



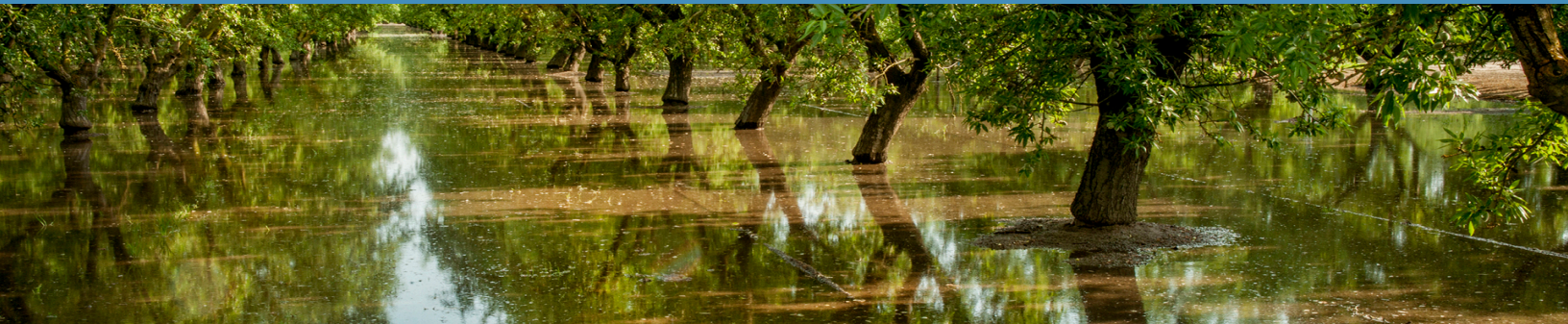
Executive Summary

FEEDING OURSELVES THIRSTY

Tracking Food Company Progress Toward a Water-Smart Future

feedingourselfsthirsty.ceres.org

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Executive Summary

Food companies are in the bull's eye of climate change, and hotter temperatures are making water one of the biggest risks to the \$5 trillion industry's bottom line. Growing population and widespread water pollution contribute to water risk, placing further pressure on food companies that rely on 70 percent of the world's freshwater to grow crops, feed livestock and process ingredients. By 2050, in order to meet the needs of a projected population of 9.1 billion, water demands are expected to increase by 55 percent and food demands by 60 percent.¹

But food companies are not only at risk from water challenges, they contribute to them. Agriculture drains aquifers in many regions of the world, and meat production is one of the biggest polluters of waterways worldwide.

This analysis updates Ceres' 2015 *Feeding Ourselves Thirsty* report, taking a renewed look at how food sector companies are responding to water risks and whether performance has improved over the past two years. This time, Ceres evaluated 42 food companies in four industries most at risk: packaged foods, beverages, agricultural products and meat. These were primarily the largest US-headquartered, publicly-traded food companies, but also included large private and non-US companies.

While the findings show that food companies are making progress at addressing water risks, many remain unprepared for the profound impact of climate change on the availability of the water resources that sustain their operations and agricultural supply chain. Few, also, are taking steps to reduce the water-polluting impacts of the growers and livestock producers in their supply chains.

In addition to benchmarking company performance, this analysis provides recommendations for how investors can effectively evaluate and engage food sector companies on their water risk exposure and management practices.

¹UN Water, The United Nations World Water Development Report, 2015

Sustainable Water Management Is A Business Imperative

The financial fallout of growing water scarcity is increasingly evident. Major industry players like Nestlé, Coca-Cola and Diageo are disclosing financial impacts linked to water challenges, including scarcity-driven tariff hikes, agricultural supply chain disruptions and lost growth opportunities in water-stressed markets. Some 85 percent of the companies scored in this report cited water as a material risk in their financial filings. More than 90 food companies so far this year have highlighted water risks on their earnings calls with investors.

Water scarcity and unpredictable weather are putting pressure on agricultural productivity. A recent MSCI analysis of food companies in its All Country World Index (ACWI) found that \$459 billion in revenue may be at risk from lack of water availability for irrigation or animal consumption, and \$198 billion is at risk from changing precipitation patterns affecting current crop production areas.²

While climate change is one of the leading drivers of water stress, four other risk drivers are also endangering the industry's precarious water security and leading to financially material business impacts: growing competition for water, weak regulations, failing infrastructure and pollution.

Climate Change's Impact On Water

Climate change is increasing the risk of both heavy rains and extreme droughts.

That's because hotter global temperatures are creating more erratic weather patterns, which impact water evaporation, stream flows and precipitation, with wetter areas generally becoming wetter and drier areas even drier.

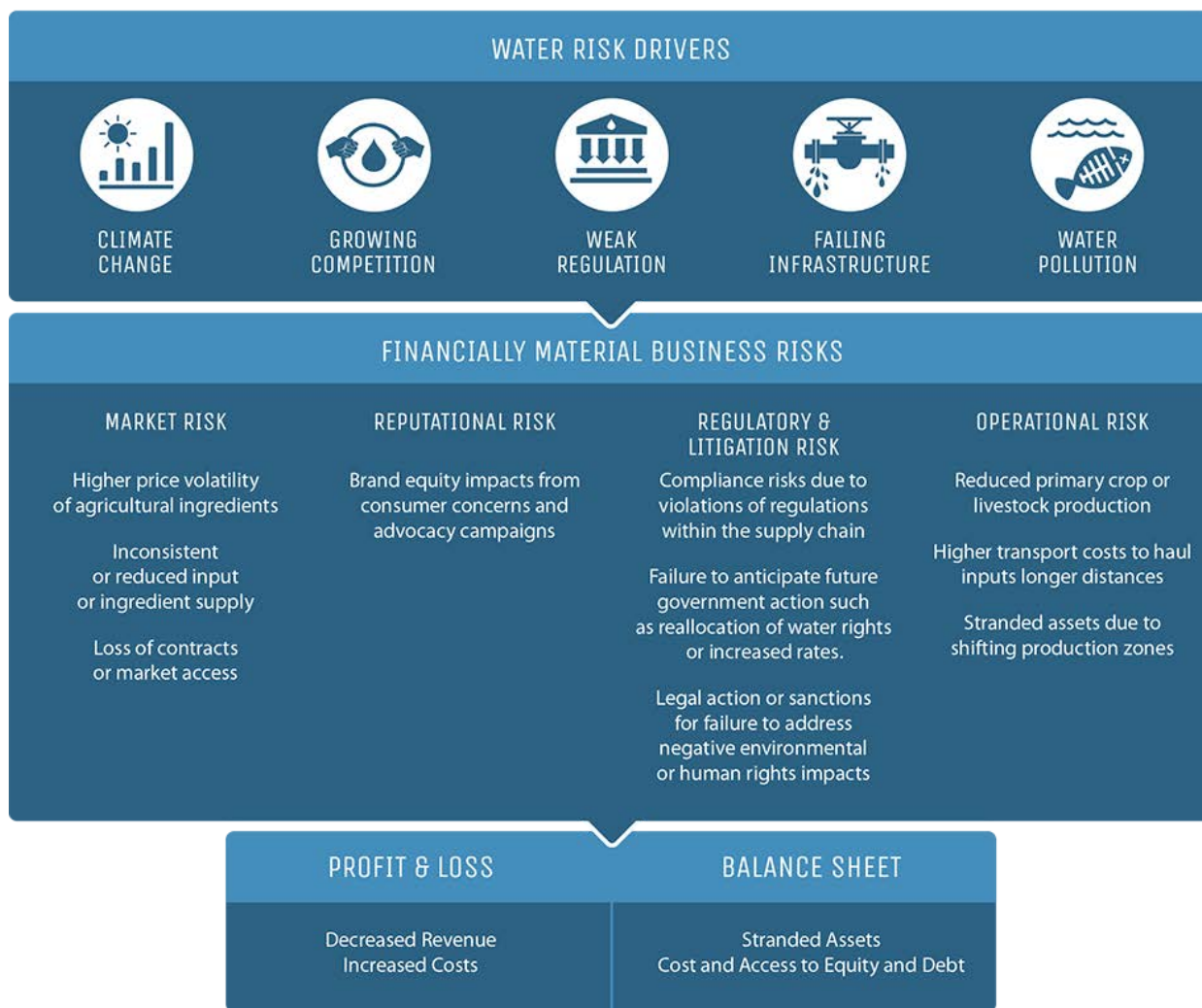
Farmers are contending with erratic periods of drought and deluges along with more weeds, diseases and pests -- all of which reduce yield and drive food prices up.

Hotter temperatures are also melting snow melt around the world, which is a major contributor to water supply for growing regions such as California, India and Peru.

Not only is climate change compromising the availability of freshwater, but on very hot days, crops suffer stress as evaporation reduces the amount of water they can soak up through the soil.

² MSCI, Food Products Industry Report, February 2017

WATER ISSUES IMPACTING THE FOOD SECTOR

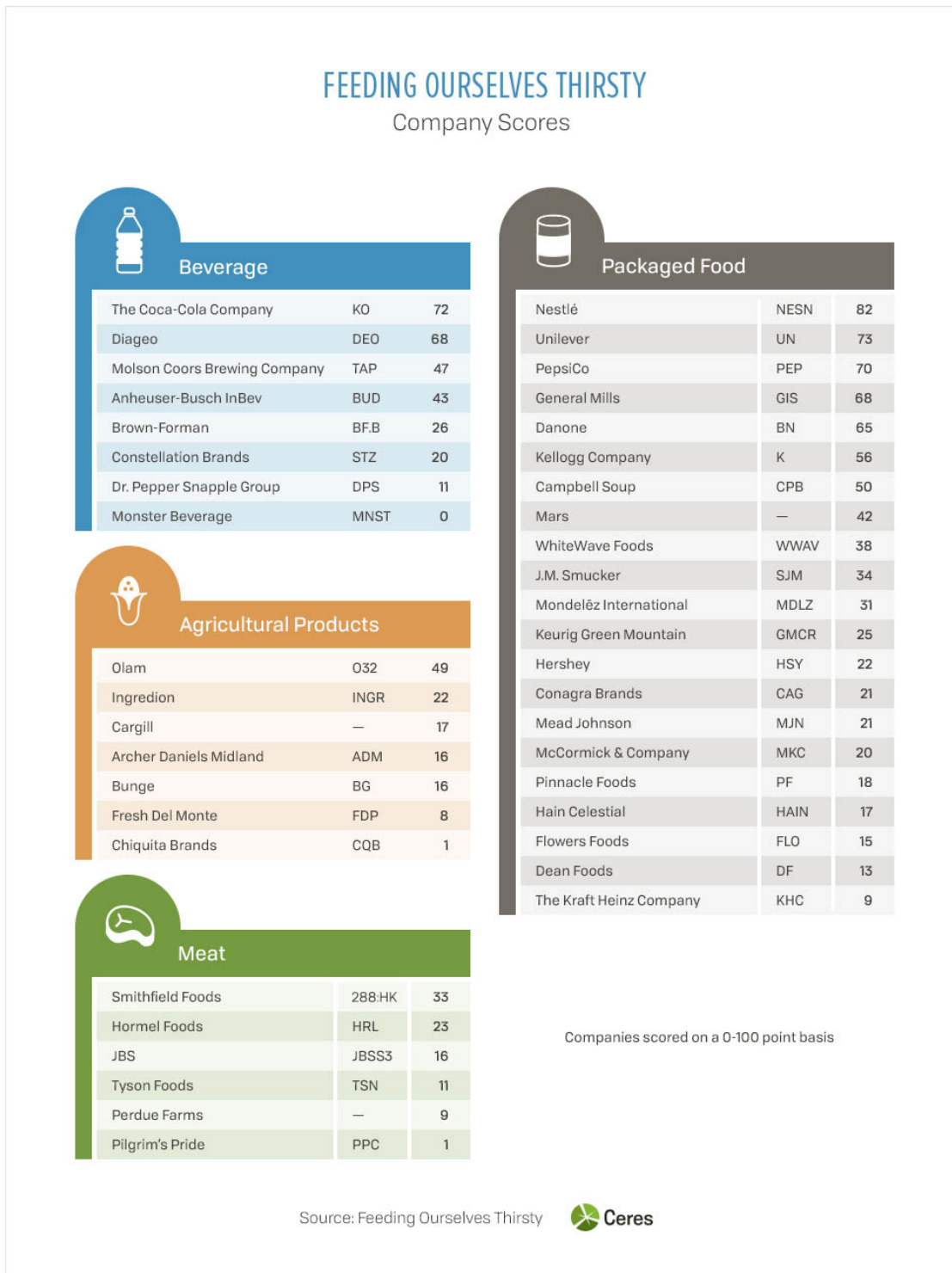


Food companies around the globe are already feeling the effect of these drivers. Recent examples of financial impacts include:

- In 2016, **Fresh Del Monte** experienced \$2.5 million in asset impairments and other charges related to drought conditions in Brazil and the company's decision to abandon certain growing areas.
- Over 1 million local retailers in Tamil Nadu, India stopped selling **Coca-Cola** and **PepsiCo** products after a 2017 drought and dwindling groundwater supplies pitted the companies' bottling operations against local water needs.
- **Illovo**, Africa's biggest sugar producer, reported a 36.5 percent drop in full-year profit in 2016 due in large part to the worst drought South Africa has experienced in 100 years.

Benchmark Results

Feeding Ourselves Thirsty: Tracking Food Company Progress Toward a Water-Smart Future uses publicly available information to assess companies on four categories of water management: governance and strategy, direct operations, manufacturing supply chain and agricultural supply chain. Companies were scored on a 0-100 point scale, using data from financial statements, corporate sustainability reports and 2016 CDP water survey responses.



Benchmark Results



Overall Performance

The water risk management scores of all food companies improved by an average of 10 percent, with the packaged food and meat industries making the biggest gains. Top performers in those industries were Nestlé and Smithfield, respectively.

Packaged food companies topped the list of best performers, with the beverage industry coming in a close second. Seven companies in the packaged food industry received 50 points or more, while the beverage industry had two of the five highest scoring companies.

Despite their relative gains, the meat and agricultural product industries continue to lag behind. Both industries disclosed limited investments in mitigating water risks in their operations and supply chains.

At the company level, some of the lowest performers in Ceres' 2015 analysis, including Hormel, Ingredion and Pinnacle Foods made noteworthy strides during the past two years. For instance, WhiteWave's score increased by 27 points, driven by improvement in water management in direct operations, governance and agricultural supply chain.

Corporate Governance & Management

Board oversight of water risk remains limited, with half of the companies evaluated showing no evidence that their boards of directors are exercising oversight on these issues. Interestingly, those companies that had stronger board oversight scored better on average across all other indicators of water risk management.

The number of companies linking executive compensation to water savings increased substantially (by 150 percent), with 12 companies using water performance as a criteria for executive pay. The strongest linkage between variable compensation and water efficiency goals for C-suite executives was made by Dean Foods, J.M. Smucker, Molson Coors and WhiteWave Foods.

Business Strategy

Water is becoming more deeply embedded in business strategy and planning, with nearly twice as many companies (26) formally considering water risks as part of major business planning activities, such as operational siting and new product development, in comparison to two years ago. This deeper integration of water risk into decision-making is essential for reducing potential financial impacts associated with water scarcity, such as the risk of stranded assets or supply interruption.

Water Risk Analysis

The number of companies assessing their water risks increased by 30 percent since 2015, but supply chain risk is still being ignored by many in the sector. To adequately inform company decision-making, risk assessments must go beyond direct operations, to evaluate surrounding watersheds and agricultural supply chains as well.

Some 83 percent (35) of companies conducted at least a barebones risk assessment of their operational water risks. Twenty-four companies (27 percent increase) also conducted a risk assessment of their agricultural supply chain.

Climate-Related Water Risk

Increasingly variable precipitation patterns and hotter temperatures pose enormous risks to the food sector, yet more than one-third of the publicly-held companies analyzed made no mention of climate-related water risks in their most recent 10-K filings. Ten percent mentioned climate change but did not make the connection to water challenges.

Water Accounting & Wastewater Discharge Standards

A growing number of food sector players now have a handle on their operational water use and discharge volumes. Companies collecting and disclosing these basic water accounting metrics (e.g. total water withdrawals and total wastewater discharges) is up 75 percent, for a total of 26 companies, or 62 percent, disclosing this data.

The sector's wastewater management practices remain murky. Even as water quality levels in key growth markets around the globe continue to decline, only four companies ([Danone](#), [Diageo](#), [Nestlé](#), [Unilever](#)) reported wastewater discharge quality data, and just five ([Coca-Cola](#), [Danone](#), [Diageo](#), [Nestlé](#) and [PepsiCo](#)) have a company-wide goal to reduce overall effluent load.

Sustainable Sourcing Goals

Fifty-five percent, or 23 companies, have goals to source at least two of their major agricultural inputs more sustainably with respect to water. This is a significant increase compared to just two years ago (from 15 companies).

However, only 14 percent - or six companies - had set sustainable sourcing goals for the majority of their major agricultural inputs ([Coca-Cola](#), [General Mills](#), [Kellogg](#), [Nestlé](#), [PepsiCo](#), [Unilever](#)).

Farmer Support and Incentives

The food sector is doing more to engage and support farmers in adopting water-smart practices, yet in many cases the efforts are targeted or relatively small. The number of companies providing some form of direct educational support to farmers on sustainable practices more than doubled to 71 percent of companies. In addition, twice as many companies (26 percent) provided some form of direct financial incentives to growers to improve farmer practices.

Collective Action at the Watershed Level

Watersheds continue to be depleted at unsustainable rates around the world, yet 80 percent of companies lack collaborative watershed protection plans focused on areas of high risk.

Collaborative efforts that spur public and private investment to protect and restore watersheds are a vital piece of the puzzle because, while important, individual company action to conserve water in at-risk locations does not prevent other users in the watershed from overdrawing or polluting dwindling water supplies.

[ABInBev](#), [Coca-Cola](#), [Mars](#) and [Olam](#) are among nine of the companies that have developed detailed plans to engage collectively in the most at-risk watersheds that they operate in and/or source from.

Recommendations for Investors

1. **Review proxy-voting guidelines to include water.** Asset managers can review their institution's proxy-voting guidelines and policies to ensure support for relevant shareholder resolutions on water risk. Asset owners should engage their fund managers to ensure such guidelines are in place and are acted upon.
2. **Solicit improved water risk disclosure.** Investors can support efforts to increase and standardize disclosure on food sector water risk. To encourage this, investors can employ a range of approaches, from engaging directly with portfolio companies, to joining relevant investor working groups and dialogues, to supporting market-level disclosure platforms such as CDP's Water Questionnaire, GRI and SASB among others.
3. **Engage directly with the company management on performance improvement.** Investors can use the resources from this analysis to engage poor performers individually, or through existing collaborative investor efforts on food sector water risks (i.e. Ceres' Investor Network, the Interfaith Center for Corporate Responsibility's (ICCR) Water & Food groups, or the UN PRI's Water Risks in the Agricultural Supply Chain group). As a last resort, some investors may consider reducing their exposure to companies that are not managing risk effectively.
4. **Join collaborative investor efforts focused on water risk.** Ceres' Investor Network and associated member working group, the *Investor Water Hub*, supports investor corporate engagement on water risk, and also provides tools and resources to help investors evaluate and manage water risks in investment practices and decision-making. This group offers peer-to-peer sharing of leading ESG and water integration and engagement practices and serves as a collective action forum dedicated to developing more effective research methods to assess water risks and opportunities.

