

# Businesses wise up to supply-chain water risks

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The Elk River in West Virginia made headlines around the world when a small and preventable chemical spill there [left more than a quarter-million people without clean water for more than a week](#). Most water risk, however, is much less dramatic. Colombian beer-maker Bavaria Brewery, for example, realized the extent of the risk it faced when its water bills began increasing a few years back.

The cause, it turned out, was a gradual shift to cattle-ranching and farming [\[PDF\]](#) on the high-altitude grasslands above Bogotá, known in Spanish as *parámos*. In a chain of events familiar to water managers around the world, large quantities of sediment began washing downstream out of the degraded *parámos*. With stabilizing vegetation gone after decades of expansion by smallholders and trampling by livestock, the soil was exposed to wind and rain, and erosion quickly increased. In the city, the Aqueduct and Sewage Company of Bogotá had to carry out additional treatment on the water before it met acceptable standards. Ultimately, the costs of this extra treatment were passed on to water users such as Bavaria — which is how a brewery suddenly became very interested in what was happening in the mountains.

Like Bavaria, companies all over the world face risks that come from beyond the fence line of their operations. Businesses often have little control over threats to their water supplies. A changing climate can increase the prevalence of drought or floods. Growing populations begin draining the aquifer to irrigate their crops. A new factory nearby might begin polluting a shared river, as recently happened in West Virginia.

But so far, few businesses are addressing — or even thinking about — water risk at a landscape level. A recent CDP survey [\[PDF\]](#) of Global 500 firms found that two-thirds had targets for internal water management within their direct operations, but just 4 percent had set goals for managing water risk in their supply chain, and only 3 percent did so for risk at the watershed level.

New research from Ecosystem Marketplace, however, suggests the [private sector may be starting to pay attention](#). About one in four watershed investment projects worldwide counts a business as a financial supporter, according to the new [Executive Summary for Business](#) based on Ecosystem Marketplace's latest State of Watershed Payments report. In the European Union, Africa and Southeast Asia, the private sector is actually the most common backer of projects — a striking finding in a field dominated by the public sector. Altogether, companies have spent \$94 million to \$100 million to date on watershed protection and restoration.



## Watershed thinking

A watershed — for example, a basin where all water ultimately flows to a single body such as a river or lake — is typically the basic unit of management for public officials and scientists. For firms such as Bavaria, a watershed approach also has appeal: After all, a company either can swallow higher treatment costs, maybe try to conserve water on-site — or it can go directly to the source of the problem.



In Bogotá, Bavaria began paying into a [local water fund](#) in 2009. The fund, supported by the Nature Conservancy, the Aqueduct and Sewage Company and the National Parks administration, pays agricultural producers in the *parámos* to move cattle off steep slopes, switch to more ecologically friendly farming practices and replant degraded areas. The trust fund also helps to pay for monitoring and maintaining protected lands in two national parks close to the city.

[Bavaria recently estimated that it's paid \\$240,000](#) into the fund so far, and ultimately will see costs for water treatment fall by \$458,000 every year in its supply area. Overall, the water fund saves the city about \$3.5 million per annum.

So-called "water stewardship" strategies such as Bavaria's are gaining traction in the environmental world. The authors of the CDP report [\[PDF\]](#) noted that their investor signatories rewarded watershed-based approaches: "They recognize that water stewardship is associated with a forward-looking, resilient company with a sound understanding of its risk profile." A group of environmental NGOs including TNC, WWF and the CEO Water Mandate in 2013 [released a beta standard](#) guiding businesses step-by-step in crafting a stewardship strategy of their own.

Advocates of water stewardship promise more effective risk management, better relations with local stakeholders and the possibility of lower costs for clean water supplies. But are businesses listening?

## Diverse approaches

The full-length State of Watershed Payments report catalogs financing for nature-based solutions to water challenges around the world, from using mussel beds to filter out pollutants in a Swedish fjord to a jobs program in South Africa that systematically removes water-guzzling invasive plant species in order to alleviate water scarcity in that country.

The Executive Summary for Business highlights developments of interest to business in this new arm of environmental finance. It's also the first effort to date to systematically inventory water stewardship approaches around the world: analyzing current business engagement, patterns in financing and crucial policy and institutional developments. The dataset underlying the report is the result of a survey of more than 300 projects across the globe.

Companies tracked in the report frequently faced rising costs to their operations, as water supplies shrank or pollution increased due to events outside the company's control. Concerns about local reputation or a desire to support sustainable livelihoods in the surrounding community are also common motivations.

But most often, companies take a watershed approach as a response to regulatory pressures: either as a compliance strategy or to get out in front of a policy shift toward nature-based solutions that Ecosystem Marketplace observed in many countries. Regulatory, accounting and tax systems gradually are being restructured to create both incentives and hard obligations to protect natural functions. For example, Philadelphia recently revamped its stormwater fee pricing structure [to drive financing toward green infrastructure](#) such as green roofs or permeable pavement in the city. In [China](#), a central government push for ["eco-compensation"](#) for environmental damages has meant stricter enforcement of regulations, mandatory relocations and new environmental fees for business.

## Investments: the big picture

Despite these pressures, uptake by business has been uneven. Beverage, manufacturing and utility companies frequently explored [water stewardship strategies](#), according to Ecosystem Marketplace's research. Meanwhile, mining and apparel firms are conspicuously absent from the dataset, despite these sectors' significant exposure to water risk.

Business contributions are also only a very small part of total spending on nature-based solutions for water. Ecosystem Marketplace estimates that, globally, at least \$8.2 billion is spent each year to preserve and rehabilitate forests, wetlands and other water-rich features of the landscape. Private sector funding represents less than 1 percent of that. Money instead largely comes from the public coffers, led by China and the United States.

Still, private sector support may be instrumental in getting a project off the ground, as observed in the EU, Africa and Southeast Asia. And large multinational firms find themselves in an excellent position to import successful strategies from one country to another.

Bavaria Breweries, for example, is a subsidiary of SABMiller, one of the largest brewers in the world (group revenues in 2012 exceeded \$31 billion). SABMiller has committed to a "beyond-the-breweries" approach in many countries where it operates, including Peru, Tanzania, South Africa, Ukraine, Colombia, Honduras, India and the U.S.

In South Africa, the firm found that it would need to shift to groundwater pumping to meet its water needs in coming decades, at a cost of at least \$700,000 a year. A risk assessment suggested that for the same amount of money, the company could invest in clearing invasive plant species through partnerships with South Africa's public works program "Working for Water," which had the added benefits of creating 50 jobs per year in the catchment and boosting the brewery's local reputation.

Similar efforts by [Coca-Cola](#), Sony, Nestlé and other firms also have yielded lower costs, resilience to water and climate shocks, and better relations with the communities where the firms operate. Coca-Cola has committed to returning the [full equivalent of its water use](#) to nature and local communities by 2020 through water stewardship efforts, and is already more than halfway there. Nestlé spends more than \$8 million each year to protect its water sources [\[PDF\]](#) in North America, France and Switzerland by supporting efforts such as organic farming and open space preservation, and by using floodplain meadows to naturally filter out pollutants from water before they enter river systems.



SABMiller Africa water supply project in Rajasthan

## Navigating the "landscape approach"

Unfortunately, businesses interested in watershed investments should prepare for a rocky playing field for first-comers. Putting together a viable investment mechanism requires engaging local stakeholders, establishing the science, designing projects and administering funds. These efforts can pay off in the long term, but are time-consuming and hardly business-as-usual for would-be water stewards.

Companies often navigate these obstacles by partnering with government agencies or local civil society groups, rather than trying to develop an investment mechanism on their own. A business also might contribute to a water fund — as Bavaria did in Colombia — or simply buy an offset certificate from a third party such as the [Bonneville Environmental Foundation](#), which represent the replenishment of water to overburdened river systems.

Unlike carbon, nearly every landscape-scale water risk management operates under its own distinct mechanism. There are no standardized offset credits, and few centralized markets or platforms for exchange. Instead, projects are driven by what's likely to work locally. In Kenya, [hoteliers and flower growers pay farmers](#) through water users' associations for actions such as reducing their pesticide and fertilizer use. In the United States, [Coca-Cola works with the United States Forest Service](#) to safeguard clean water in strategic areas on public lands. Water funds financed by a collection of local users are popular in Latin America. The briefing notes half a dozen basic mechanisms; partnerships with public and civil organizations already active in the community are so far the most popular model and are responsible for the greatest share of finance.

## The bottom line

2014 may prove to be water stewardship's year. Fears about rising water risk, the carbon world's recent embrace of landscape approaches, and natural capital's growing profile in the business world all add to the momentum.

Ecosystem Marketplace finds that business financing for nature-based solutions roughly tracks with growth in watershed investments overall, about 3 percent per year so far.

Whether that figure ticks upward depends in large part on clearing a way forward for business, according to the briefing. The enormous diversity of project models has been a benefit in tailoring efforts to local contexts, but it also is likely a source of confusion. Project standards, synthesis of best practices and tools and guidance for watershed investments are all in short supply.

*This story first appeared at [Ecosystem Marketplace](#). Water photo by [somchai](#) via Shutterstock.*