

ESG Perspectives Podcast

“Water, Water Everywhere? Well, Maybe Not for Long.”

December 1, 2022

Adam Bass ([00:03](#)):

This is MSCI Perspectives, your source for insights for global investors, and access to research and expertise from across the investment industry. I'm your host Adam Bass, and today is December 1st, 2022. Water. Every company depends on, or benefits from water in some way. The problem, if I may butcher some famous investment advice that may or may not have been said by Mark Twain, "They ain't making any more." And though the issue of water stress has been somewhat misunderstood and overshadowed frankly by concerns about carbon emissions, companies and investors are starting to pay closer attention. So let's dive right in with our first guest.

Elchin Mammadov ([00:49](#)):

My name is Elchin Mammadov. I'm Industry Lead for utilities here at MSCI and I also co-head European ESG and climate research team. At the moment, we have very dry spells across several parts of the world, US west and southwest apparently has the driest period in 1200 years. In many parts of Europe we had severe droughts, also we had major droughts in China and that has implications for both energy demand, but also for water use in agriculture and by consumers. So we've had here in the UK for example, a bunch of utility companies have already imposed a hose pipe ban, so if you want to water your garden, tough luck with that.

Adam Bass ([01:43](#)):

But of course, the problem of water scarcity, it's much larger than a yard full of dried up high drainages. And although it is exacerbated by climate change, investors habitually mischaracterize it as an exclusively environmental issue, which brings us to our second guest today.

Margarita Grabert ([02:01](#)):

I'm Margarita Grabert and I'm part of the MSCI ESG research team, where I cover three industries specifically focusing on industrial machinery, industrial conglomerates and construction materials. Even within our own ESG research team, even though we classify water as a more environmental issue, we do highlight in our assessment of companies and their water use as both a social and environmental issue.

Adam Bass ([02:26](#)):

Now, this is important and it's much more than semantics. The first step towards solving any problem, is understanding it as comprehensively as possible.

Margarita Grabert ([02:36](#)):

Water extraction has direct implications to ecosystems. If companies are withdrawing too much water and consuming too much water, that will have a direct impact on the environment and the local ecosystems. But it also depletes water sources for the communities nearby. And if we focus then also on companies neglect to clean their water use and aren't participating in the circular economy and releasing the leftovers of their waters to the community and to the local region, that will also have direct impacts on the health and prosperity, I guess, of the communities and their ability to also extract and use the local fresh water for even basic needs like hygiene, drinking water, healthcare and schools. All of these types of aspects are reliant on having access to clean fresh water.

Adam Bass ([03:22](#)):

Margarita and Elchin both hit this point hard, adding that only two or 3% of the world's water is fresh, that means not salt water. And that means that at the very least we need systems in place to desalinate that water supply. But let's start to weigh in deeper. Now that we have a bit of a better understanding of the problem, what can we do? What types of solutions exist?

Elchin Mammadov ([03:50](#)):

I mean, everyone would tell you that you should avoid reuse and reduce. I'm not sure I got the order right, but the idea is that if you can avoid using water, if you can replace water, let's say in cooling of power stations and replace it, let's say with dry air cooling, you can do that. If you can reduce your use of water, let's say in agriculture, just rather than sprinkle water everywhere and use it within nearly maybe, there are some companies that not only use the things like drip lines and whatnot, but they also use AI to look at what the forecast is going to be, when the best times to water the soil and also they look at how dry the soil is and what time of day is best to use it, what kind of crops you have. And that's just one example. And finally reusing the water rather than to dump the water into rivers and then oceans, try to recirculate itself, try to clean it up and reuse it many times.

Adam Bass ([04:59](#)):

And is that, that recirculates, is that connected with this idea of circular economy?

Elchin Mammadov ([05:06](#)):

Yeah. Definitely. I mean, it's much easier to implement this innovation in industrial and commercial sectors than in residential because we, including myself, are quite stubborn. We already have our developed habits and it's really hard to change them. Whereas industrial and commercial sector, they're much more open to using more technology and also ESGs becoming more and more important. So there is a lot of innovation happening around circular economy. I already mentioned dry air cooling for power plants, but also you can for certain industrial application, you don't need to have crystal clear water, you can use brackish water, which is water, let's say that comes out of once you've washed your hands or something from your kitchen sink basically.

([05:54](#)):

And also a lot of water companies are now expanding into the biogas so they can produce biomethane rather than using natural gas. So as a way to repurpose that sludge that comes out of our toilets and cow manures and whatnot, they put them into big bio digesters and they produce biogas that way. So squeezing more value out

of water is certainly the way to go and that feeds into the circular economy theme that we're experiencing at the moment.

Adam Bass ([06:30](#)):

There's that term circular economy again. We've heard it a few times now, so why don't we get it defined.

Margarita Grabert ([06:37](#)):

Circular economy is quite a broad term and oftentimes we think of circular economy when we talk about recycling. How can we reuse materials? How can we incorporate them back into society and find maybe another purpose for them rather than having this linear production approach? And that's what we see with water use as well. It's had a linear pattern over the last, ever since we've been using water for however many years. We extract it, we consume it, especially at the company level and then we release it.

([07:08](#)):

And I think the circular economy approach will be focusing on how can we actually instead of just releasing it and be done with it, have incorporate it back into our production. For example, when you think of construction materials, they tend to be quite water intensive and they need a lot of water for their actual manufacturing process versus the industrial machinery side of things. So I think in terms of how they would address water stress would vary quite differently from one sector to another. One might focus more on how much water they're extracting, how they can maybe become a bit more water efficient in their process. Could they even recycle some water in the process like the cement companies? And I think from the industrial machinery side, a lot of them can actually offer products for the circular economy and work on technology and products that can address water sustainability and the circular economy in other sectors.

Adam Bass ([07:58](#)):

And is that happening? Can you give us an example?

Margarita Grabert ([08:01](#)):

Yeah. It's definitely happening. So I think one prime example of a company that I cover is called Xylem, and they're providing the technology and the infrastructure and products for various industries, including agriculture that's notorious for being very water intensive, and they're producing technology that helps these companies and other industries to address how much water they're using, focusing on products also regarding water cleaning, water pollution extraction and things like that. So these types of companies really do help other industries to address their water sustainability issues.

Adam Bass ([08:37](#)):

In other words, it's really about efficiency and recycling, and that's particularly important for a limited natural resource like water. But what about heavy industrial users? How exactly does water scarcity affect them and by extension their shareholders? Are they paying enough attention to the issue? We start with Elchin, who as he mentioned earlier, covers the heavy water using utilities industry.

Elchin Mammadov ([09:05](#)):

Utilities is a very interesting industry, is that it uses water in many different ways. So we've got water utilities that are in charge of supplying water, but also treating water and sewage and again, during the dry period, they have to impose the post by bands or restrict the consumption of water in one shape or form, and that negatively impacts their relationship with the customer. For water utilities that they're getting smarter at collaborating across the region, so let's say if one region has a dryer water climate than the other, maybe they can ship water, but it has its limits. Water is very energy intensive process to ship around.

(09:51):

But yeah, the utilities are collaborating more and more, applying best practices. They are using leak detection equipment that helps them identify and solve those leaks earlier. Again, helps with water preservation and also water companies also try and help any water intensive industries like shale gas drilling in treating their water and try to recirculate that.

(10:18):

So water utilities is one group. The other group is power generation and within that you've got two subgroups. So hydropower operators rely on water quite a lot and their production varies a lot, whether depending on whether it's a dryer or wet here. And again, we've seen a lot of hydropower operators this year take huge financial loss because they were generating between 50 and 30% less power than they did a year before because it's so dry. And finally, nuclear and coal fired power generators they rely on water for cooling their plants and again, they're trying to reduce their water use through other more efficient technologies.

Adam Bass (11:02):

As Elchin continued, we shifted into why investors are also starting to pay attention.

Elchin Mammadov (11:08):

If you are a power utility in Brazil and suddenly there's a multiyear drought, suddenly you're much more exposed to that on the earnings front. So investors do track it. So not only do they track how exposed the company is to water stress, but also what the reservoir levels are in different countries. So for example, in China, Yangtze River, I think it's one of the world's largest. The last time I checked the water levels were half what they are on average they were in the past five years.

(11:46):

So yeah, the data is definitely something that investors look at and it does drive the valuations of many of these water companies. Whereas if you're water utility, you are currently incentivized to reduce water that you supply to your customers, it's very hard, but you need to encourage your customers to use less water and one way to do that is to install water meters because, if you're just charging a flat price, customers don't have incentive to cut the demand.

(12:18):

And also a lot of water utilities are trying to address the fact that when as we're seeing more extreme weather, we're discharging during the heavy rainfall times, discharging a lot of overflow sewage into the rivers, into the seas and oceans and the regulators are becoming much more tough on it and rightly so. So they're incentivizing water companies to invest in increasing their storage capacity for sludge and generally because water is a regulated monopoly, as you spend more, you tend to earn more. So investors like to see companies which have huge CapEx plans.

Margarita Grabert ([13:00](#)):

Investors are definitely paying attention to water stress, but it's always been in the shadow of climate change. And as we know, climate change has been the focus over the last five, 10 years in terms of companies having to address that issue. But even the Principles for Responsible Investing, PRI they have also started to address water stress and water use as an issue and tried to get more investor involvement in this issue. And I think it definitely needs to become a bit more of a priority because water stress and water use is one of the main culprits of, or at least companies are one of the main culprits of our fresh water use and extraction.

([13:34](#)):

And globally, I think only around 10% or 11% of fresh water consumption is coming from households and the rest is actually coming from the company or the industry side. We can see supply chain disruptions for many companies that are reliant on water for their business, such as affecting their transportation of goods or even affecting nuclear energy production.

([13:55](#)):

Beyond that, I think there's also direct impacts to production. For example, having higher costs of companies that don't have access to water and if it's a vital resource for their production, this could be very damaging for the business in the long term. And I think another angle to consider that could be important for investors in the coming years is also the regulatory and reputational risks associated to the lack of management of water. And even though water regulations maybe not as much in the spotlight as climate change regulation, we see a lot more fines are popping up and a lot more companies are facing litigation and fines regarding their water use.

Adam Bass ([14:32](#)):

Let's keep going with that. Reporting, disclosure, transparency, choose the term of your choice.

Margarita Grabert ([14:39](#)):

Disclosure is definitely a vital step in terms of addressing water sustainability and water use. For example, the CDP is a company that focuses on creating disclosure and reaching out to companies to provide disclosure not only on their climate change data, but also on their water use data. And the CDP has seen a sharp uptake in the last 10 years in water disclosure as well. I think in 2010 had around 176 companies only disclosed data to them on water. But now as of 2021, they had 3,300 companies provide disclosure on water. So I think disclosure is definitely on the rise and we're seeing a sharp uptake in disclosure.

([15:19](#)):

But I think what's missing right now in terms of usefulness of data to investors is more so the mitigation side of things like what are companies doing to actually address water stress? So they're providing information on how much water they're using, their amount of extraction and their amount of withdrawal of water, but less so on what are their mitigation plans? How are they going to lower their water consumption? Are they implementing targets? And looking at our data from the ESG side, we've seen that companies that are constituents of the MSCI equity index, only around 14% of them are actually providing a publicly disclosed target on addressing their water consumption, with a target going at least until 2025.

([16:02](#)):

And this is significantly lower if we look beyond 2025, I mean, the amount of companies having a target going up until 2050 from the same pool is only less than 1% and this is quite a stark contrast to, for example, climate change where we see a lot of companies are providing net zero targets and other types of climate change targets. So I think if investors pick up on this increasing risk of water stress, then they will also maybe create a further push for companies to implement water mitigation plans and develop their water use strategies.

Adam Bass ([16:37](#)):

I mentioned near the start of the show that we'd come back to the discussion of the price of water. We are talking after all about businesses, and investors who are trying to make a profit. So it seems perfectly reasonable to ask, what is this all going to cost me? Elchin.

Elchin Mammadov ([16:55](#)):

Water is one of the most underpriced commodities that I can think of. It is a commodity because by and large here there are different grades of water, but quality of water and whatnot but it is a commodity in my view. Unfortunately, it's very hard to ship around, to move around, is very heavy and very bulky. So that's why it's unlikely that we're going to see a global benchmarks for water.

([17:21](#)):

Trading water hasn't worked and I don't think on a large scale it is possible. But as the water scarcity becomes bigger issue, we are going to see tariffs for water increase and hopefully as the price of water goes up in different countries and subregions within those countries, we're going to see people being forced to use it more sparingly. But at the moment it's underpriced in most parts of the world, unfortunately just like fossil fuels are currently being also underpriced in many parts of the world.

([18:01](#)):

There's so little drinkable water in the world that it's a very scarce commodity that is currently being subsidized by the governments because it's a very social issue. So you want to give access to your population to water. And water utilities are one of the sectors that investors like to look at. But the fact is that the water price is expected to go up over time as governments try to use the price as a signal to reduce the water demand and make sure we consume it in a more rational and sustainable way.

Adam Bass ([18:41](#)):

We've talked about some different ways that companies across industries are working to address this vital issue. They're considering how they gain access to it, how they can limit its use, and how they can break that linear process that Margarita mentioned, and try and reuse as much as possible.

([19:00](#)):

But we also talked about how neither companies or investors are paying as much attention to the issue of water scarcity as they are to other issues, namely carbon emissions. The question now is, where do we go from here? Is the road ahead clear or is it a washout? We close today with two pretty different perspectives on water and climate change.

Margarita Grabert ([19:25](#)):

If we focus on cement companies, I've realized yes, a lot of them do have maybe climate change targets and carbon targets, but also over the last few years I've noticed that they also have water management strategies and some of them are actually focusing on addressing water, very region specific. They're looking at where are we producing cement? Where are we extracting limestone? How is this impacting the communities near us? Can we actually address our water consumption and maybe work with the local communities more so than under climate change perspective. So I think this is something that we'll hopefully see increase in the next few years is a stronger focus on water and it's definitely been a positive change over the last few years.

Elchin Mammadov ([20:04](#)):

There's a lot of talk at the moment about climate and energy, but water was taking a backseat. There was this whole crisis in South Africa where everyone was counting to Day Zero, but as the weather becomes more extreme, as the temperatures are going to rise, we are going to see a lot more cities in the world experiencing that Day Zero and counting towards that Day Zero when they're going to run out of water and there'll be much more pressure on politicians to do something about it. And that's where we're going to see, chat about, okay, let's price water as it should be. Let's cut the subsidies, let's encourage customers to reduce consumption, et cetera, and that will incentivize companies to put much more money into ensuring that we have enough supply of water.

Adam Bass ([20:57](#)):

So it may take a crisis, it sounds like you're saying.

Elchin Mammadov ([21:01](#)):

Absolutely. Yes. Unfortunately, that generally what it takes to wake everyone up and it's a global issue. It should be addressed on a global level just like carbon emissions and climate, at the moment.

Adam Bass ([21:17](#)):

That's all for this week. A big thank you from Joe and me to Elchin and Margarita, and all of you for listening. As you know, we love feedback. So why not leave a rating and let us know what you think. We'll be back next time, looking for answers to the questions investors are asking about. Until then, I'm your host Adam Bass, and this is MSCI Perspectives. Stay safe.

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