



THE ASIA WATER PROJECT: CHINA

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Messages in bottles: Water risks for Asia's beverage industry

In June 2010, Responsible Research published a report on "Beverages in Asia: Issues for Responsible Investors". Ina Pozon summarizes and expands on their key findings.

Mirroring other industries, the beverage market in the developing region, China particularly, has been on the upswing even as it began to see slow or stagnant volume growth in developed countries. Beverages are a large and important industry for emerging Asian economies. The increasingly affluent middle class is making aspirational purchases of global drink brands, partly influenced by the media and the overall trend of developing country 'westernisation'.

PepsiCo and Coca-Cola have both diversified their product and geographic spread and have extended their presence in fast growing regions in Asia. Coca-Cola grew its sales in China by 91% from 2004 to 2008; PepsiCo grew its sales by 57% over the same period. Coca-Cola has sought to continue this strategy, attempting to buy China Hui Yuan, the leading Chinese juice company. Despite this failed acquisition, Coca-Cola has signaled its focus on this market with a planned investment of US\$2 billion between 2009 and 2011.[1]

Pepsi, on the other hand, recently invested US\$ 2.5 billion, also spread out over three years, which will go to manufacturing facilities, research and development, and agricultural innovation. The investment, according to PepsiCo's chief executive, Indra Nooyi, "reflects our great confidence in China and our long-term commitment to this very important, growing market." [2]

Research says that by 2030 there will be more than 22 'megacities' with a population in excess of ten million people, and that two in three people will live in urban areas.[3] This increased urban population combined with long commuting distances will contribute to the development of a 'third place' that is neither work nor home. Drinking on the run has become the norm and the packaging of products for portability will continue to increase, as fruit juices and smoothies may be the most convenient way to consume fruits and vegetables. Both multinationals and Asian listed beverage companies are tapping into these emerging economies and megacities in Asia.

Water risks

The key factor impacting the beverage industry is access to fresh water. Water is the most important resource to the beverage sector and makes up approximately 94% of soft drinks, 90% of beer and 87% of spirits. This alone makes beverage companies' operations especially vulnerable to climate-related risks relating to water availability and quality. Beverage products such as soft drinks and alcoholic drinks have additional resource requirements including sugar, wheat, hops, corn, and various

fruits, which are in many cases water-intensive.

The scale of water use by the beverage industry is huge. JP Morgan estimates that the combined water consumption of Nestlé, Unilever, Anheuser-Busch, Coca-Cola and Danone approaches 575 billion litres a year, which is enough to cover the daily basic water needs of everyone on the planet.[4]

Investors and businesses are slowly becoming aware of the various risks— physical, regulatory, reputational, economic— posed by the emerging water crisis in China and globally – and that the beverage industry is particularly vulnerable given its heavy dependence on the resource. To manage these evolving risks, companies need to assess to what extent they, and their suppliers, depend on water and how they can best manage the required processes and infrastructure. By implementing rigorous water testing and monitoring and by installing treating equipment, companies can reduce the associated risks and become part of the solution.

Reputational costs of ignoring water

Corporate practices with respect to water can go spectacularly wrong for even the largest names in the beverage industry. In Kerala, India, a High Power Committee, established by the state government, has advocated that Coca-Cola be fined around US\$48 million for pollution and water depletion in Plachimada.[5]

In China, more than 30 Chinese NGOs, led by the Institute of Public and Environmental Affairs, organised have urged boycotts of big name beverage companies such as Tsingtao and Mengniu Dairies over pollution issues.[6] The campaign launched in February 2010 was featured heavily in the Chinese press as well as receiving international coverage. While the impacts of the boycott have yet to be determined, the organisers view the initiative as a first stab at raising consumer awareness about environmental issues. The NGOs have since moved onto highlighting water pollution associated with the global IT industry's supply chain operations.

All water is local

Corporate water risk management begins with the process of identifying and understanding the water used in direct and indirect operations. Water footprinting, as developed by the Water Footprint Network, is one tool that helps companies understand areas of operations that consume the most water, and consequently can highlight opportunities for improvements and savings.

Given the regional impacts of water scarcity, it is in companies' best interests that they seek to gather data broken down to facility level for operations in water-stressed regions. Companies can put their company's risk exposure in context by disclosing the percentage of facilities operating in areas where there are issues such as water scarcity, large-scale pollution, social unrest, and a lack of clarity from the local government regarding development agendas.

With a more comprehensive understanding of their exposure to water risks, companies can identify targets and goals and map out implementation strategies. These commitments are made on a company level and usually contain efficiency targets or Water Usage Ratios (WUR). As companies

begin to understand that water risks transcend factory walls and water security is critical, stakeholder engagement and watershed management initiatives begin to make more sense.

For a list of methodologies relevant to corporate water management, click here:

<http://www.asiawaterproject.org/for-business/managing-water-risks/water-management-initiatives-and-tools/>

Agriculture: the elephant in the room

In 2009, Brewer giant SABMiller, in collaboration with WWF, analysed water footprints for SABMiller's beer operations in the Czech Republic and South Africa. The intention was for the water footprint data to feed into a strategy that helps SABMiller manage operational risk in water scarce areas. This could also influence how SABMiller works with suppliers and engages with governments.

The results were very similar in terms of the percentage split between different users in the value chain, with crop production dominating water usage, averaging over 90% of the footprint. In absolute terms, the quantitative footprint of the South African operation was 155 litres of water per litre of beer (l/l), significantly higher than the Czech Republic footprint at 45l/l. The main reasons for the differences were the differing country temperature profiles, greater reliance on irrigated crops in South Africa, and a larger proportion of imported agricultural raw materials flowing into SABMiller's South African business from countries where crop water consumption is higher.

The report's findings highlight the fact that beverage companies are most exposed to water risks along their supply chain as opposed to their own direct operations, even if reputational risks have been most pronounced at the plant level.

At this year's Stockholm Water Week, [The Coca-Cola Company \(TCCC\) in collaboration with The Nature Conservancy](#), another international environmental group, released a water footprint report, with conclusions similar to SABMiller's. The TCCC report documented three pilot studies that were conducted on Coca-Cola products and ingredients. Its findings though relevant were unsurprising: The farms and not the factories carried the heaviest footprint. "We see significant opportunity to engage more directly with our agricultural suppliers to advance sustainable water use for the cultivation of ingredients in our supply chain," said Denise Knight, Water and Sustainable Agriculture Director, The Coca-Cola Company. "Our initial efforts will focus on the sustainable sourcing of sugarcane, oranges and corn."

Companies cannot afford to ignore this area of risk in their operations due to the potential price increases that could impact their business. A link has been established between the price of raw materials to the availability of water for irrigation. For example, a drought in India led to a 2008 sugar crop yield 45% lower than the previous year, and the 2009-2010 harvest is expected to yield similarly low levels.^[8] There has also been much media coverage of the droughts and floods in [China](#) this year and how this impacted supply and price of food commodities.

Solving the sweet tooth problem

Given the complexity of sustainable agriculture initiatives across a fragmented supply chain, companies have naturally gravitated towards collaboration. Sugar,

often the most important ingredient in many drinks, has been the favored commodity.

One such programme is the [Better Sugarcane Initiative](#) (BSI), a global multi-stakeholder non-profit initiative dedicated to reducing the environmental and social impacts of sugar cane production. The main thrust is to develop a certification system that enables producers, buyers and relevant stakeholders involved in the sugar and ethanol business to obtain products that have been derived from sugarcane produced sustainably– based on an agreed, credible, transparent and measurable criteria.

For a list of brands and organizations involved, click here:

http://www.bettersugarcane.org/bsi_members.html

Pepsi's i-crop

As one of the world's largest food and beverage businesses, PepsiCo is a major investor in global farming. Recently, it announced plans to introduce its new i-crop farming technology on a global basis. The web-based tool, which was developed by PepsiCo with Cambridge University, United Kingdom, is a crop management system that will enable PepsiCo's farmers around the world to monitor, manage and reduce their water use and carbon emissions, while also maximizing potential yield and quality.

Trials of i-crop are currently underway at 22 farms in the U.K., where PepsiCo announced ambitious plans to reduce carbon emissions and water usage by 50% across the farming of its core crops in the next five years. The technology will be expanded to Europe in 2011 and then to the United States. The company intends to roll it out in India, China, Mexico and Australia by 2012.[9]

ASIAN RANKING

Responsible Research reviewed the water sustainability initiatives underway for 30 Asian listed companies and ended up creating categories that mirrored the companies' stages of development: Leaders, Followers and Laggards. For the list of companies, follow the links:

A 2009 estimate by Business for Social Responsibility (BSR) suggests that currently only six or seven companies in the world think systematically and holistically about their water risk exposure. The best case examples of major water users included leading beverage companies SABMiller, Coca-Cola and PepsiCo, as well as multinationals with beverage lines, such as Unilever and Nestlé.[10]

Leaders:

Leaders are companies that have quantified their water usage and are implementing comprehensive and strategic initiatives on water efficiency across their company. Most of the benchmarked companies in this category were linked or owned by a large multinational company and often relied on the reporting structure of the global

website and global sustainability report. It is unsurprising that these global brands have the most comprehensive water strategies reported publically. Beyond their increased exposure to the physical risk of water shortages, these companies have a strong global brand to preserve and work hard to communicate their approach to operations in developing and emerging Asia.

Followers:

Benchmarking research shows that most companies in Asia are not yet strategically managing water resources. The Followers identified have undertaken ad hoc initiatives related to water use with apparently limited understanding of water materiality to business models.

Laggards:

The Laggards identified are not disclosing their water performance or communicating water targets at present.

- [1] Euromonitor International. Global Soft Drinks: Corporate Strategies – diversification Drives Market Dynamics. October 2009
- [2] Forbes, Pepsi's China play bubbles up, May 21, 2010. <http://www.forbes.com/2010/05/21/pepsico-china-beverages-markets-equities-consumer-snack.html?partner=alerts>
- [3] <http://ngm.nationalgeographic.com/ngm/0211/feature3/>
- [4] www.climatechangecorp.com/content.asp?ContentID=5763
- [5] <http://www.indiaresource.org/news/2010/1037.html>
- [6] <http://www.docin.com/p-48551783.html>
- [7] http://www.beverageworld.com/index.php?option=com_content&view=article&id=38281&catid=3&Itemid=173
- [8] <http://www.wri.org/stories/2009/08/environmental-challenges-food-and-beverage-industry>
- [9] <http://www.michiganagconnection.com/story-national.php?Id=2096&yr=2010>
- [10] Risk & Insurance. Brodsky, M. (2009, 3 March). Water Is Not A Right, It's a Risk: <http://www.riskandinsurance.com/story.jsp?storyId=18325014>