

## Water – one challenge, two approaches



**Daniel Wild, PhD**

Head of Sustainability Investing  
Research & Development and  
Member of Executive Committee

**It's no secret that the water crisis poses a major challenge for humanity. Entire regions on every continent are suffering through increased periods of drought, which has a meaningful impact on the environment, the economy and society at large.**

### But what is causing this crisis?

Population growth, increasing per capita water consumption, food production and pollution are major drivers behind the limited availability of water. This is exacerbated by an aging water infrastructure in developed countries, where some cities lose 30 % or more of their tap water to leaks.

Improved living standards result in higher per capita water consumption, particularly as larger middle class – most of which is located in the emerging markets – consumes more meat. Approximately 70 % of our freshwater withdrawals are used in agriculture, and producing one calorie equivalent of meat requires 10x more water than producing one calorie equivalent of corn or wheat.

Water and energy are closely interlinked. This interdependence, known as the “water-energy nexus,” was the theme of this year’s UN World Water Day on March 22<sup>nd</sup>. Roughly 75 % of all industrial water withdrawals are used for energy production and cooling. As conventional energy sources become more scarce, they are progressively being replaced by others that are significantly more water intensive. Extraction of oil from tar sands, fracturing for shale gas, production of biofuels, the manufacture of solar panels, nuclear power and hydropower all require significant volumes of water. For example, open mining operations used to extract oil from tar sands require three barrels of net water for every barrel of synthetic crude oil produced. At the same time, vast amounts of energy are required to treat, pump and transport water.

Yet while demand for water resources is unlimited, supply is limited. According to estimates by the Water Resources Group, if water consumption continues at the same rate, we could be facing a supply gap of 40 % by 2030. At RobecoSAM, we recognized investment opportunities linked to the water challenge as early as 2001, when we launched an investment strategy focused exclusively on the water theme. The RobecoSAM Sustainable Water Strategy identifies companies that develop solutions – such as sophisticated gray water recycling technologies or micro drip irrigation – that directly address global challenges related to scarcity, quality and allocation of water, because we believe these companies are well-positioned to outperform in the long run. Market opportunities related to the water sector are expected to reach USD 1 trillion by 2020.

In addition to tapping into water-related opportunities, companies – and investors – must also consider their exposures to water-related risks within their own operations and supply chains. Not only are some companies finding it harder to secure the water needed to manufacture their products, they are also facing issues related to water quality and pollution, which increases the cost of treating that water. Therefore, it is important for us, as investors, to distinguish between companies whose financial performance may be negatively affected due to poor management of water-related risks and those sustainability leaders that apply the best water management practices.

For this reason, we use our annual Corporate Sustainability Assessment to look at whether companies across all sectors manage their water-related risks so that water scarcity does not threaten to their ability keep their operations running, and ultimately, their financial survival.

And once we have identified laggards in the area of water-risk management, the RobecoSAM Governance & Active Ownership team goes one step further. By actively engaging in a constructive dialogue with companies – as we did recently with a number of companies in the textile sector – we seek to encourage them to develop a water management policy to mitigate the financial and reputational risks related to water scarcity and water pollution.

In short, RobecoSAM is tackling the same challenge from two different angles: the risks associated with water scarcity, and the opportunities arising from developing solutions to the water crisis. These are essentially two sides of the same coin. And RobecoSAM remains committed to mobilizing capital to enable the sustainable use of our water resources, while creating value for our clients.