

# THE Ethical CORPORATION MAGAZINE

WATER RISK BRIEFING

November 2020

● **Scorched earth strategies**

Climate-smart ways to feed the world

● **For peat's sake**

Why wetlands are key to solving climate change

● **Banking on nature**

The finance sector steps up to water risk



## Troubled waters

How companies' growing thirst for water is imperiling people and planet



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# Welcome to the November 2020 issue

## Water risk

**L**ooking out on rainy streets on a November day in London, it is difficult to fathom the severity of the global water crisis. But as Laurie Goering of the Thomson Reuters Foundation reports in the opening feature of this month's briefing, fresh water is fast becoming a dangerously scarce resource.

According to the UN, a quarter of the world's population is now using water much faster than natural sources can be replenished. And this will be exacerbated by the worsening impacts of climate change, growing populations, expanding farming and a rush of people to cities.

The conflict between people and agriculture is evident in water-scarce Chile, where avocado

farmers are watering their plants every day while relying on trucked-in drinking water.

As Peter Gleick of the Pacific Institute told Goering: "We're going to have to do things differently ... and we have to move toward that more sustainable future faster than we are moving today."

One of the leading authorities on the risk to companies from water scarcity is Cate Lamb, global director for water security at CDP. She was recently appointed to the High Level Climate Champions group at COP26 in Glasgow as lead on water issues. In an interview she tells me how she intends to raise water's profile so it is seen not just as a sector threatened by climate change, but as one with untapped potential to provide climate mitigation solutions.

Angeli Mehta, meanwhile, reports on how the finance sector is waking up to the dependence of its investments on healthy freshwater ecosystems, ➤



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A snowy egret flies over Florida wetland.

FLORIDASTOCK / SHUTTERSTOCK

and explains some of the barrier that will need to be overcome for money to flow into biodiversity.

We look at two of the sectors on the frontline of water security risk. Catherine Early reports on the perfect storm engulfing the mining industry. Not only are mining companies located in some of the most water-scarce countries in the world, the industry is rapidly expanding to provide critical raw materials for the clean energy revolution, with severe implications for groundwater pollution and other environmental and social issues. She also profiles how Anglo American is innovating to buck the trend and halve freshwater use by 2030.

With 70% of freshwater going to agriculture, Mark Hillsdon looks at how three leading companies in the food and drink and agriculture sectors, Cargill, Unilever and Diageo, are making every drop count as they cut their water footprints.

Industry accounts for almost 20% of global water withdrawals, and as Angeli Mehta reports, there has been a 50% increase in the past few years, despite a near-doubling in the number of companies setting targets to reduce their water use.

She looks at how L'Oréal, Microsoft, BASF and Procter & Gamble are innovating to cut water use in

their own operations – and beyond.

Nadine Hawa reports on a slow but steady shift to more sustainable alternatives and lower consumption of water in the Arabian Gulf, where two-thirds of water needs are met by desalination.

And Cate Lamb calls for a redesign of the fashion industry in her comment piece lamenting how only 10% of firms in the highly polluting sector show awareness of their environmental impacts.

We hope you enjoy this month's issue. Next month we end the year with an examination of whether the growing stack of net-zero commitments from companies are credible as we head into the final lap before COP26 in Glasgow next year. ●

A handwritten signature in black ink, appearing to read 'Terry Slavin'.



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# Insights and analysis in 2020 to inform a decade of action

## JANUARY

### Calls to action

Thought-leaders and the investment community, including John Elkington, Paul Druckman, Mindy Lubber, Eise King, Sally Uren and Sunny Verghese, give their marching orders for business in the coming decade of action on climate change and the SDGs

## FEBRUARY / MARCH

### Deforestation Risk

In a two-part assessment of deforestation risk in supply chains we will do deep dives into palm oil and forest and timber products in February and at soy and beef in March

## APRIL

### Smart and resilient cities and energy efficiency

How cities are adapting to climate change through the use of nature-based solutions and cooling technologies. Our second briefing will focus on the global drive to double energy efficiency

## MAY

### How Covid-19 has changed sustainability

Commentary and reportage on how companies are rising to the Covid-19 challenge, and the impact of the pandemic on ESG investment, biodiversity, the energy transition and workforces

## JUNE

### Accelerating the circular economy

Full-issue focus on how Covid-19 will affect the circular economy, looking at the impact of the pandemic on circularity in plastics, fashion, food and agriculture, e-waste and the automotive industry

## JULY / AUGUST

### Powering the energy transition

For our summer issue we look at the role of investors in speeding the energy transition, new energy storage technologies, and the rise of geothermal energy.

## SEPTEMBER

### Sustainable seafood and healthy oceans

Ocean-based solutions, from offshore wind and tidal power to sustainable seafood and cleaner shipping, could provide 21% of the solutions to climate change. This briefing will explore the new front in the climate battle

## OCTOBER

### The future of work

How has Covid-19 changed working practices, including managing employee well-being, supply chains, video conferencing and business travel

## NOVEMBER

### Water risk and biodiversity

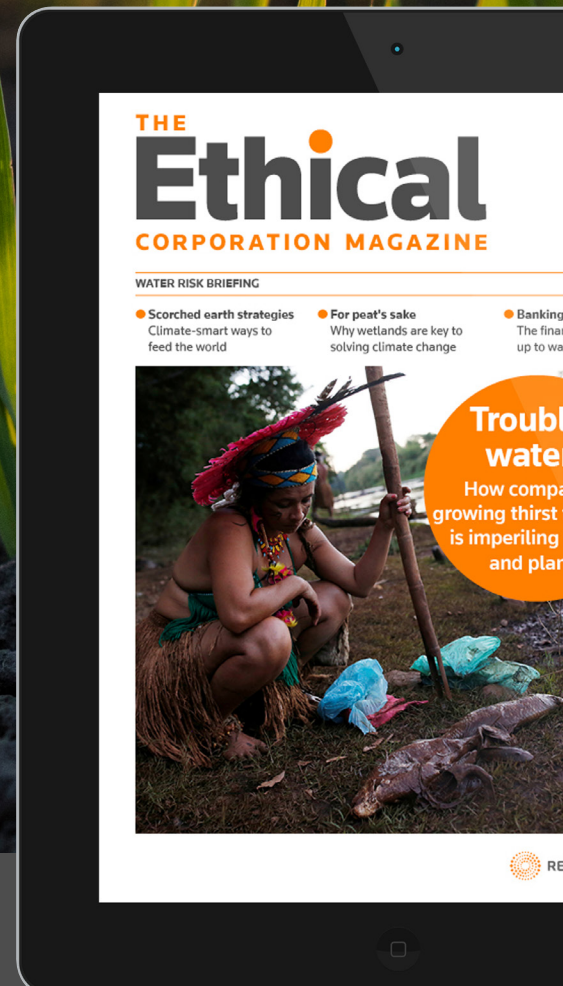
We look at growing water risk as a result of climate change. Our second briefing will be on the business-led initiatives to protect biodiversity through more sustainable land use

## DECEMBER

### Shaping up for the race to net-zero

Analysis of efforts to make net-zero target setting more credible in the run-up to COP26

**PLUS:** How companies are engaging consumers in efforts to cut emissions



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# Contents.

**7 RUNNING DRY**  
Competing for water on a thirsty planet

**13 CONNECTING THE DROPS**  
In the battle against climate change

**18 BANKING ON NATURE**  
The finance sector steps up



**24 PERFECT STORM**  
Can the mining sector ride out the risk?



**29 DIGGING DEEP**  
Anglo American aims for waterless mining

**30 SCORCHED EARTH STRATEGIES**  
How Cargill, Diageo and Unilever are cutting agriculture's footprint

**36 TREADING MORE LIGHTLY**  
At L'Oréal, Microsoft, BASF and Procter & Gamble

**41 MAKING EVERY DROP COUNT**  
In the Gulf

**46 WHY FASHION NEEDS A REDESIGN**  
Comment from CDP's Cate Lamb

**52 ON THE WEB**





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The exponential rise in water-related conflicts around the globe is beginning to spark a widespread reassessment of how water is captured, managed, shared and used.

Laurie Goering of Thomson Reuters Foundation reports

MIKE HUTCHINGS/REUTERS

WATER RATIONING  
STARTED- EXPECT  
INTERRUPTIONS

# RUNNING DRY

## Competing for water on a thirsty planet

VIEW ONLINE







THOMSON REUTERS FOUNDATION/KIM HARRISBERG

**I**n India's 'Silicon Valley' tech hub of Bangalore, where gleaming office complexes and apartment blocks have sprouted faster than the plumbing to serve them, only 60% of the water the city needs each day arrives through its water pipes.

Much of the rest is pumped from groundwater wells and delivered to homes and offices by a fleet of private tanker trucks that growl through the city of 12 million's streets.

But Bangalore's groundwater is running dry. A government think tank last year predicted the city – like others in India, including New Delhi – could run out of usable groundwater as early as 2020 as aquifers deplete.

By 2030, half of India's population – now about 1.4 billion people – may lack enough drinking water, the report predicted.

Around the world, fresh water is fast becoming a dangerously scarce resource, driving a surge in fights to secure supplies and fears over rising numbers of deaths in water conflicts.

Growing populations, more farming and economic growth, climate change and a rush of people to

cities all are increasing pressure on the world's limited water supplies, researchers say.

UN data shows 2 billion people – a quarter of the world's population – now are using water much faster than natural sources, such as groundwater, can be replenished.

In 2015, the United Nations' 193 members agreed a new set of global development goals, including one to give everyone access to safe and affordable drinking water by 2030.



**Big rivers are drying out, the population is increasing, demand is piling up and we can't supply people with water and food**

But in places from Africa to the Middle East, "big rivers are drying out, the population is increasing, demand is piling up and we can't supply [people] with water and food", warned General Tom Middendorp, a former Dutch defence chief. >

**A farmer rests alongside the Mbekamuzi river, which she uses to water her crops, in KwaMusu village in rural KwaZulu-Natal, South Africa.**



Globally, the number of conflicts related to water scarcity has risen from roughly 16 in the 1990s to about 73 in the past five years, according to the California-based Pacific Institute, which tracks freshwater security issues.

In the 1990s, conflicts driven by water scarcity led to about 350 deaths, in places from Yemen to Nigeria, according to the chronology based on news reports and other sources.

But in the last five years, at least 3,000 people – and perhaps more than 10 times that many, if estimates of refugee deaths by Medecins Sans Frontieres are included – have died in clashes related to water in a huge range of countries, it noted.

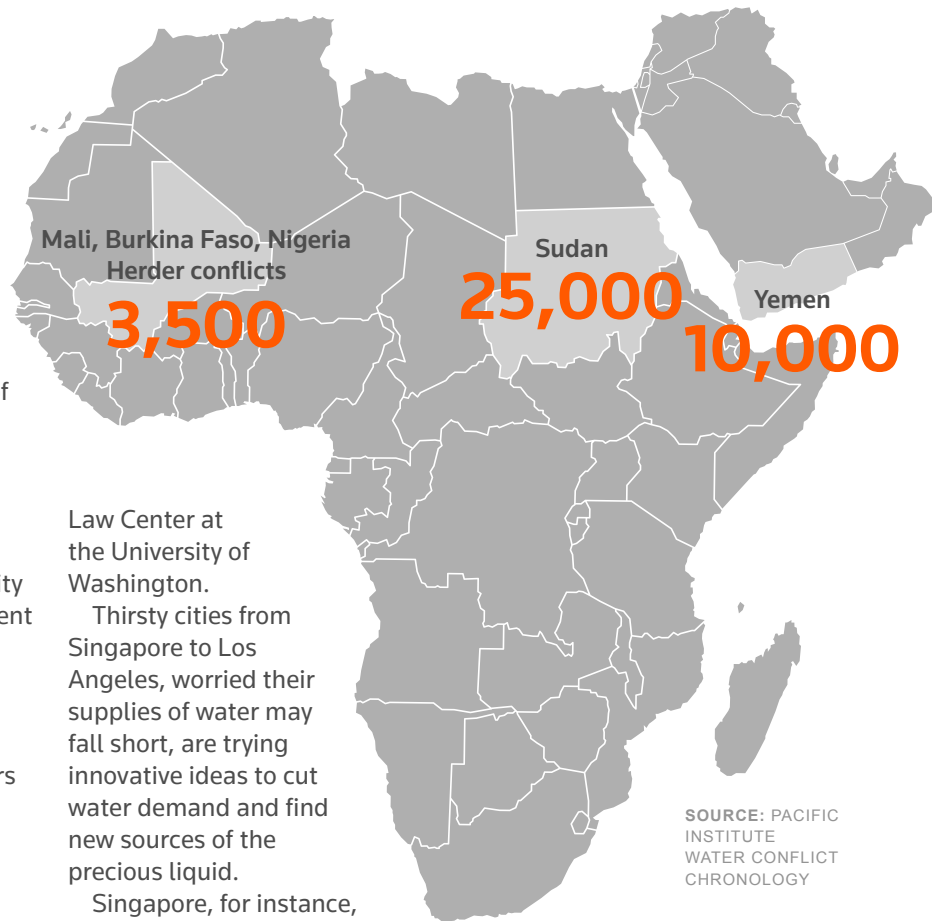
So far, “with very rare exceptions, no one dies of literal thirst”, Gleick said. “But more and more people die from contaminated water or conflicts over access to water.”

Besides fuelling conflict, increased water scarcity is also beginning to spark widespread reassessment of how water is captured, managed, shared and used around the world.

In the American west, legal challenges – including by Native American tribes – may reshape old water rights systems that give farmers or cities with “senior” rights as much water as they like, leaving others and natural ecosystems increasingly dry.

The West needs rules “reflective of modern needs and desires, rather than the rules we’ve had for 150 years and have had to stick by,” said Bob Anderson, director of the Native American

## Most deaths from water conflicts – 1990 to today



Law Center at the University of Washington.

Thirsty cities from Singapore to Los Angeles, worried their supplies of water may fall short, are trying innovative ideas to cut water demand and find new sources of the precious liquid.

Singapore, for instance, has thrown a wall across a

seafront bay, gradually turning what once was saltwater into a huge new freshwater reservoir for the city-state, which today relies on neighbouring Malaysia for much of its water.

“It is crucial to be water-independent,” said Adam Reutens-Tan, a Singapore resident whose family has slashed its water use, through measures from serving one-pot meals to save on dishwashing to taking five-minute showers.

Los Angeles, which built its growth on water sucked from the distant Owens and Colorado rivers, is looking to capture stormwater and more rain to recharge its own aquifers as climate change and competition threaten its old supplies.

It is also stepping up conservation – including paying residents \$3 per square foot to shrink or get rid of water-demanding green lawns.

“As we looked at the future and where we were going to get water reliably, sustainably, we were really looking within,” said Rich Harasick, senior >



EDGAR SU/REUTERS

Pipes carrying water from Malaysia to Singapore run beside the causeway towards the Woodlands Checkpoint in Singapore.



THOMSON REUTERS FOUNDATION/RAJAN ZAVERI

assistant general manager for the city's Department of Water and Power.

In increasingly parched southern Africa, worsening water shortages in 2017 led South Africa's Cape Town to launch a public countdown to "Day Zero" when it feared the city's taps would run dry.

That threat was averted after residents joined a successful drive to slash the city's water use. Now city officials are restructuring where the city will get its water in the future, including from more wells and desalination plants.

But in rural areas of South Africa, water shortages are also driving villagers to experiment with new drought-hardy crops, and new ways of capturing, sharing and conserving water.

In the village of KwaMusi, and others nearby, drought-hardy beans and amaranth – grown in fields snaked through with water-sipping drip irrigation hoses – are showing up on plates once filled mainly with maize porridge, the region's old staple.

Rainwater-harvesting tanks, to catch the runoff from tin roofs, also are being installed, and irrigation pumps purchased, on a continent with one of the world's lowest irrigation rates.

"These small changes mean the community will have something to eat and sell when water becomes more scarce," said Brandon Nthianandham, a rural worker for a food security trust helping farmers in the region.

**A fisherman-turned-farmer collects aquatic plants from Varthur Lake in the Indian city of Bangalore to feed his cattle.**



## People say the next war will be over water, but here it feels like it has already begun

But in many water-short areas, conflict over limited supplies is growing, particularly as dry conditions set in again this year.

"Sometimes if you go to a nearby water source, other communities are standing guard at the water. They will beat you if you come near it," said Talent Zuma, a resident of Nxamalala, a village in KwaZulu-Natal province.

"People say the next war will be over water, but here it feels like it has already begun."

One problem facing efforts to resolve worsening water disputes is that many of them are not taking place between countries, where water-sharing rules may already be in place, but between counties, adjoining villages or even neighbours.

"The tools of international agreements do not apply in these kinds of conflicts," Gleick said.

Water conflicts between countries may grow as well, with only about 60% of transboundary water sources covered by international agreements as of 2017, according to a 2018 Sustainable Development Goals (SDGs) report that looked at >



62 of 153 countries that share water sources. To deal with rising pressure on limited water supplies, finding ways to grow more food with less water is particularly important, analysts say.

About 70% of freshwater used each year around the world goes to agriculture, according to the United Nations' Food and Agriculture Organization (FAO).

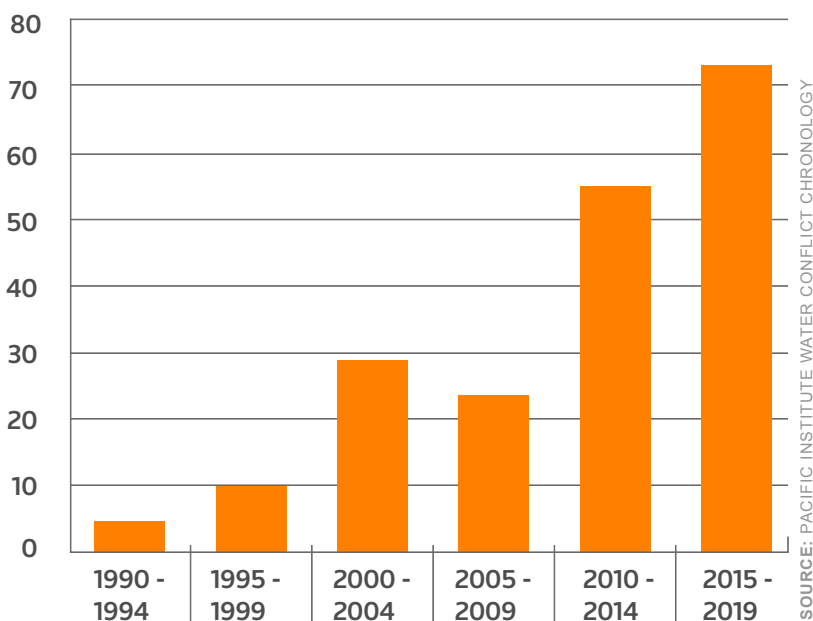
As the world's population continues to expand, finding ways to reduce farming's share of the world's water, while still growing more food, will be crucial to prevent worsening hunger, including in fast-growing cities, food experts say.

Global trade in food – which is effectively trade in the water used to produce it – may also need reconsideration.

In Chile's Petorca province, a three-hour drive north of Santiago, expansive avocado fields make Chile the world's third largest exporter of the wildly popular fruit, dubbed "green gold".

But as big corporate avocado farms have stepped up production, climate change has brought more ➤

## Water-related conflicts



Huge avocado plantations sit beyond a reservoir in Chile's Petorca region.

THOMSON REUTERS FOUNDATION/NICKY MILNE





THOMSON REUTERS FOUNDATION/CLAUDIO ACCHERI

unreliable rainfall to the region, driving more severe droughts.

That combination has led to increasingly problematic water shortages in Petorca, forcing some residents to rely on trucked-in drinking water – and raising questions about whether avocados for export should remain the region's priority.

"There are people here who water their avocado plants every day, and we have to drink water from trucks that we don't even know is safe," said Catalina Espinoza, who lives on the edge of thousands of hectares of avocado plantations.



**We're going to have to do things differently ... and we have to move toward that more sustainable future faster than we are moving today**

The biggest problem facing efforts to reshape water use in an era of climate change, population growth and fiercer competition is inertia – a reluctance to abandon old ways of doing things, Gleick said.

"It's the idea that there's always another river out

there, there's always another groundwater well we can sink," he said. "That's the way we thought about water ... in the 20th century."

But providing enough food and water in the future – and finding ways to head off rising conflict – will require much smarter and more efficient use of the limited resource.

"We're going to have to do things differently ... and we have to move toward that more sustainable future faster than we are moving today," Gleick said.

Likith R, who runs a shop that manufactures the tanks needed for water deliveries in Bangalore, agrees. With tap water perpetually short in the megacity, his business is booming, he said.

"But as a citizen I'm really petrified about the water situation here," he admitted.

"It's scary to think about, because I don't really know what the future holds for our children." ●

**Peter Gleick, a water and climate change scientist at the Pacific Institute, says the number of conflicts over water is going up 'exponentially'.**



**Laurie Goering** is a journalist who edits the Thomson Reuters Foundation's award-winning daily news website on the human impacts of climate change. As part of her work, she developed and mentors a network of more than 100 developing world climate change journalists in an effort to improve reporting on climate change around the world. [trust.org](https://www.trust.org).



INTERVIEW

# Connecting the drops in the battle against climate change

CDP's **Cate Lamb** tells Terry Slavin she hopes her new role championing water at next year's COP26 in Glasgow will lead to joined-up thinking on water's role in the race to net-zero

VIEW ONLINE

LUKASSEK/SHUTTERSTOCK

A peatbog in County  
Donegal, Ireland.







NINJA SS/SHUTTERSTOCK

**W**hen Covid-19 plunged boardrooms into crisis early this year, CDP directors held an emergency meeting to discuss whether they would send out their annual questionnaires on climate, water and deforestation risk as usual, or give business leaders a year off to concentrate on responding to the immediate threat on their doorsteps.

“We decided the environmental risks facing the planet are so great, we couldn’t afford to take our foot off the pedal,” says Cate Lamb, who is global director for water security at CDP. “Climate change is continuing, deforestation is rising, and biodiversity in freshwater ecosystems is on the verge of catastrophic collapse. Investors backing our information requests [to companies] also wanted us to continue.”

It turned out to have been the right decision. Rather than the number of respondents falling, as had been feared, the number of companies reporting on water through the programme rose again this year, with 2,934 businesses disclosing, up

from 2,433 in 2019, and from 150 when CDP first started asking companies about water risk 11 years ago.

Lamb is pleased by the increase in reporting, but says the acid test is whether companies are taking commensurate action to reduce their risk. And, with an almost 50% increase between 2015 and 2018 in the number of companies reporting higher water withdrawals, the gap between reporting and action is not only large – it is growing.



**With an almost 50% increase in the number of companies reporting higher water withdrawals, the gap between reporting and action is growing**

CDP hasn’t yet analysed all the data from this year’s responses, but fewer than half of respondents to the 2019 survey said they regularly meter and monitor the quality of their discharges into the ➤

**Rice cultivation uses up 40% of the world’s irrigation water.**



A worker holds a piece of ore at Aguilar Salt Flat in the Atacama Desert, Chile.



FABIAN CAMBERO/REUTERS



**Cate Lamb manages CDP's water security programme.**

environment, while just 12% have set a water pollution reduction goal or target.

"Asking companies to report is a mechanism by which we drive change," Lamb says. "We want to see companies begin to set ambitious targets and eliminate pollution from their value chains. At best, we want to see them halt freshwater withdrawals at today's limit or design out the need for freshwater withdrawals to make it available to those who need it more."

In August, Lamb was appointed to the High Level Climate Champions group at COP26 in Glasgow as lead on water issues. She hopes that, together with Climate Champions Nigel Topping of the UK and Chile's Gonzalo Muñoz, they will be able to raise water's profile so it is seen not just as a sector

threatened by climate change, but as one with untapped potential to provide mitigation solutions.

She references [a recent report](#) by the German government's development agency GIZ that highlighted how freshwater peatlands cover only 3% of global land surface but store twice as much carbon as all of the planet's forests combined. They are also being lost at three times the rate of forests, leading to the release of methane and nitrous oxides greenhouse gases with a far stronger global warming potential than CO<sub>2</sub>, GIZ warns.

The report also shines a light on rice, the main staple for 3.5 billion people, as an overlooked global warming villain, with methane and nitrous oxide emissions from flooded rice paddies alone responsible for at least 2.5% of global GHG emissions, as well as using up 40% of the world's irrigation water. (See [Why sustainable rice is an overlooked challenge for climate action](#))

"Changing the way we use, store and distribute and treat water could save as much as 10% of CO<sub>2</sub> and other GHG emissions... Today, however, many of these solutions remain largely untapped."

Lamb said. "I'm here to change that and make sure that it gets the money it needs to contribute to our climate goals."

In the run up to COP26, the Climate Champions will also be encouraging countries to include targets to cut water-related GHG emissions in their updated Nationally Determined Contributions over ➤



the next five years, as Chile has done in its revised plan, including a novel target of restoring 1 million hectares of natural ecosystems.

### TRANSITION TRADE-OFF

Lamb says she will also use her role at COP26 to highlight some of the implications for the planet's dwindling water resource of some of the technologies being promoted in the race to net-zero.

She gives the example of green hydrogen, which the EU is investing heavily in as part of its Green New Deal package, and is seen as crucial to the bloc achieving a targeted 55% cut in CO<sub>2</sub> emissions by 2030.

"We want green hydrogen to succeed, but producing it is very water-intensive and so far, there has been very little dialogue on this nexus issue. Unless we force ourselves to take a broader view of the environmental implications, we will waste our time and worse still, design in solutions that are far from resilient. What's the point in pushing green hydrogen if we don't have the water available to fuel it in the first place?"

The trade-offs are even more stark when it comes to electric vehicles, and their impact on the [booming market for lithium](#). Demand for this water-hungry mineral, mainly extracted from salt flats in the "lithium triangle" of Chile, Bolivia and Argentina, is projected to increase tenfold over the next decade,

leaving the mainly indigenous communities who live there without the water they need to survive.

"We are absolutely correct in pushing for EV for zero-carbon transport, but this is coming at a cost. In the Atacama desert [in Chile] lithium mining is having detrimental impacts on groundwater depletion and the potential for pollution is really high."

And lithium is far from the only water-dependent metal that will be critical to the success of the energy transition. The World Bank predicts that the production of minerals such as [copper](#), [graphite](#), [lithium](#) and [cobalt](#) could rise by nearly 500% by 2050 to meet increased demand for components in batteries, wind turbines and solar panels, exacerbating water risks for a sector that is already the most exposed in the world, in terms of groundwater withdrawals and pollution.

(See [Mining firms 'failing to get to grips with worsening water security crisis'](#))

"There will be synergies and trade-offs everywhere [in the green transition]. We must be aware of what they are and have systems in place to manage them," Lamb says.

One big challenge is the fact that water pricing doesn't reflect its true cost.

Water pricing of consumers is politically sensitive, as was seen by the uproar in Ireland a few years ago when the government tried to introduce

**Indigenous communities of the Salinas Grandes in Argentina protest against lithium mining on their territory.**



FELIX MALTE DORN/SHUTTERSTOCK





MAREKULIASZ/SHUTTERSTOCK

water metering, she says. “But from a corporation perspective companies are often paying less for their water than households, and that is a situation that cannot be sustained in any future that we imagine.”

She says in some cases companies access groundwater by drilling their own boreholes and pumping water, paying only a small licence fee. Yet it’s coming from the same aquifer as the drinking water for the city up the road, which pays the bills to maintain it.

Asked whether companies should set an internal price on water, as many companies do with CO<sub>2</sub> emissions to manage their energy use, Lamb says “absolutely”.

## What I'm hoping to get from the Climate Champions role is an opportunity to convert interest into genuine action

Yet the last time CDP asked companies whether they had set an internal water price, in 2016, only 53 companies, or 7%, reported they had done so. Data for this year’s survey has not yet been analysed, and Lamb is hoping for some improvement.

She is encouraged that numerous companies have gone public with ambitious goals to curb their water footprints in the last few months, including Microsoft, (see [Companies working to protect Earth’s most precious raw material](#)), Cargill, (see [Scorched earth strategies](#)), Kering, (see [It’s time for fashion to turn its attention from the catwalk to water pollution](#)), Accenture, and Unilever.

She praises the latter for its leadership in targeting the 85% of its water footprint that is accounted for by consumer use with innovative

products like its no-rinse hair conditioner The Good Stuff, and Day2, the world’s first dry laundry spray, and its target of making its product formulations biodegradable by 2030.

“Unilever are making really bold and transformational changes to their personal care product lines, including recognising they need to eliminate certain products. They are taking a true view on [their impact on] water, climate and the destruction of nature overall,” Lamb says.

Just like in the energy sphere, the Climate Champions are hoping to create an ambition loop for water at COP26, with companies and governments spurring each other to set ever higher levels of action.

And like in energy, the role of the global finance community at COP26 will be key. And that is not only in where they choose to move their assets. She points out how, in the wake of the 2015 and 2018 tailings dam disasters in Brazil, it was intervention from institutional investors representing \$1.3tn in assets that led to the development of a global standard for the management of tailings dams in an effort to prevent future tragedies.

“[Financial institutions] are uniquely placed as international players that invest in whole sectors, and have a global influence that no other national government has. That’s why CDP looks to them to deliver the change we need on climate, on water, and on forest.”

She is encouraged that 26 financial institutions in September signed up to the Finance for Biodiversity Pledge, pledging to reverse nature loss in the coming decade. (See [Banking on nature](#)) “We have the momentum. We have a large number of companies and investors telling us they have a problem, that they recognise the need to change,” Lamb says. “What I’m hoping to get from the Climate Champions role is an opportunity to convert that interest into genuine action.” ●

**Water is pumped for industrial users in Colorado.**



# Banking on nature

The finance sector is waking up to the dependence of its investments on healthy freshwater ecosystems, but there are barriers to overcome for money to flow into biodiversity. **Angeli Mehta** reports

VIEW ONLINE

“W

ater, water, everywhere nor any drop to drink,” vividly sums up the sorry situation of a ship’s crew becalmed near the Equator. That often-quoted line from Samuel Taylor Coleridge’s poem about an ancient mariner who disregards nature could well stand for our predicament today.

Our fast-changing climate is bringing rising sea levels and flooding, but it’s also making fresh water >





an increasingly scarce resource – another layer to add to the crisis already caused by pollution and over-consumption.

By one estimate, if it's business as usual, global demand for water could outstrip supply by 40% by 2030.



## In September, 26 financial institutions signed the Finance for Biodiversity Pledge and called on world leaders to reverse nature loss in this crucial decade

Freshwater ecosystems are crucial for our survival. They are also biodiversity hotspots, and that biodiversity is being lost at an astonishing speed. The International Union for Conservation of Nature estimates that almost a third of freshwater species face extinction.

Discussions are under way through the

[Convention on Biological Diversity](#) to get countries signed up to restoring freshwater habitats as part of a drive to have 30% of the planet in a natural state by 2030.

The finance sector can't afford to ignore the imperative. In June, De Nederlandsche Bank (DNB) analysed biodiversity risks in a portfolio of more than €1.4tn worth of investments made by Dutch financial institutions. It found that 36% of their investments are highly, or very highly, dependent on ecosystem services – with the highest dependence on the ecosystems that provide groundwater and surface water. Of every euro invested, approximately one quarter is dependent on these ecosystems.

In September, 26 financial institutions – together managing over €3 trillion (£2.7tn) of assets – added their voice, calling on world leaders to reverse nature loss in this crucial decade. In signing the [Finance for Biodiversity Pledge](#), they've committed to shouldering their share of responsibility through their financing activities and investments. They say they'll share methodology and metrics that will have a positive impact on biodiversity, and engage with the companies they invest in. ➤

**Untreated sewage flows from an open drain into the river Ganges.**



The organisations will also assess their portfolios for both significant positive and negative influences on biodiversity, and come up with targets to address those impacts, by 2024 at the latest.

Behind the pledge sits a set of principles developed over the past year by the [Partnership for Biodiversity Accounting Financials](#).

Dutch asset manager Actiam is one of the partners. It already screens companies based on both their water consumption and strategies for managing water, and engages with those who don't measure up.

But more can be done to address biodiversity. "I think a lot of investors are now looking at climate and being carbon neutral – because this is demanded from them by the outside world. But next to that, I would hope that more investors are going to look at water, land use, species [loss] – although it's a bit more difficult – as well as pollutants," says responsible investment officer Colette Grosscurt.

"To really integrate those aspects into the screening of companies and investments could be very valuable to mitigate risks and benefit from opportunities."

Getting up-to-date data as well as unpicking supply chains are key challenges to be tackled. Last year, Actiam teamed up with satellite imagery and artificial intelligence (AI) firm Satelligence to check on whether companies are meeting deforestation targets, and to investigate deforestation in their supply chains, starting with palm oil.



## There's not one institution or even one set of stakeholders or actors that can solve water challenges

Water, specifically, is a typical public goods dilemma, suggests Grosscurt. "Even if a company may take up that responsibility [for a water basin] it's not going to solve the issue. It has to be a collaborative approach, but with someone actually having the ultimate responsibility for it." Her colleague, Nadja Franssen adds: "In many >

**Flooding from typhoons in Asia are affecting supply chains for Australian companies.**



KIM KYUNG-HOON/REUTERS



countries, water rights are allocated to a specific company. So then it's also really easy to just shift the responsibility, because then you can say 'the government has allocated me these rights, and they will take into account the environment, so I can just do whatever I want with these rights'. Well, that's not always the case."

Karin Krchnak, programme manager of the 2030 Water Resources Group (WRG) believes collective responsibility is crucial: "There's not one institution, or even one set of stakeholders or actors that can solve water challenges." The group, hosted by the World Bank, aims to mobilise the private sector, government and civil society to work in partnership on water security and help achieve the Sustainable Development Goals.



## The financial sector often thinks of water as a local issue, or a company issue, however risks around water scarcity and water quality are systemic

So far it's created 14 multi-stakeholder platforms in Asia, Africa and Latin America, involving over 800 partners. These cover sectors such as urban water management, mining and agriculture. Having government at the table also addresses legislative obstacles and enforcement. In Mongolia, for example, where mining and manufacturing industries foul diminishing groundwater supplies, introduction of the "polluter pays" principle, together with national standards for wastewater reuse, have encouraged industry to invest in treatment and recycling.

### LIQUID ASSETS

The 2030 WRG is also making the investment case for water, and developing new financial instruments to address the funding gap. One such success is in creating a new public-private partnership model to finance three wastewater treatment plants in India's Ganga basin. Now the Indian government is looking at 15 more plants to tackle the 8bn litres of untreated wastewater that flows daily into India's mightiest river.

Krchnak also wants to work with investors on best practices and metrics that would "help drive greater understanding amongst the investor community on water-related risks and opportunities, including best practices in portfolio monitoring from a water perspective."



CLICKVISION/SHUTTERSTOCK

US sustainability non-profit Ceres, which was founded in the aftermath of the 1989 Exxon Valdez oil spill, is also working with investors to develop tools to assess water risk. According to its [research](#), around half of industries in the US economy face significant water risks. "There really needs to be a wake-up call," asserts Kirsten James, programme director for water.

"The financial sector often thinks of water as a local issue, or an individual company [issue] and they tend to look very narrowly. However, risks around water scarcity and water quality are systemic issues. And, across the board, there isn't that clear sense of material or financial value of the freshwater resources at risk," says James.

On water, she says, "we don't really have the >

**One financing scheme success is a drip-irrigation project for sugarcane farmers in Karnataka, India.**





VASTRAM/SHUTTERSTOCK

foundational thinking and business case that we do on the climate side, [or] clear universal language for companies around responsible water use."

Together with the Dutch government, Ceres has launched the Valuing Water Finance Taskforce to draw attention to the scale and urgency of the challenge and to bring others to the effort. Fifteen founding members range from Nordic banking group SEB to superannuation and pension fund AustralianSuper, as well as a strong US presence including state comptrollers from California, New York and Illinois.

Kelly Christodoulou, listed ESG and stewardship manager for AustralianSuper, says: "Investors need a framework and to come together on this issue. This initiative will provide the assessment framework and tools for us to adequately assess water risks." She said that AustralianSuper, which invests over A\$180bn (£99bn) globally, recently had its equities portfolio assessed for physical risks. In addition to the on-going water stress in Australia, it identified flooding from typhoons in Asia as having an impact on the supply chains of Australian companies.

The other side of the coin is for investors to have a positive influence on water resources and biodiversity. While Actiam's impact investing arm is using microfinance loans to support specific local projects, it's also looking into restoration finance. "There's plenty of projects out there ... but often they're projects with a relatively low-ticket size. And then it's challenging to channel money for that from our typical institutional clients," says Grosscurt. However, she adds, "we strongly believe that by

bundling various of these projects we can turn them into an investable product."

Krchnak agrees that scale is an issue. "When we look at water, so many challenges are really around governance and policies. So you can have a great project, but if you don't have the policies in place that enable its scaling or replication, then you're stuck."

One success is a pioneering drip-irrigation scheme for sugarcane farmers in Karnataka in south-west India, which began with 24,000 hectares. It is being scaled up to create an entire and sustainable supply chain from technology to market, across several hundred thousand acres and supported by a new financing model.

For Krchnak such advances give cause for optimism. "What we've been able to create are not just talk shops. They're really delivering results. So I think we can turn things around. Will it happen in the next year or two years? I think probably not. But honestly, from the dedication I see from our partners, and governments, private sector, civil society all speaking together and working together, that really does make me hopeful." ●

**Pollution is threatening the freshwater ecosystems crucial for biodiversity.**



**Angeli Mehta** is a former BBC current affairs producer, with a research PhD. She now writes about science, and has a particular interest in the environment and sustainability. [@AngeliMehta](#).





# MOMENTUM

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A woman from the Pataxo Ha-ha-hae tribe looks at fish killed by pollution after the Brumadinho tailings dam collapse in Brazil.

ADRIANO MACHADO/REUTERS

VIEW ONLINE

# Mining firms 'failing to get to grips with worsening water security crisis'

The mining sector provides the raw materials needed to mitigate climate change, yet its rapid expansion is exacerbating water scarcity and pollution.

**Catherine Early** reports

**M**ining is crucial to the global low-carbon transition. To achieve a future where temperature rise is kept below 2C, more than 3 billion tonnes of minerals and metals will be needed to deploy wind, solar and geothermal power, and energy storage. The production of minerals, such as graphite, lithium and cobalt, could increase by nearly 500% by 2050 to meet these needs, according to [a World Bank report in May](#).

But mining is also on the front line of water security risk. The sector is a major user of water, which is needed to get the raw material from the ground, to extract the desired element from the raw material, and in transport and storage of excess slurry.

Many countries where mining is located are exposed to decreasing water availability, including >



Peru, Chile, Australia, South Africa and Mongolia, [a 2019 report by Moody's](#) pointed out. In the next 20 years, all of these countries are predicted by the World Resources Institute to become more water stressed, making mining more difficult and costly, it says.

The industry is increasingly turning to desalination to secure supply. For example, BHP now secures more than 40% of its water from desalinated seawater, Moody's says. But desalination is expensive, energy-intensive and might not be practical, depending on the location of the mine, it points out.

The mining sector is also exposed to risk from water pollution since it produces significant volumes of water, either through "dewatering" mines to access minerals below the water table, or as a by-product of extraction or processing. This water can be highly acidic and contains toxic amounts of metals or other pollutants. The sector's potential to pollute both ground and surface water is high, according to [CDP's analysis of the sector last year](#).

Given that mining operations are tied to locations where the resources exist, companies do not have the option to transfer operations to less risky environments. CDP notes that they must adapt

their practices with the environmental constraints and needs of the communities around them or risk losing their licence to operate.

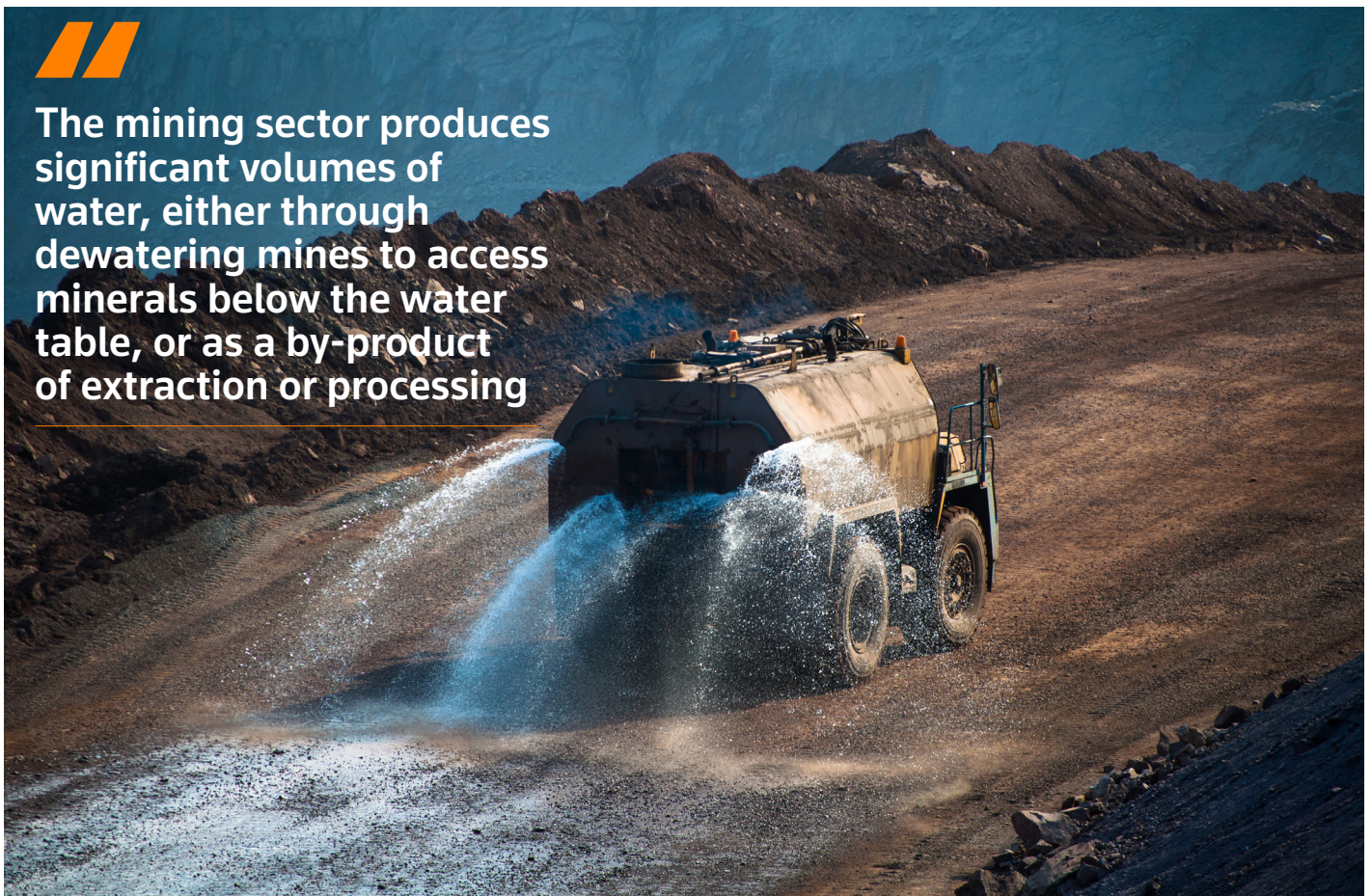
The majority (91%) of respondents from the mining sector reported exposure to water-related risks, with an estimated financial impact totalling \$24.9bn. Not only that, but respondents expected nearly two-thirds (61%) of these risks to materialise over the next three years. Just under half of respondents (44%) had already suffered water-related financial losses amounting to \$11.8bn in the previous five years, compared with an average across all sectors of 27%.

In spite of this awareness, CDP has found that the number of mining companies disclosing this risk has stagnated, with just 21 more companies releasing data to CDP than five years earlier. More than half of those CDP contacted chose not to disclose in 2018, including major companies BHP, Imerys and Rio Tinto.

Some companies reported water-related data in their corporate sustainability reports, using guidelines issued by industry body the International Council on Mining and Metals (ICMM), but this data is rarely comparable, complete or consistent, says Cate Lamb, global director of water security at CDP. ➤



**The mining sector produces significant volumes of water, either through dewatering mines to access minerals below the water table, or as a by-product of extraction or processing**



YEVHEN 1/SHUTTERSTOCK





SUPITCHA MCADAM/SHUTTERSTOCK

“There’s a risk ... that the information disclosed is far from the complete story. Water issues can be very complicated and present a very severe risk for this sector. Comprehensive data of the type collected by CDP is therefore necessary for stakeholders, including institutional investors, to make informed decisions,” she said.

#### REGULATORY RISK

Another risk to mining companies is a trend for governments to step up implementation of regulations against irresponsible behaviour, Lamb says. The Chilean government in 2018 ordered Canadian mining company Barrick Gold Corp to close down its Pascua-Lama gold and silver mining project. The \$8.5bn project had been on hold since 2013 due to community concerns about groundwater pollution and other environmental and social issues.

“This is one of the clearest examples yet where a country has prioritised people and freshwater resources and the long-term sustainability of its natural environment and resources above its desire or need for economic return. The mine is now a stranded asset,” Lamb says.

CDP assessed the sector’s awareness of the risks associated with tailings dams for the first time. “Tailings” are the residue from mining processing,

comprising a mixture of finely ground rock and fluid effluents, as well as often toxic chemical reagents used to extract commodities, in a reservoir held behind a dam. They can be huge, spanning several square kilometres.

**Yellow, toxic wastewater from a mine in Colorado, USA.**



## Despite the tailing dam disasters in Brazil in 2015 and 2018, just 26% of mining companies reported to CDP that tailing dam risk has high-level oversight

The environmental and social risks of these dams have been brought dramatically to the fore in recent years, particularly in Brazil. In November 2015, a tailings dam collapse at Mariana in eastern Brazil killed 19 people when 60 million cubic metres of iron waste spilled into the environment, displacing numerous communities and devastating the river environment. Just three years later, another collapse at the Brumadinho mine took the lives of 270 people. ➤



CDP data from 2018 reveals that the issue did not have senior-level oversight in the sector, with just 26% of mining companies reporting risk management procedures for tailings dams that required sign-off by the highest-ranking senior executives in a company.

However, the Brumadinho disaster catalysed action from the investor community. Vale, the Brazilian mining company that owned the Brumadinho mine and had a 50:50 stake in the operations at Mariana, was removed from [the investor-led Corporate Human Rights Benchmark](#) within a week of the disaster.

Less than two months later, the ICMM came together with the United Nations Environment Programme (UNEP) and investor members of the Principles for Responsible Investment (PRI) to develop a global standard for the management of tailings dams to prevent future tragedies, following calls for intervention from the Church of England Pensions Board, institutional investors from Sweden and several other countries with assets of more than \$1.3tn.



## ICMM is requiring all new members to implement a voluntary global standard for the management of tailings dams, developed in the wake of the Brumadinho tragedy

The standard was launched in August 2020, and can be applied to existing and future tailings facilities, irrespective of location and ownership. It covers site selection, design and construction, management and monitoring, closure and post-closure, as well as emergency procedures should a dam collapse.

The ICMM is requiring all members to implement the standard, which will include site-level validation and third-party assessments. All facilities rated as high risk need to conform within three years, and all other facilities within five years.

"The transparency associated with our disclosure requirements will make it clear if companies are not in conformance and what they intend to do to address this," Aidan Davy, chief operating officer of ICMM, said in an email.

The ICMM counts around one-third of the world's mining companies among its membership, but is promoting the standard to non-member companies. It is in the process of developing a ➤



ELISEO FERNANDEZ/REUTERS

Opposition to The Barrick Gold Corp's Pascua-Lama mine in Chile led to its closure in 2013, ruled permanent in September this year.

### MINING IN NUMBERS

- To keep temperature rises to **2C**, more than 3bn tonnes of minerals and metals will be needed to deploy wind, solar, geothermal power, and energy storage. The production of minerals, such as graphite, lithium and cobalt, could increase by nearly **500% by 2050**
- Mining locations including Peru, Chile, Australia, South Africa and Mongolia will become more water-stressed in the next **20 years**
- BHP gets more than **40% of its water** use from desalination
- **91%** of mining sector respondents to CDP report exposure to water-related risk
- But participation has stagnated, with just **21 more companies** releasing data to CDP in 2018 than five years earlier
- The Chilean government ordered Barrick Gold to close its **\$8.5bn** Pascua-Lama project in 2018, after it was put on hold in 2013 due to community concerns about pollution
- The tailings dam collapse at Mariana in Brazil in 2015 killed 19 people. Three years later another collapse at the Brumadinho mine killed **270 people**
- Just **26%** of mining companies reporting to CDP in 2018 said they had risk management procedures for tailings dams that required sign-off by the highest-ranking senior executives





ADRIANO MACHADO/REUTERS

good practice guide to tailings management that will be available on its website for anyone to use, alongside a protocol to support companies with either self-assessments or third-party assessments of implementation, according to Davy.



## With Mariana, investors engaged with individual companies, this time it's the whole sector. Investors are very much at the table driving this issue

The Church of England Pensions Board is adding pressure by writing to all mining companies with tailings facilities asking them to confirm support for the standard, according to Adam Matthews, director of ethics and engagement. He believes that the standard is a "significant step" towards addressing the threat of tailings dams, though several other interventions would also be needed.

UNEP and the PRI are taking forward work on an independent institute to audit and certify facilities against the standard, using independent assessors. Other oversight needs include round-the-clock independent monitoring capacity, which Matthews says can be achieved using a combination of satellites and on-the-ground sensors.

**A rescue team searches for victims following the collapse of the Vale SA-owned Brumadinho tailings dam in 2018.**

The most dangerous dams should be removed, particularly ones that have effectively become "lost", Matthews says. These are dams that have moved ownership several times, and become overgrown and merged into the landscape, so that local communities might not even be aware of their existence. These can also be found using satellites, Matthews says.

Though there is much work to be done, Matthews believes that the tide has turned on the issue of tailings dams. The response to the Brumadinho disaster was completely different to that taken after Mariana, he says. "With Mariana, investors engaged with individual companies, this time it's the whole sector. Investors are very much at the table driving this issue, there's a link-up with banks and insurers, it's a completely different dynamic," he says.

Lamb concurs: "I think the days of lax corporate governance of tailings dams issues is over, certainly for the large publicly listed companies. Investor interest in this issue is so high now, companies have very few places where they can hide, and I think we'll see a change in the disclosure on governance of these issues this year." ●



**Catherine Early** is a freelance journalist specialising in the environment and sustainability. She writes for Business Green, China Dialogue and the ENDS Report among others. She was a finalist in the Guardian's International Development Journalism competition.





MIKE HUTCHINGS/REUTERS

Anglo American CEO Mark Cutifani speaking at the 2020 Investing in African Mining Indaba conference.

# Anglo-American aims to go waterless

**A**nglo American, which scored A- in CDP for water risk, has around 75% of its global operations in water-stressed areas. As part of its sustainable mining plan, the company has a target to reduce the abstraction of freshwater by 50% by 2030 and a vision of operating “waterless” mines, though there is no target date for that.

There are several elements to its strategy. Most mines recycle some water to reduce the draw on new resources, but Anglo American wants to fully close the loop on its system. It is innovating with new technologies to reduce evaporation, enable dry processing and dry separation.

Evaporation losses from the company’s dams account for 10-25% of total water lost at a mine, costing it approximately \$200m annually to replace. In South Africa it is trialling technologies that produce much more accurate data on evaporation, twinned with fibre optics to measure water flows, which enable it to target efficiency efforts in the most impactful areas.

Water disposed of in typical tailings dams

often represents the largest water loss at a mine, so Anglo American is also innovating to create dry tailings. Coarse-particle flotation concentrates the mineral, after which water is removed from residual waste. It is also exploring innovative methods for dry separation of ore, with early estimates showing the potential for a 30-40% reduction in water used per unit of mineral production.

More importantly, it is working to help to help boost water catchments and preserve access rights and water quality for the communities living near its operations. In South Africa, it says it is exploring the feasibility of using excess mine-water discharge and water stored on operational mines as a water source for the Limpopo province. In Peru, it is constructing a dam to create a water-supply reservoir to serve the Quellaveco mining project, the local community and agricultural industry in the future.

“In water-stressed areas the priorities for water are people first and agriculture second; if we truly want to become partners in society then we need to find ways of removing our water needs from the equation,” a spokeswoman for Anglo American says. ●

Catherine Early



# SCORCHED EARTH STRATEGIES

**Mark Hillsdon** reports on how Cargill, Unilever and Diageo are cutting the water footprint of agriculture

[VIEW ONLINE](#)







**W**ith 70% of freshwater used each year around the world going to agriculture, what are some of the world's leading food and drink and agricultural commodity companies doing to reduce their water footprint?

Every year, CDP reports on what companies are doing to address water risk as part of its supply chain programme. Ahead of the full data release, The Ethical Corporation has learnt that the number of companies reporting on water through the programme rose again this year, with 2,934 businesses disclosing, among them 414 food, beverage and agricultural companies, up from 390 last year.

Cate Lamb, CDP's director of water security is encouraged by the increase in numbers, but with water withdrawals continuing to increase every year, and just 12% of the world's largest food companies having targets to tackle water pollution, she says companies are far from plugging the water gap. "While we have seen an increasing number of companies in the sector disclosing, and some leaders moving to set ambitious goals, this is far

from the norm. Agricultural production is up there with mining as one of the greatest sources of freshwater pollution."

Here we look at three companies in the agriculture, food, and beverage value chains, respectively, that are leading the way.

#### **CARGILL**

US-based Cargill, one of the world's biggest agricultural companies, is not one of the usual suspects when it comes to sustainability initiatives. But it recently announced a new set of targets around water, including an eye-catching commitment to restore 600 billion litres of water in priority watersheds by 2030.

Developed with the World Resources Institute (WRI), the targets also commit Cargill to reduce 5,500 tons of water pollutants in its priority watersheds, while further improving access to safe drinking water in 25 of them. It is also set to implement water stewardship programmes, aligned to the AWS International Water Stewardship Standards (AWS Standard), at 81 priority facilities.

In the past, Cargill has focused on its direct operations, but its new approach to water management looks outside the factory, mixing strong science-based targets with a local ➤

**Cargill's supply chain is very much US based operating from rich agricultural areas such as Nebraska.**



perspective, all backed by a commitment to regenerative agriculture.

At the targets' launch, the WRI's senior manager for water quality and agriculture, Sara Walker, said: "While for years companies have set targets that try to address global water issues, the local nature of shared water challenges has meant targets aren't necessarily meaningful in the areas in which companies operate or from where they source ... [Cargill] sets targets specific to the catchment context and severity of local water challenges."

"It makes a lot more sense focusing on that local context rather than taking a random global water efficiency approach, or global replenish approach," says Truke Smoor, director of water at Cargill. "Every watershed has its unique challenges."

In terms of internal water efficiency, the company sets the bar high, with a basic foundation level of water management at all its facilities. "We have to keep our own house in order," says Smoor, but by knowing that systems are in place to achieve high levels of efficiency, she continues, the company



## More than half the water used in US beef production goes on irrigating crops for cattle feed, something that Cargill realised it could influence

can concentrate on driving change through water stewardship programmes along its supply chain "where it matters most".

Although Cargill's supply chain stretches across some 25,000 companies, it is still very much US based. Many businesses operate from the wide-open spaces of Nebraska, which has some of the most productive agricultural land in the US, and the second-largest cattle population. More than half the water used in US beef production goes on irrigating crops for cattle feed, something that Cargill realised it could influence. Working in partnership with The Nature Conservancy and Nestlé, smart weather sensors have been introduced onto farms, allowing farmers to make

**Smart weather sensors have been introduced onto Cargill's supply chain farms to help farmers decide on irrigation levels.**

better-informed decisions about irrigation. When the project ends next year it is expected to have saved 2.4 billion litres of water.

Cargill is also part of the Midwest Row Crop Collaborative, which extends across farmland in Illinois, Iowa and Nebraska. Here, Cargill is working with other companies to accelerate farmer-led programmes in water conservation across 75% of this cultivated land, and help to prevent nutrient run off into rivers flowing into the Mississippi Basin. Another project is focused on grassland restoration in the Great Plains, which encourages different grazing methods to help create healthier soils and recharge aquifers.

All these projects should act as a connecting point, says Smoor. On the one hand they create incentives that improve the resilience and profitability for farmers, and on the other they address environmental issues that are important to consumers.

Cargill is also working with the WRI to develop a new Water Management Toolkit, which will be made available to other businesses to help set water targets based on their specific operations and agricultural supply chain. Smoor sees the kit as a way of encouraging companies to address shared water challenges and work together to promote sustainable water use, especially at the local level. ➤



SCHARFSINN/SHUTTERSTOCK



## UNILEVER

In June, the Anglo-Dutch consumer brands behemoth announced new commitments to tackle its water footprint and regenerate nature as part of its new Compass sustainability strategy.

Unilever has a large water footprint from its range of cleaning and beauty products, as well as its drinks and food.



### Unilever's Sustainable Agriculture Code has a big focus on farmers shifting to drip irrigation, which cuts water use as much as 50%, and can cut use of fungicide as well

In the last couple of years, it has innovated to introduce water-saving products after realising it would fail to reach a goal in its 2010 Sustainable Living Plan to halve the water use associated with consumer use of its products by 2020. Rather than fall, water use by customers had actually increased by 1% up to 2019.

But Unilever has done much better when it comes to reducing water use in agriculture, which accounts

for 15% of its water footprint. Close to 100% of its vegetable suppliers are in compliance with its Sustainable Agriculture Code.

In the code there is a big focus on shifting to drip irrigation, which cuts water use by as much as 50% compared to overhead or furrow irrigation, and can cut the use of fungicide as well, by up to 50% in humid regions.

Suppliers must engage with farmers to ensure they frequently check the impacts of irrigation systems on biodiversity and local communities, and ensure drinking water and water distribution isn't compromised, with systems monitored to avoid crop or soil damage.

It renewed the code in 2018 to provide clear guidance on all aspects of climate-smart agriculture, and in June introduced a new Regenerative Agriculture Code for all its suppliers, with an overall aim of regenerating the land in order to make it more productive, biodiverse and better at storing carbon. The company said it would build on the work done through the Sustainable Agriculture Code, and "move towards applying principles that take a regenerative approach, and which can be more broadly applied to all our suppliers and farmers".

As with the Sustainable Agriculture Code, Unilever is making the new code available to any organisation that might find it useful, with the goal of driving change through the industry.

Another target is to draw on funding from the €1bn Climate and Nature fund to set up water >



FLOKI/SHUTTERSTOCK



stewardship programmes for local communities in 100 locations by 2030, guided by its membership of the Alliance for Water Stewardship (AWS), and taking lessons from Unilever's Prabhat initiative in India.



## In the end, they are the stewards of the land. We must work with a new generation of farmers and smallholders in order to make a step change in regenerating nature

This takes a community-led approach, supporting farmers and improving access to water through building dams to recharge groundwater levels and store monsoon rains, rehabilitating ponds, and reducing water demand through better farmer education. Unilever estimates that the work in Prabhat has conserved more than 49 billion litres of water and resulted in 2,000 tonnes of additional agricultural yields benefiting 15,000 farmers.

"In most parts of the world, the economic and social inclusion of farmers and smallholders in sustainable agricultural production is the single most important driver of change for halting deforestation, restoring forests and helping regenerate nature," says Marc Engel, Unilever's chief procurement officer. "In the end, they are the stewards of the land. We must, therefore, empower and work with a new generation of farmers and smallholders in order to make a step change in regenerating nature."

### DIAGEO

Anyone working in one of Diageo's maltings – where cereals are soaked in water and converted into malt – along Scotland's notoriously wet north-east coast would be hard-pressed to see water management as an important issue for the business, admits Michael Alexander, the company's global head of water, environment and agriculture sustainability. But elsewhere in the company's global supply chain, water is a far more precious resource.

Later in November, the company, whose brands include Johnnie Walker, Smirnoff and Guinness, will announce a new set of water targets up to 2030 that Alexander says will be a refresh of the strategy it has followed for the last five years.

"The simplicity of the strategy has been really >

**Tea-pickers in Assam in India.**



RON RAMTANG / SHUTTERSTOCK





important," he explains. If it's not intuitive, and easy to report against, he says, "then we're not going to make the difference that we want to make."

Highlights from its 2015-2020 strategy include successfully replenishing 100% of the water used in its final products in water-stressed areas, and a 46% improvement in water efficiency across the company, against a goal of 50%. Alexander says the target was narrowly missed due to Covid-related delays to water recycling projects in Africa.

However, other projects were completed as part of Diageo's £180m investment into both carbon and water efficiency at its African breweries. These included new water recovery, purification and reuse facilities at five sites, including the Port Bell brewery in Uganda. Here, the changes have led to a drop in the amount of water used to make a litre of beer from 4.9 litres in 2018 to just 2.4 litres.

Water efficiency involves continuous improvement, and chipping away to make small gains, says Alexander. And while its own operations will always be important, he believes the company can now have an even greater impact outside its four walls.

Here, projects have included reforestation programmes to stop run-off, soil erosion and flooding in the watersheds where the crops to make its products are grown. The company has also invested in desilting dams to improve water storage for farmers, and introducing ideas such as rainwater harvesting. This year more than 250,000 people also benefited from Diageo's partnership with Water

Aid to support WASH programmes, focusing on clean water, sanitation and hygiene.

In 2019, Diageo was appointed a UN Global Goals Business Avenger, championing SDG 6. Alexander believes partnership must play a bigger role in meeting the SDGs.

For instance, outside of water Diageo has teamed up with PepsiCo and Unilever to develop an innovative paper bottle. On its own Diageo wouldn't have been able to take the idea forward, but the partnership brought unit costs down and made the project viable, says Alexander.

At Diageo, 126 companies accounting for 88% of its supply chain responded to CDP's request for data about their water management, which Diageo uses as a way of exploring possible areas for collaboration.

Diageo remains open to learning too. "Some of our suppliers are bigger than us, such as Cargill who are doing fantastic things around water," he adds. "We can learn from our suppliers; we don't have all the answers." ●

**Diageo's water risk exposure varies from Scottish distilleries to African breweries.**



**Mark Hillsdon** is a Manchester-based freelance writer who writes on business and sustainability for The Ethical Corporation, The Guardian, and a range of nature-based titles including CountryFile and BBC Wildlife.





PETER BOCKLANDT/SHUTTERSTOCK

# Working to protect Earth's most precious raw material

**Angeli Mehta** reports on how L'Oréal, Microsoft, BASF and Procter & Gamble are cutting water use in their own operations – and beyond

[VIEW ONLINE](#)

**I**ndustry accounts for almost 20% of global water withdrawals and consumption is growing steeply.

An analysis published by CDP last year revealed that the number of companies reporting higher water withdrawals increased by almost 50% between 2015 and 2018, despite the fact that there had been a near-doubling in the numbers setting targets to reduce water withdrawals.

"Corporate action is not reaching the pace and scale needed to truly address water insecurity," CDP's CEO Paul Simpson warned in his forward to the Treading Water report. "Our analysis shows that even as companies report greater risks year on year, freshwater withdrawals are increasing as they expand their production."

## L'ORÉAL

One company bucking this trend is L'Oréal. The world's largest cosmetics group has managed to cut its water consumption by a third over the past decade, despite increasing production.

In an interview, L'Oréal's environment director Jean-Michel Pille summed up the imperative: ➤





L'OREAL

"We are totally linked with water. We are linked upstream when we source our raw material, our packaging material; we are linked with water when we produce and manufacture our product. Water is the first raw material for all our products worldwide.

L'Oreal's first Waterloop factory in Burgos, Spain.

## // L'Oréal's Waterloop technology ensures the only water withdrawn by its factories is for raw material in its products and for human consumption

"And when you think about the consumer, our products are certainly linked with the availability of water. No water – no shampooing or showering. So our ability to operate effectively and meet all the needs of our consumers depends on sustainable water access, management and conservation."

The turning point came when the company introduced an internal waterscan tool 10 years ago, allowing it to monitor how much water is used in different processes.



MONTICELLO/SHUTTERSTOCK

The company homed in on wastewater as a route to minimise consumption, with its best-performing factories setting the standard for the others.

The company decided to push harder and see if it could recycle its wastewater to use in operations like cleaning tanks and producing steam. The answer lay in adopting technologies used to produce clean water for cities, and getting them to work on a far smaller scale.

The concept, called Waterloop, has been tested and installed in four factories in Europe and Russia, ➤



making four different products. The definition of Waterloop is that the only withdrawals of water are for human consumption and as a raw material in L'Oréal products.

The ambition is to have all 39 factories using the technology by 2030. Its priorities will be plants in high-stress watersheds: in Egypt, India, Israel and South Africa.



## Microsoft aims to be net positive for water in 2030, putting more back into stressed basins than its global water consumption

A fifth factory in Mexico City will be Waterloop by the end of the year. Here, says Pille, L'Oréal will also upgrade its internal water management processes in recognition of the dire state of the city's natural reserves. A framework for water stewardship also sees it working with the city's government and other water users.

The French cosmetics company is also working with suppliers to encourage them to disclose their environmental impacts to CDP. The next step is to "ensure that they are able to monitor the water they use, the wastewater they discharge – everything we do for our own facilities," says Pille. "And if there

are opportunities in the same watershed, we will be able to co-build solutions – something we have already done with energy."

L'Oréal is also willing to share its technology with its competitors, and has already talked to Procter & Gamble and Unilever.

### MICROSOFT

Another A lister in cutting its operational water use is Microsoft, which in September went a step further by making a commitment to replenish more water than it uses by 2030. Specifically, it says it will put back more water in stressed basins than its global consumption across all basins. This means focusing its efforts on 40 highly stressed basins where it operates. The company plans to invest in wetland restoration and removal of impermeable surfaces like asphalt.

In a recent blog, Brian Janous, general manager for energy and sustainability, explained that for more than six months of the year, its Arizona data centres will use no water for cooling. Instead, it will use outside air (instead of water) for cooling when temperatures are below 85 degrees F (29 C) – so-called adiabatic cooling.

At higher temperatures, it will use evaporative cooling, which requires 90% less water than conventional systems such as cooling towers. More savings – expected to reach 350 million litres a year – will come from investment in solar energy as part of the company's greenhouse gas emissions reduction target.

Separately, Microsoft will harness the power >

**A Microsoft data centre in Wyoming – the tech firm is innovating to use alternative sources to water for cooling.**

MICROSOFT







UWE ARANAS/SHUTTERSTOCK

of data and AI to enable other companies and governments to monitor water consumption and availability, and to predict threats to supply.

#### BASF

Although Europe doesn't experience the same level of water stress as parts of the US, no geography is immune, as European manufacturing companies discovered when prolonged drought a couple of years ago put the brakes on shipping on one of the continent's most important navigation routes, the river Rhine.



## Procter & Gamble is spearheading the 50L Home Coalition, where it is working with partners to develop solutions to the urban water crisis

In addition to the ecological damage, the German economy took a hit, with companies having to reroute materials or unable to draw all the water they needed for cooling. Steelmaker ThyssenKrupp and chemicals groups Evonik Industries and BASF were all forced to scale back their output.

In its 2019 management report, BASF said it could "no longer rule out the effects of extreme low-water situations caused by climate change" at its major integrated manufacturing site at Ludwigshafen.

**In recent years, drought has affected navigation of the Rhine.**

The company, one of 31 companies on CDP's A list for water risk, installed an early warning system for low water levels and chartered more ships that can cope with shallower waters; as well as installing more capacity to recycle cooling water several times before discharging it back into the Rhine.

BASF, which has a 2030 target of introducing sustainable water management at all production sites in water-stressed areas and its most resource-efficient Verbund sites, last year also brought in new rules for its global operations, expanding its definition of "water-stress" to areas in which more than 40% of available water is used by industry, household and agriculture, compared with the previous definition of more than 60% of available water.

#### PROCTER & GAMBLE

Water plays a significant part in Procter & Gamble's Ambition 2030 sustainability plan, with targets to deliver a 35% reduction in water consumption per unit of production (compared with 2010) and to source at least five billion litres of water – almost 8% of its consumption – from circular sources by 2030.

But by far the biggest contribution to water consumption is the use of its products in the home.

As part of its efforts to address its total water footprint, the company is spearheading a new initiative, the [50L Home Coalition](#), where it is working with Electrolux, Kohler, Engie, Suez and Arcadis, the World Bank Group, WBCSD, and the World Economic Forum to develop solutions to the urban water crisis.

The coalition aims to bring together companies, ➤





MIKE HUTCHINGS/REUTERS



CHAYATORN LAORATTANAVECH/  
SHUTTERSTOCK

policymakers and communities to develop and scale innovations across the entire domestic water value chain and prove that it is possible to create homes where people can live comfortably using 50L of water a day. That's the amount that Cape Town's residents were restricted to in 2018 when the city faced having the taps run dry, and is the [minimum amount of water](#) the World Health Organization (WHO) says is necessary to ensure that a person's most basic needs are met.

Homes in Europe get through up to 300 litres a day, whilst in the US daily water consumption can be as high as 500 litres.

In an interview, Frantz Beznik, head of sustainable innovation at P&G, said an ambitious goal such as 50 litres is needed "to create a mindset for very radical innovation".

One of the first tasks, working with Kohler and Electrolux, is to set a budget for each point of water use in the home – from the kitchen tap to the shower.

Water reuse is another big focus for innovation. Instead of sending wastewater from showers and washing machines to municipal treatment plants, Beznik anticipates that systems engineering and clever chemistry will enable some reuse of water, for example in toilets, with digital systems managing the processes and making water consumption visible to residents.

**The pressure is on to develop solutions to urban water crises such as Cape Town faced in 2018.**

"The [area] that is actually taking most of our brain time is the reuse space – how we actually make water re-usable from one spot to the other and really starting from some pretty interesting questions [like] why we use potable water in toilets," Beznik says.

Innovation groups within P&G, which are working to cut the company's water consumption, will explore how any advances could be replicated in the 50l home.

Outside the home, the coalition is thinking about how water treatment could be decentralised, so saving energy and creating more resilient systems.

Tackling water consumption will make a big dent in greenhouse gas emissions, since heating water for use and to warm our homes contributes to the bulk of domestic carbon emissions, Beznik points out. "The 50-litre home would really be the enabler to get to zero carbon. It will give people the ammunition to act on climate change."

The coalition wants to team up with cities to pilot innovations. It's in discussions in both China and the US, but is also eyeing India, where one of its partners, the [2030 Water Resources Group](#), has well-developed multi-stakeholder collaborations. ●

**Angeli Mehta**





AFZAL KHAN MAHEEN/SHUTTERSTOCK

VIEW ONLINE

# Can innovation quench the Gulf's unslakable thirst for water?

With two thirds of needs in the region being met by environmentally destructive desalination, there is a slow but steady shift to more sustainable alternatives and lower consumption. **Nadine Hawa** reports

**T**he Gulf is a hot and arid region where water has always been in short supply. The region is home to 6% of the world population, but contains less than 1.5% of its renewable freshwater resources.

In recent years, however, rapid population and economic growth, shared water sources, and the effects of climate change – including frequent droughts, declining rainfalls and high evaporation rates – have turned water security into an increasingly urgent challenge.

According to the [World Bank](#), the region faces estimated losses of up to 14% of GDP by 2050 from climate-related water scarcity, the greatest economic hit in the world. And with water being withdrawn faster than it can be replenished, the importance for companies to work towards being water positive is not just a precursor to economic success, but to their very survival.

Agriculture is by far the biggest water consumer. It claims up to 75% of water usage, as traditional irrigation methods soak up hundreds of millions of litres each day. Changes to the ways this industry uses the commodity have great potential to tackle waste and free up large quantities of water.

Gulf conglomerates with a hand in agriculture >





SAINUDEEN ALANTHI/SHUTTERSTOCK

are putting water conservation at the top of their environmental agendas. These efforts tend to begin by setting water management targets, followed by adopting sustainable water usage methods, and implementing water efficiency devices.



## **Qatar's NAAAS signed an agreement with China's Ningxia University to bring in new digital irrigation technology that has been proven to save over 22% of water and 26% of energy**

In 2019 Almarai, a Saudi multinational specialising in food and beverage manufacturing, formed a water steering committee to set water-management goals and boost water efficiency across operations. The installation of water-saving devices that optimise cleaning processes and a new water reuse system for dairy and juice operations, are estimated to reduce groundwater consumption by 14% over the next five years.

For its dairy farming, Almarai's approach is

**Agriculture and farming in the Gulf takes up to 75% of water use.**

focused on maximising milk yield per cow (a happy cow produces more milk). This approach reduces the number of cattle required to meet demand. Focusing on yield reduces the total water requirements for animal drinking water and for growing animal feed for cattle.

In Qatar in August, Qatari holding company NAAAS signed an agreement with China's Ningxia University to bring digital water-saving irrigation technology to the country. The new system, which includes wind-solar powered water extraction technologies and a control software system operated on smartphones, aims to save water in uncultivated areas and remedy "blind" irrigation, which can result in overwatering and wasteful runoff. Where used, the system has been proven to save over 22% of water and 26% of energy while irrigating industrial crops.

In neighbouring UAE, which has one of the highest per capita water consumption rates in the world (550 liters per day), the Majid Al-Futtaim Group, an Emirati holding company based in Dubai, that owns and operates shopping malls, retail, and leisure establishments, is taking matters a step further. It is the first company in the Middle East to commit to becoming net positive for both carbon and water by 2040.

"In practice, this means that by 2040, our group will be producing more clean water than >





Several instore hydroponics farms have been introduced into UAE supermarkets.

it uses," says Ibrahim Al-Zu'bi, chief sustainability officer at Majid Al-Futtaim, which was recently awarded the prestigious Green Globe certification throughout its entire hotel portfolio across the Middle East.



**We realised that the biggest part of our water impact lies in our ... agricultural supply chain. Obtaining this data has helped us prioritise our actions**

"Since 2010, we have been working on reducing the water impact of our operations through water-efficient landscaping, water-saving fixtures, and reusing grey water. By investing in water-efficient technologies, we have noticed significant reductions in our water consumption."

Here, moving beyond one's own operations is key. "We realised that the biggest part of our water impact lies in our upstream value chain, especially



Ibrahim Al-Zu'bi is head of sustainability at Majid Al-Futtaim Group.

TWITTER

in the agricultural supply chain. Obtaining this data has helped us prioritise our actions and focus our approach on what we can most directly impact: our operational footprint," he explains.

One breakthrough came in the form of hydroponic farming, a process that uses 90% less water than traditional soil agriculture. Majid Al Futtaim Group has introduced several in-store hydroponic farms in UAE supermarkets through its Carrefour business. These grow more than 35 unique leafy green herbs and vegetables, which are sold to customers as "zero km" products.

The adoption of innovative water solutions is undoubtedly paving the way to water efficiency for Gulf companies. But we cannot speak of a sustainable water transition in the region without addressing desalination, the backbone of business activity in the Gulf.

#### TOWARDS SUSTAINABLE DESALINATION?

With 96.5% of water on the planet undrinkable because it lies in highly saline seas and oceans, there are more than 17,000 desalination plants in the world in some 150 countries. Nearly half ➤





A desalination plant on the shores of the Arabian Gulf.

STANISLAV 71 / SHUTTERSTOCK

## WHAT IS..... DESALINATION

- There are more than 17,000 desalination plants in the world, nearly half located in the region covered by the Cooperation Council for the Arab States of the Gulf, where they meet more than 90% of inhabitants' daily water requirements.
- Desalination is energy-intensive, using fossil fuels to generate heat to evaporate and condense water to a purified form.
- Its by-product is a hyper-saline brine, which is harmful to marine life once released back into the sea. The brine also reduces efficiency of desalination equipment.
- A third of desalination plants in the region use reverse osmosis, where seawater is forced through semi-permeable membranes to remove salt. This process uses 3.5 times less energy than thermal desalination.
- The first large-scale solar-powered desalination plant in the region is set to come online next year. By 2040, 41% of seawater desalination in the region is expected to come from solar.
- Abu Dhabi is teaming up with Spanish company Abengoa to build the world's largest solar-powered reverse osmosis desalination plant, which will aim to provide fresh water to 4.5 million people.
- In Saudi Arabia, the Saline Water Conversion Corporation has signed a memorandum of understanding with Japan's Toyobo to test technology that efficiently reuses concentrated brine.

of them are located in the region covered by the Cooperation Council for the Arab States of the Gulf, where they meet more than 90% of inhabitants' daily water requirements.

Though vital for the region, desalination has a mixed reputation, particularly among conservationists.

An energy-intensive process, desalination uses fossil fuels to generate heat to evaporate and condense water to a purified form. It also creates a by-product, a hyper-saline brine, which is harmful to marine life once released back into the sea. "The regional impact of water discharged from thermal desalination plants has not been studied in depth," says Javier Mateo Sagasta, project leader for ReWaterMENA at the International Water Management Institute. "But countries surrounding the small, enclosed Arabian Gulf are increasingly concerned about the threat to marine life and damage to the fragile marine ecosystem."

A 2018 [UN study](#) says unconventional water resources, such as desalination, are key to support Sustainable Development Goal 6 (to ensure availability and sustainable management of water and sanitation for all) in water-scarce areas, however, it said more sustainable processes, using less electricity and generating less brine, must be sought. ➤



And that transition is under way, albeit slowly, with greater use of **reverse osmosis (RO)**, a process that forces seawater through semi-permeable membranes to remove salt, using 3.5 times less energy than thermal desalination processes, according to Mateo Sagasta.

According to the International Energy Agency (IEA), a third of desalination plants in the region currently rely on membrane processes, while the majority still use fossil-fuel based thermal desalination.

The use of solar energy, in which Gulf countries have a comparative advantage, is also gaining popularity. The first large-scale solar-powered desalination plant in the region is set to come online next year. The IEA estimates that by 2040, over 41% of seawater desalination in the region will come from solar.



## Saudi Arabia will test technology that reuses brine discharged by desalination plants to produce sodium hydroxide, which can be used to pre-treat seawater and make the desalination process more efficient

Last year, the Dubai Electricity and Water Authority (DEWA) announced it had set a target to power 100% of its desalination plants using solar power, and generate 305 million gallons per day by 2030. By using lower cost renewable energy to power the plants, the utility company will save \$13bn over the next decade.

Similarly, Abu Dhabi is teaming up with Spanish company Abengoa to build the world's largest solar-powered reverse osmosis desalination plant, which will aim to provide fresh water to 4.5 million people – or half the population of London.

"The cost of solar photovoltaic technology continues to decline," says Mateo Sagasta. "The same is happening with energy requirements and costs of RO. As of 2019, large RO plants can deliver water consuming an average of 3 kWh/m<sup>3</sup> compared with thermal's 17 kWh/m<sup>3</sup>. This is making solar technology more attractive to replace fossil fuels as an energy source for RO. A trend which is likely to continue."

The overall sustainability of these latest adoptions cannot overlook the environmental burden of



HAMAD I MOHAMMED/REUTERS

**The world's largest desalination plant in Ras al-Khair, Saudi Arabia, uses reverse osmosis technology.**

brine; and Gulf states are beginning to address it. In November 2019, the Saline Water Conversion Corporation, the Saudi state-run company overseeing much of the country's desalination, signed a memorandum of understanding (MoU) with Japan's Toyobo to test technology that efficiently reuses concentrated brine discharged by desalination plants.

By seeing brine not as a waste product but as a resource, one approach uses brine to produce sodium hydroxide, which can be used to pre-treat seawater going into the desalination plant, makes the desalination process itself more efficient.

The continued proactive adoption of innovative solutions and renewables, such as solar and membrane processes, will no doubt support the sustainable transition of the Gulf's water industry... and perhaps give desalination a cleaner name. ●



**Nadine Hawa** is a former CNBC business news presenter and producer. She has also been a sustainability consultant, working on projects with organisations including the UNEP and RSPO. She has been a regular contributor to Ethical Corporation magazine since 2012.



# 'It's time for fashion to turn its focus from the catwalk to water pollution'

**Cate Lamb**, head of water risk at CDP, says with only 10% of fashion firms showing awareness of their environmental impacts, the sector urgently needs a redesign



HENRY NICHOLLS/REUTERS

VIEW ONLINE







WERAYUTH TES/SHUTTERSTOCK

**F**ashion capitals London and New York recently held their biannual fashion week, albeit in a virtual format due to Covid-19. Along with the latest designs and haute couture, the industry's environmental impact is increasingly being scrutinised, with water use and pollution of particular concern.

From agricultural pesticides to toxic dyes and microplastics, the fashion and textiles industry has long been known to be a major polluter of water, using 79 billion cubic metres of water in 2015 alone – the equivalent of 10% of all industrial use. Globally, [the UN estimates](#) that 80-90% of wastewater is returned to the environment untreated.

CDP's new report [Interwoven Risks, Untapped Opportunities](#), revealed that out of a pool of 136 fashion and textile companies, fewer than half (62) provided data to CDP on their water impacts when specifically requested to do so by their customers and investors, and less than a quarter of these are currently setting goals to reduce water pollution.

This low level of transparency and ambition

is concerning, especially since, along with the environmental damage caused, fashion companies face material risks from water pollution – such as regulatory penalties and damaged brand image.

It's alarming that the sector continues to turn a blind eye to such a vital issue. With our research finding that only one in 10 top fashion companies show awareness of water pollution across their whole value chain, including Gap Inc, H&M, Inditex, Burberry and Kering Group, the sector is leaving itself open to worsening water risks from this ['invisible crisis'](#).

Public concern about plastic waste hit an all-time high in 2019. Yet out of the 62 fashion companies that provided us with information, H&M is the only company that mentioned microplastics or microfibres, despite textile production being widely responsible for their release into the environment. In fact, washing just 1 kilogram of synthetic garments can release between 640,000–1,500,000 microfibres, and the washing of synthetic textiles accounts for 35% of all microplastics released globally, causing damage to aquatic ecosystems and even accumulating in human body tissue.

And we now know natural fibres that have been coated in chemicals during textile manufacturing are also a major contributor to microfibre pollution. ➤

**Washing just 1 kilogram of synthetic garments can release up to 1,500,000 microfibres.**





The release of microfibres from textiles is [the biggest contributor](#) to the crisis of plastic pollution choking our oceans, and few companies are taking action on this issue. And with the rapid rise of fast fashion, the problem looks set to continue if companies don't change course.

The fashion industry is known for changing fast, and this needs to happen when it comes to water pollution.

Only a third of the 62 companies that provided us with data (29%) were able to calculate the financial value of business opportunities from reducing water pollution. However, this alone totalled \$184 million per year.



## Our research found that only 10% of fashion companies have identified business opportunities relating to the improved use of recycled materials

This demonstrates that the financial rewards associated with tackling water pollution are underestimated and under-reported – but are there to be seized by forward-thinking companies.

What's more, a [McKinsey survey](#) recently identified that 66% of US consumers now consider sustainability when making a luxury purchase, with younger generations increasingly stating that they are willing to pay more for products that have a

**Adidas's innovations in recycling have enabled it to better face future water-related risks.**

proven minimised environmental impact.

Moving towards a circular economy with eco-design and sustainable sourcing at its heart is the direction of travel, but our research found that only 10% of fashion companies have identified business opportunities relating to the improved use of recycled materials.

But some leading companies are taking action and reaping the rewards. For example, luxury fashion group Burberry has increased its resilience to water-scarcity induced cotton price fluctuations through procurement of recycled cotton.

Meanwhile on the high-street, Gap Inc reports that product teams are selecting materials based on water quality impacts and potential for circularity. Likewise, Adidas's investments in recycled polyester have enabled it to position itself as a leader in innovation, and better face future water-related challenges and risks.

Water security is a business-critical issue for the fashion industry, and companies must recognise its value across their value chains.

Circular thinking needs to be embedded within each company, with a focus not only on reducing water consumption and pollution in manufacturing operations, but also in raw material production and product water use in people's homes.

As the global economy shifts and looks towards a post-Covid world, we have an obligation to build back better. The fashion industry must look to re-design its image and its impact. ●

**Cate Lamb** is Global Director of Water Security at CDP





# Reuters Events: Sustainable Business

## The Time is NOW: Making 2021 the Year of Action

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### THE AMBITION

2020 has been a year that has seen devastating impacts to the health of our society, the business and natural environments. However, through all of this, there became an awakening. Both Business and Society realised, and widely communicated, that 2020 was to be a turning point, and that we had to rebuild a world that was clean and just.

We know what we need to do, we understand why we need to do it. Now the real challenge is **identifying HOW we deliver this transformation of global systems behind a clean, resilient and just ambition.**

Throughout 2021 Reuters Events will run a series of events, workshops, leadership briefings and in-depth magazine features to help provide you and your peers with the answers you need to accelerate your impacts and ambition. We will showcase the companies that are leading the way, we will have deep-dive case studies on how companies are transforming their value chains, we will provide frank and honest discussions on the current shortcomings and challenges and most importantly we will put interactivity at heart of all this – ensuring the connections and challenging discussions are had.





## January – March 2021

### EVENTS

#### › Reuters Events Natural Capital & Biodiversity Week 2021 (March)

- Bringing together the leading organisations, companies and investors that are putting natural capital and biodiversity at the heart of actions and ambitions in 2021

#### › Reuters Events Net Zero Week 2021 (March)

- This event will convene a multitude of stakeholders to share their latest investments, innovations and collaborations on their quest to becoming Net Zero, and to serve as a springboard for action ahead of COP26

### WEBINARS / WORKSHOPS

#### › Leadership Briefings & Invite-Only Workshops (January – March)

- Financing a Resilient Future: Making 2021 the Year for Real Change
- Finance and Net Zero: Moving Capital Markets Behind a Clean Recovery
- Sustainable Sourcing in 2021: Putting Purpose at the Heart of Procurement

### THE ETHICAL CORPORATION MAGAZINE (MARCH)

#### › Decarbonising Food & Land Use

- Delving into the multi-sectoral partnerships and platforms addressing these issues and the implications not only for GHG emissions, but for biodiversity, human rights and other social issues, and governance



## April – June 2021

### EVENTS

#### › Reuters Events Transform USA 2021 (May)

- Transform USA will bring together CEOs, CSOs, CPOs and ESG Investors from USA's leading organisations to share their latest insights, and more importantly, actions as to how they are helping deliver the required transformation of business for a clean, low-carbon and circular future

#### › Reuters Events Global Responsible Business 2021 (June)

- Part of the world's leading event series highlighting the latest trends, investments, innovations and collaborations shaping the future of sustainable business. For over 20 years this has been the go-to event for those driving to deliver a more sustainable, just and clean future for all

### WEBINARS / WORKSHOPS

#### › Leadership Briefings & Invite-Only Workshops (April – June)

- Climate Action: Reaching Net Zero
- ESG Disclosures: Deliver Greater Transparency Through New Technologies
- Purpose Driven Communications: Empowering Consumers to Take Action

### THE ETHICAL CORPORATION MAGAZINE (JUNE)

#### › Decarbonising Transport

- Delving into the multi-sectoral partnerships and platforms addressing these issues and the implications not only for GHG emissions, but for biodiversity, human rights and other social issues, and governance





## July – September 2021

### WEBINARS / WORKSHOPS

#### › Leadership Briefings on the Future of...

(July - September)

- The Future of Cities in a Clean and Just World
- The Future of Food and Land Use in a Clean and Just World
- The Future of Transport and Mobility in a Clean and Just World
- The Future of our Oceans in a Clean and Just World
- The Future of Finance in a Clean and Just World
- The Future of Technology in a Clean and Just World

### THE ETHICAL CORPORATION MAGAZINE (SEPTEMBER)

#### › Decarbonising Energy

- Delving into the multi-sectoral partnerships and platforms addressing these issues and the implications not only for GHG emissions, but for biodiversity, human rights and other social issues, and governance



## October – December 2021

### EVENTS

#### › Reuters Events Responsible Business Awards 2021

(October)

- The world's leading Awards celebrating leadership in sustainable business. For the past 12 years the Awards have served as the benchmark for businesses from across the globe showcasing real leadership on key environmental and social issues

#### › Reuters Events Transform Europe 2021 (October)

- Transform Europe will bring together CEOs, CSOs, CPOs and ESG Investors from the world's leading organisations to share their latest insight and actions as to how they are helping lead the transformation of business to a clean, low-carbon and circular future

#### › Reuters Events Responsible Business USA 2021

(November)

- Part of the world's leading event series highlighting the latest trends, investments, innovations and collaborations shaping the future of sustainable business. For over 10 years this has been the go-to event for those driving to deliver a more sustainable, just and clean future for all

### THE ETHICAL CORPORATION MAGAZINE (DECEMBER)

#### › Decarbonising Built Environment

- Delving into the multi-sectoral partnerships and platforms addressing these issues and the implications not only for GHG emissions, but for biodiversity, human rights and other social issues, and governance.

Become one of our Lead partners in 2021 and showcase your work, impacts and announcements to a global audience of over 100,000 opt-in business executives.

Do contact [matt.buckingham@thomsonreuters.com](mailto:matt.buckingham@thomsonreuters.com)  
for more information

**TOGETHER WE CAN PROVIDE THE INSIGHTS, IDEAS AND ANSWERS  
TO HELP DELIVER THE REQUIRED ACTION IN 2021 AND BEYOND**



# ON THE WEB

'If we don't radically change how we do business in the next decade we will run out of time'



Comment: WBCSD's Peter Bakker explains why the sustainable business organisation is raising the bar for ambition and action on climate change, nature loss and social equity, and giving its members two years to get into line

[GO TO ARTICLE](#) ➤



'Tackling palm and timber deforestation is a good start. Now brands must zero in on soy and cattle'



'We can win the war on plastic waste if we marshal the power of finance and markets'



'The finance sector must go beyond business as usual to solve the biodiversity loss crisis'



## PLUS

'The meat industry's failure to protect workers at their time of greatest hazard will hurt us all'

[GO TO ARTICLE](#) ➤

'Building a more equitable, just and sustainable economy is no longer an ideal. It's imperative'

[GO TO ARTICLE](#) ➤

'Data can help save the world from climate change – but mind the transparency gap'

[GO TO ARTICLE](#) ➤