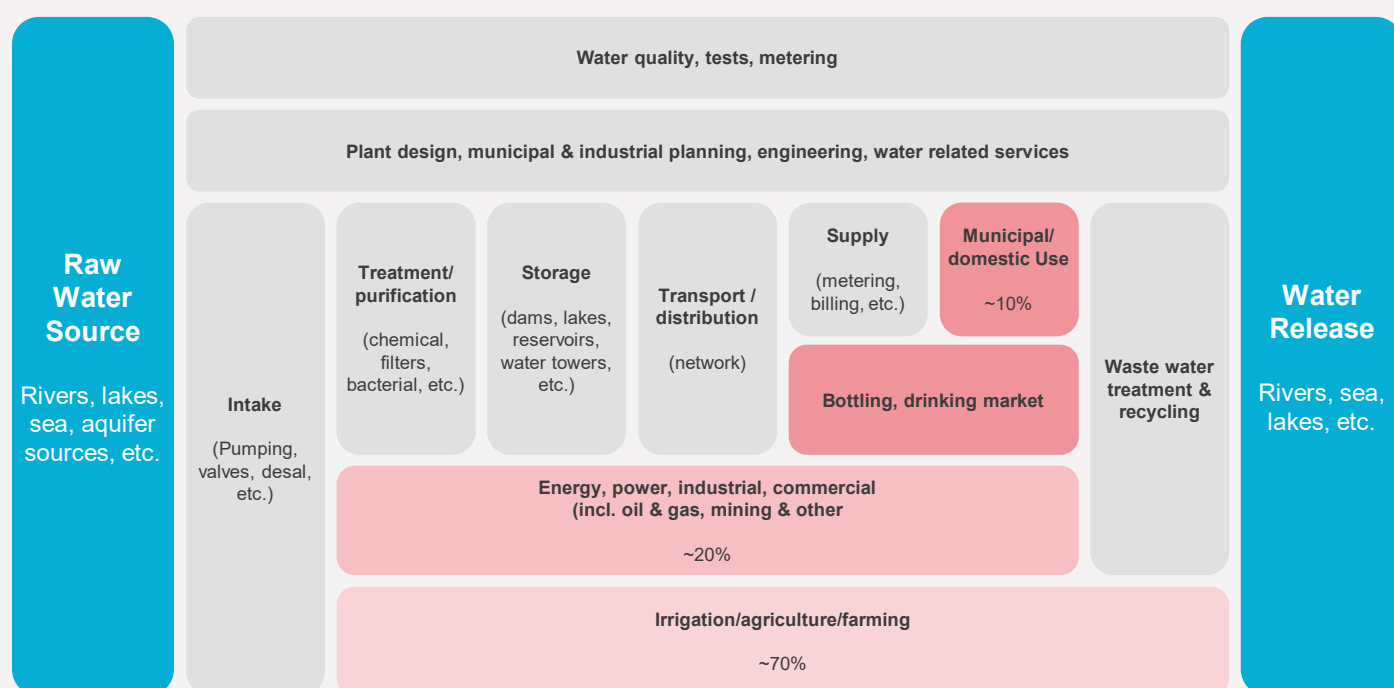
Given the theme's perpetual nature, investors are increasingly moving towards water as a long-term investment opportunity. The theme offers steady returns and has lower economic sensitivity to economic growth than other infrastructure investments. Exposure to commodity prices is negligible and unlike the renewable energy sector, there are no subsidies or government support which means political and regulatory interference is limited.

Investment opportunities exist across the water value chain and different segments offer distinct fundamental exposure which prudent investors can access. The water value chain comprises pump and valve manufacturers, water treatment companies, water storage providers, network operators, metering and billing companies and wastewater treatment firms.

To many investors less familiar with the opportunities in water, regulated utilities are often perceived as the only 'play on water' from an investment perspective. However, regulated utilities only represent less than 20% of the investable universe and even these businesses have the ability to pass through costs to customers and generate robust returns. The remaining 80% of the universe consists of competitive businesses striving to maximise stakeholder value like any other company.

Investing in the water value chain

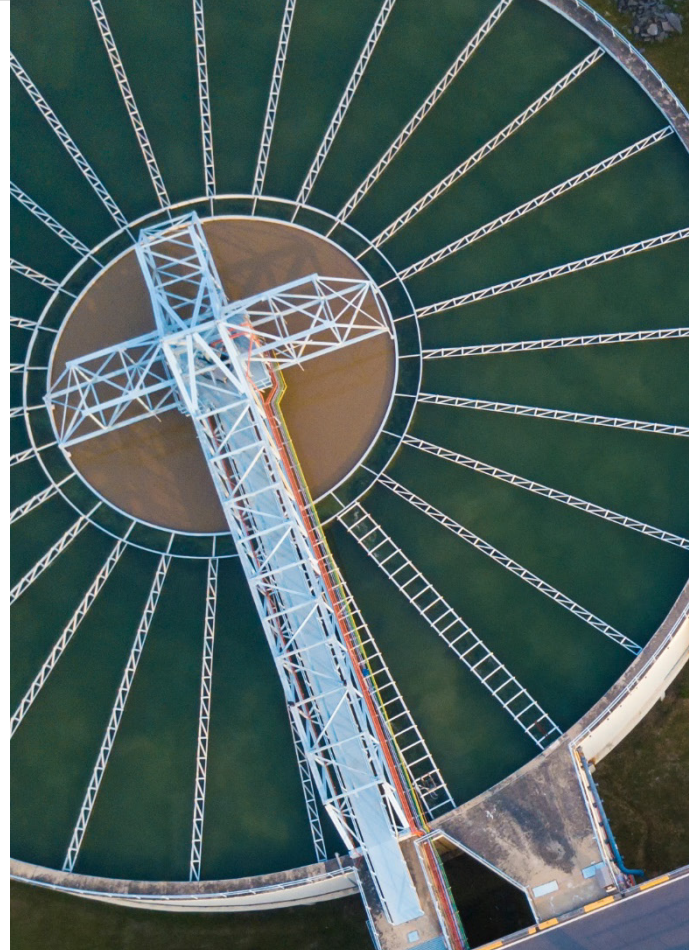
Focus on all industries exposed to the water cycle



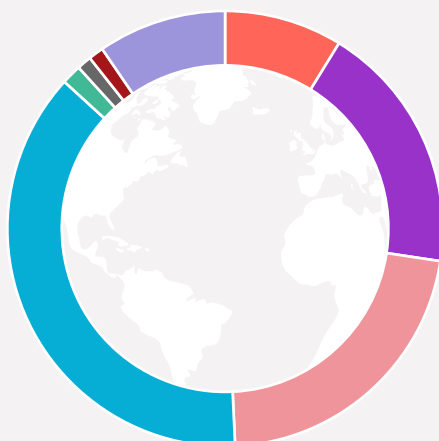
Source: Regnan.

Investment opportunities across the value chain

Many of the aforementioned investment opportunities can be accessed via publicly listed entities. We have been monitoring the water-related investment universe for over 20 years. When we analyse the value chain by market capitalisation and our proprietary segmentation, we see that companies in the filtration, treatment and efficiency segment form 50% of the universe. This segment includes companies involved in wastewater treatment, desalination, ballast water treatment, water quality assessment and purification, and life science tools. With rising water scarcity and growing water demand as structural drivers, we expect these companies to continue to offer steady and growing returns to investors in the long term.



Investable global equities water market



- Competitive Water Utilities and services
- Regulated Water / Defensive Utilities
- Water Pumps, Valves, Pipes
- Filtration / Treatment / Health / Efficiency
- Consumers solutions
- Measurements - Meters
- Irrigation / Agriculture
- Water Engineering / construction

Source: Regnan as at March 2021. Based on market cap and subjective assessment.

The structural push for pumps, valves and pipes companies will come from the ageing infrastructure in the developed world, which requires constant maintenance and investment. Additionally, the need to build out new infrastructure in emerging markets where population growth and urbanisation rates are comparatively high creates further opportunity. We are already starting to see massive fiscal spending in these areas.

On the other hand, water utilities are resilient, low beta businesses that tend to generate stable returns for investors and have defensive characteristics during periods of economic uncertainty.

Lastly, related technological innovation and increasing sustainability-linked fiscal spending are other long-term drivers for all segments in the universe.



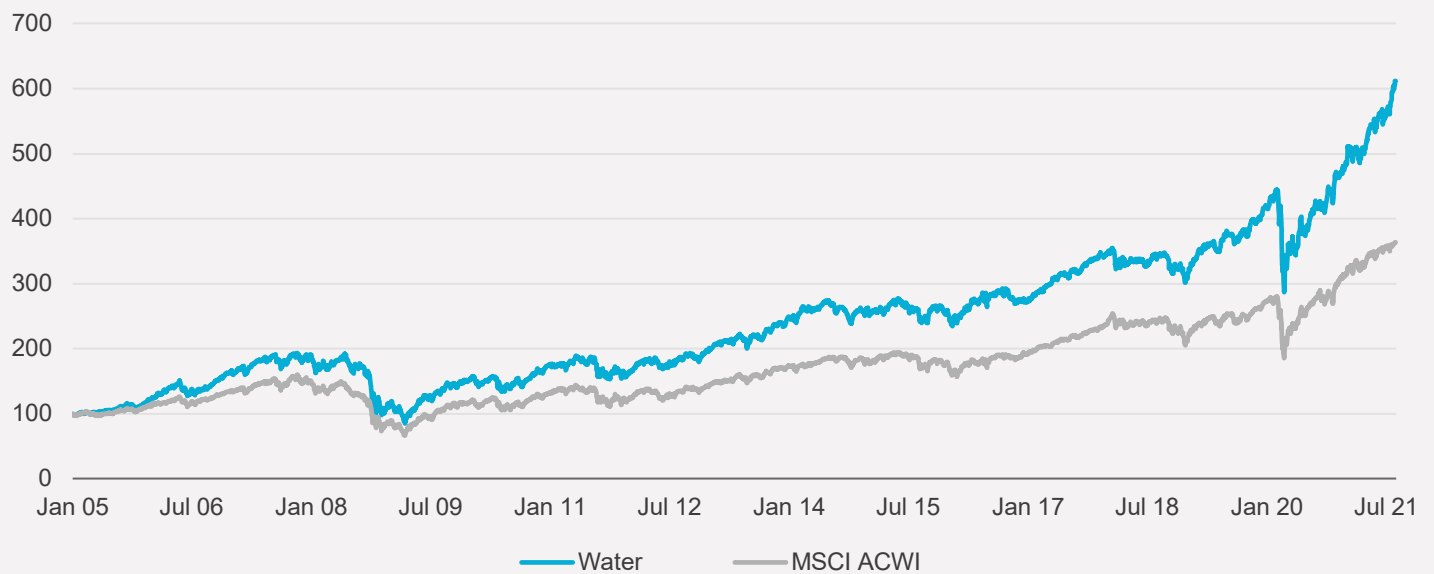
Historical performance of water

Helped by the long-term structural drivers behind the theme, water companies have outperformed the broader market in the last c.15 years. To illustrate such companies' long-term performance, we can look at the chart of the S&P Global Water Index versus the MSCI All Country World Index. It shows water stocks consistently outperformed the broader market over the two decade-period.

These stocks have historically demonstrated a solid up-down capture showing resilience during down markets and rising with the market in a rallying environment. This depicts the superior historical risk/return profile of these stocks.

Historical performance of Water

Water Index vs. MSCI All Country World Index (net total return)



Source: Bloomberg as at 16 August 2021. Water Index represents S&P Global Water USD Net Total Return Index. All Indices in USD.

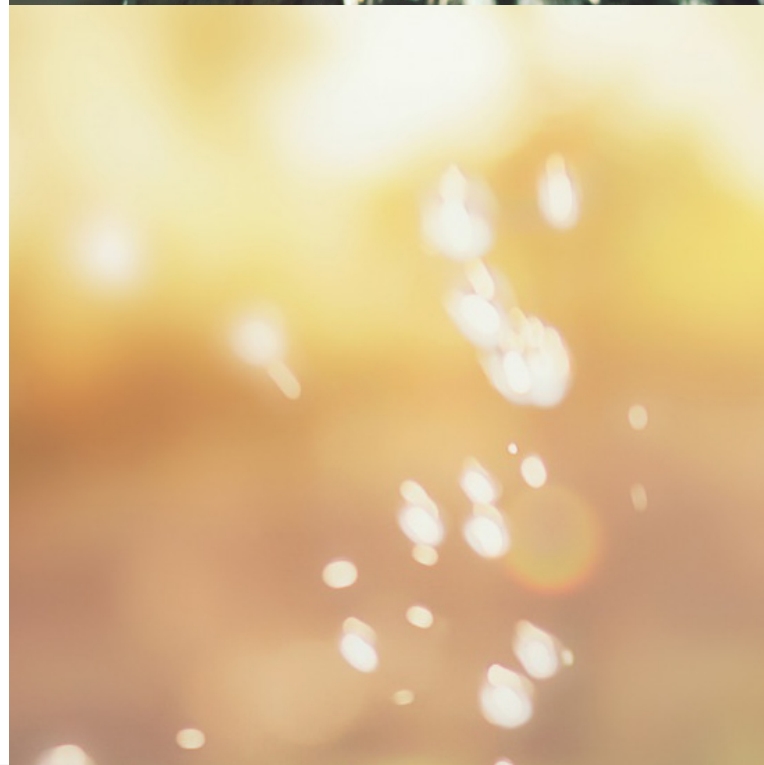


The role of capital markets

Increased privatisation of water infrastructure coupled with the influx of capital towards such sustainable infrastructure is opening new investment avenues within the water theme. Private sector investment and innovation is expected to play a significant role in an integrated approach to water management and is expected to see additional capital deployed in areas including utilities, capital goods and chemicals, construction and materials, and quality and analytics. Given economic growth and the need to improve basic infrastructure, we expect water sector investments to grow at a relatively fast pace in many regions, outpacing global GDP growth. We expect to see growth of the water sector continue as technological advances improve efficiencies.

Equities in the water space have exhibited strong fundamentals with steady revenue growth, robust operating income and expanding net income margins. We expect these trends to continue as economies start to reopen and recover from the COVID crisis.

To be a successful investor in the water space, one needs to have a deep understanding of the central role water plays in the global economy, understand the challenges and constraints whilst also identifying the latest technical innovations and industry solutions. Investors also need to closely monitor political and regulatory developments, understand the economics of the various segments of the value chain and undertake robust fundamental research. It is also equally important to do a deep dive into these companies' ESG practices and engage with them to form a long-term view. Regnan's team has a long history of analysing companies in the water value chain and has the in-house expertise of performing detailed sustainability analysis.



About Regnan

Regnan is a responsible investment leader with a long and proud history of providing insight and advice to investors and industry bodies such as the UNPRI.

In 2020 Regnan expanded into responsible investment funds management, backed by the considerable resources of Pandal Group.

Our strategies:

Regnan Global Equity Impact Solutions

The Regnan Global Equity Impact Solutions strategy is a solutions-first approach, focused on investing in mission-driven businesses that address underserved environmental and social challenges and deliver real, systematic change for the better. It is a high-conviction, global, multi-capitalization portfolio with low turnover and a strong emphasis on driving impact by engaging companies to improve measurable outcomes.

Regnan Credit Impact*

The Regnan Credit Impact Strategy is an actively managed portfolio of mainly investment grade impact bonds (green/climate, social & sustainability) that support positive societal and/or environmental outcomes including advancement of the United Nations Sustainable Development Goals.

Regnan Sustainable Water and Waste

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*Available to Australian investors only.

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