

# ERODING CORPORATE WATER REPORTING?

A STUDY OF THE AUSTRALIAN FOOD,  
BEVERAGE AND TOBACCO SECTOR

BE HEARD.  
BE RECOGNISED.



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## Abstract

Here we explore disclosures made by large Australian corporations about their impact on one of society's critically sensitive and scarce resources – water. Our attention is directed to public disclosures by large industrial consumers of water. This report follows CPA Australia's 2010 'Corporate Water Reporting: A Study of the Australian Food, Beverage and Tobacco Sector', and seeks to contrast the extent and quality of corporate water reporting examined at that time with current reporting practices (as examined in 2013 and 2014). This further study has been undertaken to explore how corporate reporting changed as drought abated and the emphasis on demand management by authorities waned. Our findings suggest that appropriate support from authorities for both corporate water management and water reporting practices is critical. Without such support, important learnings in the corporate sector, particularly here in the world's driest inhabited continent, can erode.

The study examines seven key dimensions of water reporting:

- Details of water consumed
- Water saving strategies
- Sources of water
- Effluent levels and management procedures
- Impact of effluent on the environment
- Investment in water savings infrastructure
- Reference to the GRI and ASX Corporate Governance Principles

## Introduction

Water supply challenges experienced throughout the globe are increasingly driving the need for demand management and, consequently, water accounting. Prolonged drought conditions in South Eastern Australia through the 1990s and into the 2000s (BoM 2007) drove authorities to implement a range of demand management initiatives, including actively reviewing water costs, levelling water restrictions on both households and corporate consumers, and implementing legislation requiring large organisations to develop water management plans (Egan 2009, Parliament 2005). A national framework for water accounting has also been introduced (WASB 2010). Australian drought conditions then abated significantly into the late 2000s, which in turn has led to debate about the on-going need for water management. In early 2013, for example, Sydney Water Corporation<sup>1</sup> revealed that a range of programs designed to encourage water efficiency would be scrapped (SWC 2013). A backlash, crying hypocrisy and lamenting the potential erosion of valuable learning about water efficiency, was immediate (Hasham 2013).

At the same time, the corporate sector is increasingly responding to sustainability concerns and actively developing related external reporting practices (Brown and Fraser 2006, KPMG 2008). With respect to water usage in Australia, large water consuming organisations responded to the drought of the early 2000s by developing increasingly sophisticated data collection and accounting approaches (Egan 2014). We argue, therefore, that such organisations are in an increasingly strong position to develop nuanced and detailed external water reporting practices. As many countries, including Australia, move towards an integrated reporting of financial, environmental and social impacts (IIRC 2011), an examination of recent voluntary water reporting practices provides some insight into the preparedness of reporting entities.

While a broad overview of corporate water reporting is provided by Morikawa, Morrison and Gleick (2007), and Morrison and Schulte (2009), here we explore how well-developed Australian corporate water reporting practices changed in the 2010s, as both drought conditions abated, and the emphasis on demand management from authorities waned. This study builds from Egan and Frost's earlier 2010 study contrasting voluntary reporting practices of nine large companies operating in the food, beverage and tobacco sector in Australia in 2009, with a detailed examination of related practices in 2013 and

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<sup>1</sup> The sole retailer of potable water for all households and industry located within the Sydney basin.

2014. This return study enables us to consider how reporting practices changed as the context and pressure for reporting changed.

Three key contributions are made in this paper. First, we observe that to March 2009, the quality and quantity of water reporting became increasingly sensitive and responsive to underlying community concerns about this threatened resource. However, second, it would seem that management were choosing not to disclose related available data where it might not reflect positively on the organisation. A key detail that our case organisations are known to be collecting that was not disclosed was total water consumed. Third, our findings suggest that despite a backdrop of increasing GRI focused sustainability reporting, some decline in water specific disclosures occurred in 2013/2014. This trend appeared to align with both an easing of drought conditions and a declining emphasis by water authorities on the importance of water management. This apparent 'short-termist' approach from authorities aligns with a general emphasis on smaller government and a tightening of government budgets at this time. A recent example of this on-going trend was the announcement in April 2014 that the National Water Commission may be wound up (Kirk 2014). Despite apparent declining government interest, we argue that the need for a solid focus on water management in industry remains critical. Aside from the environmental implications, poor preparation for the inevitable return to drought cycles in the future in Australia has a significant cost burden on the community. The recent decline in related disclosures indicates that community pressure for voluntary corporate reporting is not enough. Clear cost and regulatory incentives are needed to both drive and sustain change. Without such incentives, we currently risk losing much of the learning that industry developed in the late 2000s on both good water management and good water reporting practices.

## Background and prior literature

Water supplies on the east coast of Australia rapidly declined in the mid-2000s (WSAA 2009). While this has largely been attributed to drought, climate change is also shown to be a threat to Australian rainfall patterns, which are now expected to be both erratic and unreliable into the foreseeable future (IPCC 2007). In response to these concerns, public authorities debated and implemented a variety of water policy initiatives, culminating in 2006 with all states and the Commonwealth of Australia signing the Intergovernmental Agreement on a National Water Initiative (NWI) (NWC 2007). The NWI facilitated an increasingly coordinated approach to water reform across Australia. With a focus on developing efficient water markets, it also championed the development of innovative Australian Water Accounting



Standards (AWASs). This novel approach to water resource accounting aimed to better describe the extent and location of the nation's potable water sources in litres (as opposed to taking a financial accounting approach) in order to better assist the nation in decisions about the use of this scarce resource (WASB 2010).

The nine organisations targeted in this study operated from large production sites within the greater Sydney region of New South Wales (NSW). In NSW, the main focus of public water policy up until 2006 had been the development of tools to help consumers curtail demands for water. One significant outcome was the development of the Metropolitan Water Plan 2006 that included a number of demand management tools designed to help large corporate water users to find water efficiency opportunities (GoNSW 2006). The plan included the 'Every Drop Counts' program (which continues to provide the business sector with voluntary demand management advice and support tailored to the specific needs of individual businesses), as well as regulatory tools designed to mandate the development of water management plans. As the drought became particularly acute in 2007, a number of unexpected supply side solutions were also added to the mix. In particular, politically unpalatable desalination plants were quickly designed and approved for most major urban centres including Sydney, Melbourne, Brisbane and Perth (GoNSW 2007).

As organisations respond to these environmental and policy pressures, they are likely to increasingly collect a range of data on water usage, related impacts, and the success of management responses. The extent to which organisations might willingly provide meaningful insight into resource management practices within voluntary sustainability reporting is questioned (Adams and Frost 2008, Epstein 1996). Pérez *et al.*, (2007) suggest that synergies between sustainability accounting and a range of related developments can drive environmental management change. Alternatively, Mitchell *et al.*, (2012) find little evidence that management utilise related data to improve sustainability management practices. Little research has been undertaken to explore how a well-developed focus on sustainability management practices might support the provision of fuller voluntary disclosures. Adams and Frost (2008) argue that an organisation's ability to develop comprehensive and useful disclosures is constrained by their capacity to develop integrated reporting systems and also by their willingness to provide information which may not present them in a positive manner.

Bebbington and Larrinaga (2014 p 399) argue that the contested and political nature of sustainable development suggests the need for:

new ways of reflecting upon and shaping practices. In particular, investigations that focus on an issue of concern (rather than a discipline framed starting point for problem identification) might

more readily allow subjective and objective dimensions of issues to be appreciated together rather than either perspective being issued to provide unique access to truth.

The authors note that five key issues are “widely accepted to fall within the ambit of sustainable development”; water, energy, health, agriculture and biodiversity. “What is relevant to note is that these areas do not neatly map onto disciplinary fields. Rather, they are arenas which can only be understood through multiple lenses: in short they require, at least, inter-disciplinary approaches for their investigation”. In this study, we respond to these suggestions by exploring corporate reporting approaches to the specific issue of water consumption, and efforts made to minimise the corporate impacts of that consumption. We contribute to research exploring the relationship between resource management practices and voluntary disclosures by examining how a group of organisations, known to be responding to pressures for water management change, were utilising related data to develop increasingly sophisticated voluntary water reporting practices.

## Methodology

In this study we focus on organisations operating in the Australian ‘food, beverage and tobacco’ sector (as defined by the Global Industry Classification Standards). This sector has a significant impact on water resources and would therefore be expected to have some history of providing public disclosures on issues relating to resource usage. The food, beverage and tobacco sector is also of interest as it uses water for a variety of purposes, including as a raw material and for ancillary purposes (such as cleaning). Companies in this sector may therefore be presented with a range of opportunities to consume water in a more efficient manner (for example, using recycled water for ancillary purposes). Furthermore, broader global concerns regarding food security have driven a number of foreign acquisitions of large Australian and New Zealand food producing companies in recent years. These structural changes may impact on the commitment and ability that individual companies are able to make to water management and accounting.

Two key steps are undertaken. First, we look to the literature to gain some insight into the range of water related issues and impacts on which such organisations could provide voluntary disclosures. Second, all publicly available water related disclosures provided by nine large organisations from this sector were scrutinised as at three dates. Initially, we explored all disclosures provided by our nine target organisations as at March 2009. We then returned to the websites of those 9 organisations for two further reviews in May 2013, and September 2014. The logic in this selection of dates is that

drought conditions peaked in Australia in 2008, but then rapidly abated in 2009 and 2010. We are therefore motivated to consider how reporting practices might change as social pressures to be more water efficient ease. The water related issues that organisations could address through reporting were then compared to what was disclosed at each date and an assessment of voluntary water reporting was made.

The nine organisations targeted include all food, beverage and tobacco producers that meet the following two discriminators:

- required by the *2005 New South Wales Water Savings Order* to produce ‘water savings action plans’ because their operations in Sydney used more than 50 megalitres (i.e. 50 million litres) of water per annum in 2005 (Parliament 2005)<sup>2</sup>; and
- have more than \$1 billion of income in their Australian operations in 2006, as taken from the data available on the *Business Review Weekly’s* 2006 listing (BRW 2006).

We analysed the content of all water related disclosures found on each organisation’s websites at each of our three target dates. The disclosures reviewed at each date include most recent annual reporting, particularly where they are ASX listed, along with sustainability or corporate social responsibility type reports and other water related disclosures provided elsewhere on their web pages. A narrative description was made and is provided in the findings section. Some of the nine target organisations were subsidiaries of multinational parents. Furthermore, since commencing this study in 2009, some had been sold or restructured. As such, in order to fully review all publicly available water related disclosures, it was necessary to search not only their Australian websites, but also the Australian websites of any re-branded or new parent entities, as well as the websites of any foreign parents. We only gathered water related disclosures from foreign websites that were specifically about the water related issues and impacts of their Australian operations.

Our nine target organisations, as they existed in 2014, were: Arnotts Biscuits Holdings Pty Limited (ABH), British American Tobacco Australia Limited (BAT), Cadbury Australia (CA), Coca-Cola Amatil Limited (CCA), Goodman Fielder Limited (GF), Inghams Enterprises Pty Limited (IE), Lion Pty Limited

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<sup>2</sup> A full list of the 237 entities targeted is provided as an appendix to that Order. Our assessment was based on the ‘large’ organisations identified by the New South Wales water savings plans only. Other similarly ‘large’ organisations would have been added to the sample had the selection also considered other urban water savings plans, such as Victoria’s Environment and Resource Efficiency Plans (EREP).

(Lion), Schweppes Australia Limited (SA) and Unilever Australasia Pty Limited (UA). An overview of those nine targeted entities is provided in figure 1. As noted above, there have been some restructurings, mergers and acquisitions of these organisations across the period of this study (2009, 2013 and 2014). Figure 1, therefore, also reveals, as appropriate, any former names, along with the names of several key related entities (including where relevant, any foreign parent entities). We have reviewed both the websites of all nine Australian target organisations, along with the websites of those key related entities, for any water related disclosures made in relation to Australian operations. As far as possible, for the sake of simplicity, the nine acronyms developed above will be used generically throughout the remainder of the paper to refer to disclosures provided on either the Australian or related entity websites.

<b>Organisation targeted</b>	<b>Additional organisational websites we have chosen to review</b>	<b>Reason for reviewing those additional websites</b>
1. Arnotts Biscuits Holdings Pty Limited (ABH)	Snack Brands Australia Pty Limited	A parts of the former Arnotts business acquired by external shareholders in 2008
	Campbell Soup Company	USA parent
2. British American Tobacco Australia Limited (BAT)	British American Tobacco PLC	UK parent
3. Cadbury Australia (CA)	Cadbury PLC, Kraft Foods, Mondelez International	Cadbury PLC is the UK parent. Cadbury PLC was owned by Kraft Foods until 2012. In 2012 Cadbury PLC was transferred to Mondelez International
4. Coca-Cola Amatil Limited (CCA)	The Coca-Cola Company	USA parent
5. Goodman Fielder Limited (GF)		
6. Inghams Enterprises Pty Limited (IE)		
7. Lion Pty Limited (Lion)	Dairy Farmers	A key subsidiary of Lion

	National Foods Limited	A key subsidiary of Lion
	Kirin Holdings Company Limited	Japanese parent of Lion
8. Schweppes Australia Limited (SA)	Asahi Group Japan	In 2009, Asahi became the parent of Schweppes Australia Limited
9. Unilever Australasia Pty Limited (UA)	Unilever PLC	UK parent

**Figure 1.** Overview of all targeted organisation and an explanation of additional websites requiring review in order to understand all publicly available water related disclosures across our three points of review (2009, 2013 and 2014).

## Water related issues that could be addressed within water reporting

We first identify the broad range of water related issues for which disclosures could be developed by examining related guidance provided in the Global Reporting Initiative's G4 Guidelines, the Australian Stock Exchange (ASX) Corporate Governance Council Principle 7 (Recognise and manage risk, where applicable), Australia's developing 'Water Accounting Standards' (AWAS), state based related regulatory requirements, and extant academic literature. The Global Reporting Initiative (GRI) provides an internationally recognised voluntary framework of social and environmental impacts that organisations might choose to report on. The disclosure of three water related matters are suggested: total water withdrawal by source (EN8); water sources significantly affected by withdrawal of water (EN9) and percentage and total volume of water recycled and reused (EN10) (GRI 2014). The ASX CGC's Principle 7 Recommendation 7.4 encourages listed entities to include "disclosing whether it has any material exposure to economic, environmental and social sustainability risks and, if it does, how it manages or intends to manage those risks" (ASX 2014 p 30).

One of the responses of Australia's National Water Initiative was the development of AWAS and a related Water Accounting Conceptual Framework (WACF). The WACF provides a definition of 'reporting entity'. The definition is based on whether it would be reasonable to expect users who would depend on water accounting reports. Most water consuming entities would probably not be captured by this definition as they would be unlikely to have significant user groups dependent on the production of water accounting reports. However, in detailing the requirements for 'general purpose water accounting reports' the draft AWASs provide some insight into the issues that water reporting undertaken by water consuming organisations could address.

Interpreting the AWASs from the perspective of water consuming organisations, our nine target organisations could firstly provide some detail of the water 'context' of the organisation. From the perspective of water consumers, this requirement might be interpreted as disclosing a description of the general water needs of the organisation and any conditions that have an impact on the way the organisation manages that usage. The draft AWASs go on to mandate a 'Statement of Water Assets and Water Liabilities'. For water consuming organisations, these requirements could be interpreted as requiring the preparation of a statement indicating the water usage within the accounting period dissected by source (for example, town water supply, ground water, recycled water, collected rainwater etc) and then some explanation of the purpose for which each source has been used. While it may not have been common in the past, the use of sources other than town water supply may be increasing (for

example, some organisations may be harvesting rainwater for use in limited functions such as cleaning). As such, the preparation of such a statement could provide insight into management's efforts to secure alternative supplies and into how those supplies are used. Finally, the AWASs mandate some supplementary disclosures focused on details of water related policies and procedures, methodology for quantifying usage, targets and insight into related KPIs and other relevant management controls.

The *2005 New South Wales Water Savings Order* required 237 large Sydney-based water consuming organisations to develop plans for the efficient management of their water usage. That list included the nine organisations examined in this study. These 237 organisations were required to prepare water savings action plans (WSAPs) by 31 March 2006 (Parliament 2005). The stated aim of the WSAPs has been to 'encourage managers of high water using organisations ... to gain better knowledge of ... the real financial savings that can be made through water savings' (GoNSW 2006 p 56). While not directly mandating any public disclosures of water related issues, the order required these organisations to document their current water use (by conducting a water usage audit), determine a list of specific water savings measures, and propose which of these measures they would implement in the four-year period following approval of the WSAPs (Parliament 1987). As a result, those targeted organisation could draw on that data for external water reporting. Similar orders were enacted around the same time in other major Australian urban centres, including Victoria and Queensland, driven by similar drought conditions.

Academic literature also provides some insight into a developing range of water related data that large water consuming organisations are now collecting. All of that data can be considered as we examine recent voluntary water reporting practices to understand what data is possibly being withheld. Egan (2014) explored the development of water management systems within large water consuming organisations operating in major Australian urban centres through the 2000s. He argued that water management practices were developing, and were focused on reducing water usage through the purchase of water savings technologies, re-engineering of production schedules and methods where possible, staff awareness and the development of reporting and accounting techniques. Egan (2014) found that target organisations were developing KPIs to encourage management to minimise water usage per unit of production, and investing in sub-meters so as to more precisely trace sources of inefficiency. With financial support from programs such as 'Every Drop Counts', some organisations were also developing infrastructure to treat water before discharge, recycling it back into particular production processes or harvesting, treating and using rainwater in selected processes (DRET 2008, Egan 2014). A lot of quantitative and qualitative data was collected through those processes that had the potential to be reworked appropriately for external water reporting disclosures. A range of related studies argue that organisations possess the information needed to develop more comprehensive

reporting of water usage (Hazelton 2013, Morikawa, Morrison, and Gleick 2007, Morrison and Schulte 2009). Hazelton (2013) questioned whether the provision of water related disclosures can be seen as a human right.

All of the above provides insight into a potential scope for water related disclosures, and so can be considered as something of a checklist of matters that might be included in any voluntary water reporting practices. Considering all of these guidelines for potential issues to be included in water reporting, a water consuming organisation might consider publicly disclosing:

1. Details of water consumed, dissected appropriately (for example, by production site or process)
2. Water saving strategies – targets, initiatives and achievements
3. Sources of water supply
4. Effluent details – volumes, cost of disposal and targets
5. The impact of effluent on water bodies
6. The detail and cost of investments designed to save water, including infrastructure to recycle water or harvest rain water
7. Specific reference to utilising the GRI and/or ASX corporate governance principle



## Findings

The disclosures of each of the nine target organisations have been categorised according to these seven potential water related issues for disclosure, as determined in the preceding section. Seven subsections provide an overview of what was, or was not, disclosed by this field of organisations in relation to each of these issues as at March 2009, May 2013, and again at September 2014.

### Details of water consumed

#### *March 2009*

Some disclosure of water consumed was provided by ABH, BAT, CA (and therefore SA), CCA, Lion and UA. Nothing was disclosed on this issue by GF, IE, or UA. In general, there appeared to be a reluctance to disclose total water consumed, and for those entities that did, they were generally unwilling to dissect by location or country.

Arnotts Biscuits Holdings (ABH) disclosed some insight into recent volume reductions in total water consumed in their Australian operations. British American Tobacco (BAT)'s last Australian 'progress' report from 2005 (still available at March 2009) responded to the GRI indicators and so disclosed actual water volumes used from 2001 to 2004, plus the target for 2005. Some explanation for these volumes was also provided. For example, a 43 per cent increase in 2004 was explained 'as a result of faulty air conditioning coils as well as an underground pipe leak which has subsequently been repaired'. BAT's 2004 Australian 'social' report disclosed total waste water used from 2001 to 2004, including water use as a percentage of production. The BAT 'sustainability reports' on the UK parent website disclosed consolidated global total usage together with a quantification of that usage per unit of production. The data showed a downward trend from 8.01 cubic metres of water withdrawn per million cigarettes equivalent produced in 2002 to 4.73 in 2008. The global website separately states that "we aim to reduce our water use by 13 per cent to 4.2 cubic metres per million cigarettes equivalent produced by 2012".

There was no reference to water related issues on the Cadbury Australia (CA) website (which included both Cadbury Australia and Schweppes Australia at that time). The UK parent (Cadbury Plc) made a number of disclosures in relation to water usage and management across their global operations, however most of these disclosures were consolidated global information. For example, it was disclosed that "we have reduced our consumption of water [globally] by 10 per cent between 2006 and 2007. Our business used approximately 9 million tonnes of water in 2007 compared with 10 million in 2006".

Coca-Cola's (CCA) Australian website provided a number of disclosures relating to their water management practices and achievements. While not disclosing total water usage, both the Australian company and the US parent (The Coca-Cola Company) provided some insight into water consumption ratios per unit of output, and how those ratios had changed in recent years. Websites at both levels appeared to be focused on highlighting the organisation's achievements and defended its water usage in the face of community concern about the drought and water security.

The National Foods Limited (Lion) 'Environment Program' explained that the group needed "significant volumes of water to maintain high standards of food safety and hygiene". A 2008 corporate social responsibility report provided by the Japanese parent disclosed total global data on water used, water discharged and investments in "environmental conservation costs". No specific disclosures relating to the Australian operations were provided. The then 'Lion Nathan' website provided a '2008 Sustainability Report' which explained that water usage KPIs had reduced in recent years "driven mainly by reductions at Castlemaine Perkins (8.8 per cent), Tooheys (7.4 per cent) and South Australian Brewing Co (6.9 per cent)... in FY08, Lion Nathan's beer business used a total of 3,674 million litres of water". The report added that "on average across our breweries, we currently use approximately 4 litres of water for every litre of beer we produce"

### **May 2013**

A variety of changes were evident by 2013. BAT, CCA and Lion continued to provide some insight into water usage, or at least, water usage per unit of output. GF now also joined them with some related disclosures. CA however, now no longer provided disclosures relating to volumes of water consumed. The Australian websites of ABH, IE, SA and UA continued to provide no insight into water usage, however there was some trend towards the provision of more related information on the websites of foreign parents. Nevertheless, parent disclosures were generally limited to consolidated total global water consumption, and provided no specific comment on water usage within Australian subsidiary operations.

While Arnotts Biscuits Holding Pty Ltd (ABH) and Snack Brands Australia Pty Ltd provide no insight into total water consumed in 2013, Campbell's Soup Company disclosed some related information in its '2012 corporate social responsibility report' on the issue of 'water resource mapping'. The disclosure explains that this water resource mapping utilises a 'global water tool' provided by the World Business Council for Sustainable Development (WBCSD) to map water intake, recycled water and waste water

extraction at each of the company's facilities. The website also discloses total global water use with a declining trend of water used per tonne of food produced from 2008 to 2011. No specific disclosures are provided for the company's operations in Australia.

British American Tobacco Australia Limited (BAT) continued to provide a variety of water related disclosures in May 2013. Total water volumes consumed were no longer disclosed, however total water use per 'cigarette equivalent' was disclosed, which indicated a declining trend in recent years. Coca-Cola Amatil Limited (CCA) provided a 2011 'Corporate Sustainability Report', which disclosed water efficiency per unit of output for 2010, explained that efficiency targets were set each year and that water usage KPI's were a part of key management performance plans. Much of the related qualitative information disclosed in 2013 did not differ greatly from what was disclosed in 2009. The USA parent includes a '2011/2012 Sustainability Report' that provides a pie chart explaining total water use (apparently 66.9 billion litres globally) and its key sources for 2011. None of the disclosures provided speak specifically of water management activities in Australia.

The Goodman Fielder Limited (GF) website included 4 years of 'Sustainability Reports' in May 2013, from 2009 to 2012. Limited disclosures were provided within each of these reports on water. The 2012 sustainability report disclosed total water consumption and water usage per tonne of output for 2010, 2011 and 2012. Lion Nathan National Foods now provides a website for the Australian operations. In May 2013, the website, provided 'sustainability reports' for 2009, 2010, 2011 and 2012. The 2012 sustainability report disclosed total water used noting that this was 12.6% down on 2011. The report explained that this decrease was due to 'efficiency improvements and site closures' and furthermore that the achievement was actually less than target due to 'challenging business conditions'. Lion Nathan Food's Japanese parent disclosed total water consumed within their Japanese breweries, however no detail was provided of their Australian operations.

No disclosure of water usage was provided by Schweppes Australia (SA) when we searched again in May 2013. However, SA's Japanese parent disclosed 'CSR Reports' from 2006 to 2012 inclusive. In the companies 'CSR activities' link, details of total water consumption across the Japanese part of the group, as well as water usage per unit of sales, is provided. No detail was provided of their Australian operations. Unilever Australia and UK provided limited insight into the percentage change in total water usage in recent years.

## September 2014

A marginal progression from reporting in 2013 was evident in 2014. ABH, CA, IE and SA continued to provide no insight into water usage within their Australian operations, however, the trend towards the provision of more related information on the websites of foreign parents continued. BAT, CCA, and Lion continued to provide some insight into water usage per unit of output. Disclosures from GF continued to improve with total water usage, and water usage per unit of output disclosed. Some related disclosures were also now provided by UA.

As in 2013, both Arnott's Biscuits and Snack Brands Australia continued to provide no reporting in this category, while Campbell Soup Company continued to disclose both total global water use and water use per tonne of food produced for the past 4 years. The 2013 values for these categories were 24,820,481 m<sup>3</sup> and 8.49m<sup>3</sup>/tonne respectively. As in 2013, BAT Australia disclosed water consumption in cubic meters per million cigarettes equivalent produced for the past three years (2013 value: 3.77). CCA, in their 2013 sustainability report, disclosed both their total water use and their water use ratio (as litres/litre of finished beverage) for the time span of 2006-2012. The Coca-Cola Company, reported global water use ratios for each year between the period of 2004 to 2013, with the 2013 value being 2.08 litres per litre of output.

GF disclosed total water consumption and water efficiency as kilolitres/tonne (kL/t) of production for the past three years, for separate geographic regions (Australia, New Zealand and Asia Pacific). For Australia, the 2013 values were 329 mL and 1.37kL/t respectively. Continuing from 2013, Lion reported (in their 2013 Sustainability Report) that over the past twelve months overall water use reduced from 8,512,007kL to 6,956,012kL and that water intensity was 2.56kL/kL. Kirin Holdings Company Ltd reported water intensity scores for a number of their operations, including their Australian subsidiary, whose intensity score seemed to be a little different to the calculation reported by Lion of 2.56m<sup>3</sup>/kL of beverage produced for 2013.

While IE and SA did not report any details of water consumption, Asahi Group Holdings, parent to SA, reported both global water consumption, and water consumption per unit of sales (m<sup>3</sup>/yen) for the past five years. For 2013 these values were 23,664,000 m<sup>3</sup>, and 13.6 m<sup>3</sup>/one million yen respectively. Unilever Australasia Pty Ltd reported: "we have made good progress in those areas under our control. In our own operations, water abstraction is down by 29% per tonne of production since 2008 and by 74% in absolute terms since 1995. However our biggest impact comes from the water used by consumers when they use our products where we have less control. By the end of 2013, our water impact per consumer use had increased by around 15% since 2010." They also reported that their

parent entity's (Unilever PLC) water use was 2.12m<sup>3</sup>/tonne of production for 2013. Unilever PLC presented the same information as their Australian subsidiary via their 2013 annual report.

## **Water saving strategies**

### *March 2009*

Extensive disclosures about water savings strategies were provided by CA, CCA and Lion. Very general comments were provided by GF, IE and UA that efficiency improvements had been made in recent years. Limited disclosure of specific efficiency strategies were provided by ABH and BAT. UA took an interesting approach, arguing that most of the opportunities for efficiency improvements within their supply chain rested with suppliers and consumers. While that may be true, this strategy may have also been designed to deflect attention away from the company.

ABH provided a dedicated 'Arnotts and the Environment' page which provided statements on efforts to reduce water usage at two different plants. At a Sydney production site, water usage was cut from 850,000 litres of water per day in 2001 to 500,000 litres per day by 2004, but there was no information as to how this was achieved. An environmental policy was also disclosed which committed to efficient use of water resources. The website added "that's why we work closely with water authorities, like Sydney Water, to identify opportunities for reducing water consumption". ABH's USA-based parent provided a 2008 'Corporate Social Responsibility Report' which only explained very generally that the multinational was "committed to reducing our environmental footprint through sustainable business practices" and that one of the four 'priorities' stemming from this commitment was reducing water use and waste water treatment. Clarifying their progress, they stated: "while we have been addressing these areas for decades, we plan to establish more formal goals and key performance indicators (KPIs) in each of these areas using 2007 as a baseline". The report further added, "plants develop individual action plans that must be executed within six months". The report stated, "all business operations worldwide ... sets goals for energy and water conservation, waste management and recycling."

'Sustainability reports' were provided on British American Tobacco (BAT) UK parent's website, which disclosed that reductions in water usage were "due to manufacturing rationalisation, water conservation activities, plumbing improvements and leak detection and rectification". The Australian website disclosed:

Our strategy is to reduce water usage across the company. ... Many measures to reduce usage are relatively simple: careful monitoring, care and attention, repairing leaks, ensuring all water use is essential, and recycling and reusing water where appropriate.

In December 2004 the company created the new position of Energy Manager. The appointment of an engineering manager to this position will enhance the focus on the reduction and economic use of the vital natural resources of electricity, gas and water.

CA disclosed in its 2008 UK annual report that the organisation had made a 17 per cent reduction in water use since 2006 and that 33 sites now had 'water reduction programs' in place. The 2007 annual report disclosed that "all 'water scarce' sites will have water reduction programmes in place". 'Sustainability' or 'social responsibility' reports were published on the UK website, with the 2005 report disclosing consolidated global water usage ratios as a percentage of production and advising that efficiency was improving. Elsewhere on the global website, the organisation outlined their 'purple goes green' program which "sets a vision for our company to tackle climate change. We intend to shrink our global environmental footprint by cutting our energy use, reducing excess packaging and managing our water use". The Cadbury PLC website provided a number of specific disclosures about water management practices in their Australian operations:

The water saving programme at our beverages plant in Australia replacing eight conveyor lines, exchanging water-based lines with new water free conveyor belt technology has contributed to the State of Victoria's water reduction target of 15 per cent by 2010. This will save up to 21,620 kilolitres of water a year.

Our Asia Pacific region is leading activity in this area and is helping to inform wider development. Australia and India are the lead countries. We are sharing lessons from the Asia Pacific region through workshops in the first half of 2008. We have also developed a water management toolkit to share good practice across the business.

Our Huntingwood site in Australia was awarded a Sydney Water Innovation Award for introducing waterless lubrication in its production. This has now been introduced across 12 lines in Australia and New Zealand, saving tens of millions of litres of water a year.

These specific disclosures were in addition to general disclosures providing insight into the multinational's global approach to water management:

Accountability for environment, health and safety cascades down from the main board (who bi-annually review our programmes), through each business unit to every individual. Each and every employee is responsible for some aspect of protecting the environment and health and safety.

Training programmes are conducted annually in different regions and these programmes not only raise awareness but provide practical information on how to conserve energy and water, undertake risk assessments, improve machine guarding, reduce waste, promote recycling and respond to spills and emergencies.

Cadbury Schweppes Ringwood site is mentioned on the [savewater.com.au](http://savewater.com.au) site as a finalist in the 2008 'Australian Save Water Awards', demonstrating innovation and achievement in the reduction of water used. They add that:

Corporate social responsibility has always been at the forefront of Cadbury Schweppes' business, so it comes as no surprise to see that its Ringwood site has undertaken various initiatives to reduce water usage. .... In addition to installing more than 300,000 litres of tanks for rainwater storage, the Ringwood site has converted all its urinals to waterless systems and has installed more than 35 water meters within the factory to gauge and monitor water use. Perhaps the biggest and most beneficial investment by Cadbury Schweppes Ringwood came with its upgrade of chilling equipment. This has so far reduced water consumption at the site by approximately 8ML or just over three Olympic-size swimming pools. "These initiatives complement a multitude of water-saving programs across our business here in Australia and elsewhere around the world," explained Mark Callaghan, Cadbury Schweppes' Managing Director – Confectionery, Australia and New Zealand. "For example, the waterless lubrication on our production lines at our Huntingwood site earned us a Sydney Water Innovation Award. This process has now been introduced across 12 production lines in Australia and New Zealand, saving tens of millions of litres of water a year."

Coca-Cola Amatil Limited (CCA) maintained a specific web page entitled 'Australian water reduction targets' which disclosed that:

over the past six years, water efficiency programs in plants across CCA have produced cumulative water savings of around 13 per cent. In 2007, CCA Australia has committed to reducing the amount of water used in production by a further 1 per cent to achieve a national target of 1.48L/FBL.' (litres per finished beverage litre).

Anecdotes of how this goal was being achieved were also provided:

Coca-Cola Amatil's Northmead plant has undergone a radical culture shift in the way the company and employees view water usage... during and after the Northmead audit, numerous changes were made to the lines, all contributing to saving the 230kL of water a day, or about two Olympic-sized swimming pools every week.

CCA's 'Australian water reduction targets' also disclosed detail of several awards that the organisation had received in relation to water management. Related disclosures appeared to be quite candid. For example, "prior to the audit CCA only knew how much water was coming in through the meter and how much was leaving as wastewater". CCA states "we work closely with state water authorities to find more ways to save water and we have won many water savings awards for our efforts". CCA also disclosed a 'group environment policy' and their 'water policy'. The group environment policy outlined their approach to waste reduction and sustainability and claimed that the organisation is:

committed to understanding and minimising any adverse environmental impacts of our beverage manufacturing activities... To this end we will identify and implement ways to improve the efficiency with which we use resources including water, energy, packaging, chemicals and raw materials.

Water related disclosures were also included within CCA's 'Corporate Responsibility Report 2008'. However, the report's content was similar to disclosures provided elsewhere on CCA's website. A message from the chairman and group managing director stated that water and energy savings were 'crucial'. In the report's 'strategy' section it stated that the organisation was "one of the world's most efficient users of water in the non-alcoholic beverage manufacturing industry". 'Water stewardship' was listed as the first priority of environmental management. Several pages of description of key plant level water efficiency achievements were provided. The report noted that "CCA Australia achieved one of the best water efficiency ratios in the global Coke System". This was documented (as also disclosed elsewhere) to be 1.56 litres per finished beverage litre (L/ FBL). The report also devoted a page to addressing 'bottled water – the facts'. These disclosures specifically stated that the bottled water industry had been subject to criticism and so went on to disclose a number of arguments supporting CCA's case for its production of water products. Finally towards the end of the report, several tables of '2007 figures' were provided, giving a disaggregated disclosure of the organisation's water usage ratio (along with other ratios including an energy usage ratio).



The Coca-Cola Company (the parent website) indicated significant disclosure of water related issues. Annual 'sustainability' or 'environmental' reports were available for download from 2003. An examination of the 2007/08 'sustainability' report indicated that water was a significant issue at the global level. Interestingly, while the Australian website focused on ground water extraction, water efficiency and waste water treatment, the issues raised about Australian operations in this global report focused on litter, recycling of packaging and projects to protect bio-diversity. Apparently, the global group felt that distinct dialogues needed to be addressed at different levels.

Disclosure of water saving strategies by GF, and water impacts, were more limited. The 2008 annual report stated that:

the Company's manufacturing sites are participating in water efficiency management programs conducted by various State Governments. The Company intends to utilise the knowledge obtained during participation in these programs to drive water efficiency improvement across the business.

Similar statements were made in the 2007 and 2006 annual reports. While not directly reflecting water management practices, the 2007 annual report noted that "Goodman Fielder was nominated as a climate change leader in the Food Industry in Australia and New Zealand on the basis of its response to the Carbon Disclosure Project". The company also disclosed a '2008 environmental policy' which made statements consistent with those in the annual reports that "resources such as energy, water, raw materials and consumables will be used as efficiently as practical and the amount of waste generated will be minimised to the extent practical". A web page devoted to 'Goodman Fielder's Environmental Management System' reported on the group's approach to environmental training programs. Water related key performance indicators were also calculated by site to "increase the transparency of each site's environmental management achievements and potential improvement areas."

Inghams Enterprises Pty Limited (IE), a privately owned Australian company, provided limited disclosure on water management and water related impacts. A web page entitled 'our philosophy – our environment' included a copy of the organisation's 'environmental policy'. It stated that the organisation's commitment to protecting the environment extended to, "development of an environmental management system that is integral to overall management, prevention of pollution, principles of 'reduce, re-use, recycle, recover' (purchase of recycled products), water, energy and material conservation and continuous environmental improvement."

The web page continued with disclosures on the organisation's 'environmental management plans', and to the organisation's approach to an annual site-by-site self-assessed 'environmental audit'. Without specifically referring to water, it stated that:

each Inghams site is required to implement an Environmental Management Plan (EMP). The EMP objectives are compliance with applicable legal and other requirements, identification of the environmental impacts of our activities, products and services, procedures for managing activities with a potential to impact the environment, continuous environmental improvement through setting and reviewing specific objectives and targets and define organisational structure and implementation and review responsibilities...

The Lion website disclosed a number of statements about recent water savings initiatives. It reported that both of its Sydney-based plants had taken part in the Sydney Water Corporation's 'Every Drop Counts' business program and achieved 'outstanding results'. Referring specifically to the organisation's Penrith production site, the company reported that although water usage had increased from 2006, water usage per unit of output 'represents "best practice" water efficiency of 0.82 L/L' (suggesting production had also increased in that period). The website added that overall, "since June 2000, Penrith has reduced water use by 35 per cent" and a number of initiatives explaining this decrease were listed.

Lion also reported that water authorities in Brisbane had targeted the organisation's two production sites in that city to reduce water usage by 25 per cent, and provided examples of how that was achieved. An 'Environment Program' page documents the organisation's environmental policy. It outlines the organisation's focus on saving water, indicating that all business groups had established plans and key performance indicators to achieve stated goals, which focused on 'actively reducing our water consumption' and '[aiming] to achieve best practice water use'. These goals were met through having 'water reduction targets and action plans':

Over the past 15 years, Castlemaine Perkins [the Brisbane site] has reduced its water consumption by 58 per cent which means the brewery now benchmarks among the best of its type in the world. The improvements have been achieved through a combination of strategically targeted capital investments, productivity improvements and vigilance in managing water wastage through employee involvement.

A distinct Dairy Farmers website was still accessible in March 2009<sup>3</sup> and disclosed that the organisation was ‘engaged in a program of water and energy saving.’

Lion also provided a ‘sustainability review’ and a ‘sustainability report’ for the first time in 2008. A ‘water conservation’ web page provided a graphical presentation of the organisation’s ratio of ‘water usage per litre of beer’ showing a steady decline from a baseline figure of 100 in 1995 to approximately 65 in 2006. Comments were provided about the factors motivating this focus on water efficiency:

Water is a precious resource and vitally important to us because it is one of the main raw materials we use to make beer... over the past few years, dam levels across much of Australia have dropped to alarming levels... Lion Nathan has had an ongoing focus on water conservation for over a decade however the drought that’s struck much of Australia over the past few years has made us more aware than ever of the need to keep improving our water management practices.

Other Lion disclosures indicated that all production sites had ‘programs and initiatives in place to reduce and improve the efficiency of water usage’ and that sites across several states were preparing water savings plans and working with local authorities to improve water efficiency. An ‘aspects and impacts’ web page provided examples of specific ‘capital investments’ and ‘productivity improvements’, including “installation of water meters around the site and installation of a resource management software system”. The ‘case studies’ page finished with this statement:

It’s also the simple things which are really important and add up in the overall saving of water used on the site. These include re-using water at every opportunity, using sweeper machines rather than hosing for cleaning outdoor sealed areas, turning taps off during work breaks, not leaving hoses running and reporting leaks and wastage to management. In addition, training programs, our website and environmental notice board help to raise awareness, share ideas and instil a water saving culture and protection of the environment across the business.

Lion’s website also disclosed that the plant made public disclosures through its ‘Alehouse Visitors Facility’ which “features a display by Brisbane Water and a chart which shows our performance and initiatives in saving what we consider to be our most precious resource”. A 77-page ‘2008 Sustainability Report’, published through its website, reiterated several matters also disclosed elsewhere. Water

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<sup>3</sup> The purpose of this website appears to be largely to promote the brands and domestic operations of this company.

efficiency achievements at the Castlemaine Perkins brewery in Queensland were reiterated strongly in this report, including photographs of the water treatment plant. The report added that: “Many years ago, and long before environmental sustainability became fashionable, our journey began with initiatives to reduce water and energy consumption and to embed a culture of environmentally responsible production”. No specific disclosures were provided by the Japanese parent relating to the Australian Lion operations.

For UA, both an Australian website for the non-listed subsidiary and a UK-based website for the listed parent contained a significant number of disclosures on sustainability. Quantitative data was provided, referring mainly to water usage and savings. Some of the content on the Australian website appeared to re-use information disclosed on the global parent’s website. The Australian ‘environment and society’ web page disclosed several general statements about the organisation’s values. The page added that, ‘globally [the group] has identified agriculture, fish and water as areas in which we can make the most difference.’ A web page devoted to water, reported that the organisation had:

estimated our water use through the full life-cycle of our products and right across our product range, from raw material sourcing to consumer use of products ... Unilever’s manufacturing operations account for about 3 per cent of its total water imprint. Our main water imprint is associated with the growing of our raw materials (upstream from our factories) and with the consumer use of our products (downstream), not with our manufacturing operations.

The agricultural activities referred to above were undertaken by external suppliers and so this disclosure is cleverly constructed to suggest that most water related impacts are more directly the responsibility of other parties. The disclosure discounts the fact that internal manufacturing operations also require significant water consumption. The disclosure ended: “this explains the importance we place on our sustainable agriculture initiative and on the need for us to work with consumers to foster the responsible use of water”. A copy of the ‘Unilever Australasia Environment Policy’ disclosed that the organisation sought to “reduce waste, conserve resources, in particular water and energy, prevent pollution and explore every opportunity for waste re-use and/or recycling.”

Elsewhere on the Australian website, a May 2008 media release noted that “Unilever Australasia has registered another outstanding result in the 2008 Corporate Responsibility Index (CRI)”. The Australian website had several links to documents prepared by the UK parent. For example, a ‘Unilever and Water’ report, which had apparently been produced some years earlier, noted that “our factories around the world are working hard to reduce their water consumption – already down 7.2 per cent in 2001 compared to 2000”. Emphasis was given to the efforts made by the organisation’s consumers and

suppliers: “We will increasingly be working with our suppliers, especially within the agricultural sector, to reduce the total supply chain impact on water”. The UK parent’s website provided a general disclosure:

Since 1995 we have reduced the amount of water used per tonne of production by 63 per cent by minimising water use and maximising water recycling. During 2008 we achieved a 3 per cent reduction in water use compared to 2007 – from 3.05 cubic metres to 2.96 cubic metres per tonne of production ... ‘This reduction has been achieved through many initiatives. For example, our factories collect reusable water which would otherwise be wasted, such as water evaporated from fruit and vegetables during the drying process.

### *May 2013*

In general, the disclosures provided into 2013 by all nine case organisations had reduced from what was provided in 2009. However, there was a growing emphasis on water footprinting, and some increase in general related disclosures by foreign parent companies.

In 2013, ABH’s webpage now noted simply that the group has an ‘environmental policy’ which includes goals to “limit emissions to the water, air and land, and the efficient use of resources”. A ‘sustainability’ page by Snack Brands Australia website provided a copy of a 2009 water efficiency award and commented that the company reused more than 90 per cent of water through its wastewater treatment plant. The USA parent’s website noted that water management for the group as a whole was currently focused on improving their accounting for their “strong water recycling and stewardship practices”. In 2013, BAT noted that the company has developed a “methodology for evaluating the long-term water supply and demand requirements in ‘high risk’ locations”. This vague comment could either mean risk from the perspective of society or from the perspective of the company (probably the latter). The webpage noted that the company will continue to target low water usage, however little detail was provided on how this might be achieved. Greater clarity was provided in an assurance comment from Ernst & Young, who explained that the company has developed “new five-year targets” requiring a 1 per cent reduction year-on-year between 2012 and 2017. The same data was also disclosed on their UK website. CA’s ultimate parent, Mondelez International, provided limited disclosures of overall global water savings and related strategies.

Some detail was provided in 2013 by CCA on its water saving strategies in its ‘2011 Corporate Responsibility Report’. A ‘blow fill production process’ was being implemented in both Sydney, Victoria and South Australia. Disclosure was also provided about the company’s ‘Innov8’ program, which

encouraged staff to share water savings ideas. It seems that a strategy here was to impress with a cleverly named and apparently innovative program. Other water saving strategies are described including capturing and recycling clean water sources, rinse optimisations, 'clean in process' techniques, and pervasive sub-metering and leak detection programs. The CCC parent website commented on a target to be "striving to replenish an amount of water equal to what we use in our finished beverages by 2020". There was also disclosure about the group's early efforts to develop 'water footprinting' of its products. They explained that Coca-Cola Europe was proposing a methodology which they are seeking to contribute to the 'global dialogue'. These comments would appear to suggest some effort to become an 'authority' on water footprinting, at least with respect to beverages. Like ABH and Lion, we can observe that much of CCA's 2013 disclosures appeared to be recycling what had been disclosed when last we looked, in 2009.

IE continued to provide limited water disclosures into 2013. Their 'sustainability' page noted a commitment to reducing water use and managing wastewater. The website noted that each processing site has developed a 'sustainable water savings plan' and that the company aimed to achieve a five-star rating water management for each major site. Elsewhere the company noted that this commitment to sustainability had been recognised by winning the 'Australian Prime Minister's Water Wise Award' in 2010 for their achievements with an advanced water treatment plant at the Queensland site. No other specific detail was provided.

Lion was providing little insight into the group's water savings strategies by 2013. Some discussion of creek rehabilitation projects was provided. Recent Lion sustainability reports were interesting, however, in that they now attempt to cover a broad range of issues including packaging, employee health issues, and animal welfare (re dairy farms). Lion's Japanese parent provided some specific comment on water efficiency within their Australian operations, noting that floods in Brisbane in 2011 inundated the water recycling plant at their Castlemaine brewery so that recycling plant was "out of action for six months". It would be interesting to know how much these repairs cost the organisation (we are not told). The disclosure went on to emphasise that efficiency was improved at the Auckland operations. This is interesting because drought conditions impacted in New Zealand in recent years whilst they abated in Australia, and so some adaption of disclosures is evident here to emphasise positive actions in a new water 'hot spot'.

Little water related disclosure was evident on the SA website by 2013. There was some reference to water saving strategies including low flow taps, education programs, water-less lubrication systems with comment on how much water this saved. The website also disclosed an environmental policy, which stated that the company was "committed to minimising the impact" with an ultimate goal of creating

'zero harm' to the planet. 'Zero' harm is a bold statement and it was not clear how this might be achieved. As with several other case organisations, much of these disclosures refer to old achievements that we previously cited on their website in 2009.

In 2013, UA provided a 'sustainable living' page with consideration information on water. The website noted that a move towards concentrated laundry and kitchen liquids meant that they had been able to reduce the water used in manufacturing. Presumably there were also several benefits for the organisation through developing smaller and more concentrated products. UA also note that water use per tonne of production has decreased by 7 per cent from 2011 to 2012 through reducing water in cleaning processes, harvesting rainwater, and leak detection. In general, UA disclosures were unclear about where exactly these activities were taking place; it could even be that these disclosures refer to the multinational generally rather than Australian operations specifically. The website goes on to disclose activities undertaken to develop water footprinting since 2009. Apparently, what UA had learnt from those efforts so far, is that their water intensive crops were tomatoes and sugarcane. They therefore explained that they had been working with these suppliers to help introduce drip irrigation. As in 2009, much of the information on UA's websites referred to water efficiency at the supplier and consumer level. While UA therefore seemed to be continuing with a strategy of deflecting to suppliers and consumers, the disclosures provided on both the Australian and UK parent websites suggest that the group was quite proactive in developing water sustainability projects in the communities where it operated.

### *September 2014*

In 2014, a trend continued towards less disclosure. While foreign parents tended to disclose more, much of that detail was very general, with little specific reference to Australian operations.

In ABH, Arnotts provide no disclosures in this category. The Campbell Soup Company made a statement about goals to cut their environmental footprint by 2020, including reducing water use per tonne of output by 50 percent. Snack Brands Australia continued to disclose the fact that significant volumes of water were re-used in their Smithfield production site (currently 65 per cent). The Campbell Soup Company parent stated,

since our 2008 baseline year, we have realized a 20.7 percent reduction in operational water use through FY2013. In order to sustain this progress, a team of Campbell employees and outside experts are evaluating the process currently used to manufacture products in our most

water-intensive operations — the facilities that manufacture soup, sauce and juice products. This effort is expected to result in a manufacturing process that is more uniform across our network and one that is much more energy- and water-efficient.

BAT's disclosures had significantly reduced by 2014. A key statement from their 2012 sustainability summary report was that they were progressing towards their 2017 goal of 3.6 cubic metres per million cigarettes equivalent produced. Their website also made the general statement that "our sustainable water management strategy has been strengthened to include a methodology for evaluating the long-term water supply and demand requirements in 'high-risk' locations." This could of course mean risk from the perspective of the environment or the company (and so was probably, in the first instance, the latter). CA's ultimate parent Mondelez International, disclosed that one of its Australian production sites had been nominated for a water savings award.

CCA also reiterated past disclosures noting a number of water saving strategies. The 2013 Sustainability Report reiterated detail on their "blowfill" technology for PET bottle self-manufacture and waterless conveyor lubrication. Suggesting some challenge with achieving efficiency targets, the report also reported 'temporary' water use spikes because the new technology was still in the process of implementation. CCC, the US parent, gave a general statement in their 2014 sustainability report that "between 2005 and the end of 2013, through 509 community water partnership projects in more than 100 countries, we balanced an estimated 68 percent of the equivalent water used in our finished beverages." In a document entitled 'Carbon Disclosure Project', CCA also outlined a number of water related goals:

- engage with our key agricultural suppliers to assist in improving water use and crop yields;
- maintain site management plans in accordance with our Quality and Environmental Management Systems for mineral and spring water sources, taking into consideration the hydrogeological aspects of each source, their zones of influence, sustainability and use; and
- maintain open dialogue with governments, non-government organisations and local communities about water resource management.

In their 2013 Annual Review, GF provided a case study of water efficiency achievements at one of their bakeries: "the team at Quality Bakers Oamaru has delivered a 19.6 per cent reduction in water use per kilogram of product by eliminating overflow from the mince cooker." This case appeared to be a response to the developing drought conditions in New Zealand. GF also outlined several water saving strategies, including updated training for staff, waste water improvement projects and managing leaks and controls in water top up processes.



Reiterating past disclosures, IE disclosed detail of awards achieved for water savings and stated:

in 2009 we opened an advanced water treatment plant at our site in Murarrie, south-east Queensland. Through the use of advanced treatment processes, including reverse osmosis, we can treat our water to extremely high standards, reducing our reliance on local water supplies and as a result making this site more sustainable.

Kirin, the Japanese parent of Lion outlined a few examples of water saving initiatives undertaken in their Australian operations. These include a water mapping exercise and prioritising the reuse of water in most manufacturing sites. They noted some detail of other water savings initiatives at the Australian level including efforts to reduce ground water usage at their King Island dairy site in order to limit impacts on the local community. Kirin also disclosed the water saving target for their Lion business: “we will reduce water intensity by 10% from the level in 2011 by 2016.” Lion noted that their goal was to reduce water usage by 10 per cent by 2016, and made the following statement:

we’re proud to be a regional leader in water management. Some of our plants boast world-class standards in water management and in many cases exceed them. We’re working hard to achieve ambitious targets to further improve our water efficiency through investment in new, more efficient plants and finding better ways to do things through the practical, day-to-day decisions made by our people.

SA continued to reiterate past disclosures noting a number of water saving strategies including waterless lubrication systems, a rain water harvesting system and the installation of water efficient appliances including low flow taps. The Japanese parent Asahi, provided the following very general statement:

Asahi Soft Drinks Co., Ltd. recognizes that the preservation of water resources is an important issue for the Asahi Group. At our factories, we are working to reduce water usage by setting a water consumption basic unit target. We are also managing our wastewater.

UA stated that water savings were made in the cleaning of production lines, harvesting and re-using storm water, and an on-going identification and elimination of leaks. UA added that they sought to “halve the water associated with the consumer use of our products by 2020.” Similarly the UK parent, Unilever PLC, provided several statements about global initiatives such as rain water harvesting, improved sub-metering, employee awareness campaigns, and the reuse of treated effluent, along with detail of initiatives undertaken with suppliers. A statement was also made relating to their Australian operations: “in Australia for example, tomatoes have been grown using up to 70% less water.” The

parent also stated that by ‘using innovative technology, we aim to create laundry products that require less water in use.’ This theme of focusing on water inefficiencies at the supplier and consumer level continued from previous years. These efficiency goals at consumer level are curious and one might ask; how can a laundry liquid enable a halving of water use by consumers? Won’t they still be doing just as many loads of washing? While it’s clearly admirable to create such goals, questions arise as to their measurability.

## Sources of water

### *March 2009*

While extensive disclosures were provided on this issue by CCA, almost nothing was disclosed by the other eight case organisations or by CCA’s US parent, CCC. Extraction of ground water featured heavily in CCA’s disclosures, suggesting this was perhaps a contentious issue for the organisation and its stakeholders. Explaining where the organisation sourced water, the CCA Australian website disclosed:

Water use varies per state. Annual bottled water production for all water companies accounts for less than 0.01 per cent of the total amount of groundwater withdrawn from Australia and New Zealand. We use “town” or “mains” water to produce our carbonated soft drinks. ... Most of the water used goes into the beverage, with just two cups per litre left to run and clean our manufacturing sites.

CCA’s ‘bottled water’ webpage commented on sustainability:

We go to great lengths to measure, monitor and assess our use of groundwater. CCA invests in infrastructure, stringent monitoring of its water use and undertakes rigorous hydrogeological studies at its water sources. Licence conditions at CCA’s water sources explicitly state that any taking of water is sustainable, as does CCA Australia’s water policy. Throughout 2007, CCA is rolling out a remote monitoring system at our water sources across Australia. The technology will enable us to see real-time standing water levels, water quality and flow rates at any site at any time of the day.

CCA explained that the Australasian Bottled Water Institute audits CCA’s ground water extraction. CCA also explained that they partnered with Landcare Australia to regenerate land and contribute to local

biodiversity. A separate 'Peats Ridge Springs Update' web page disclosed significant detail on an application to secure permanent access to extract ground water from the organisation's Peats Ridge site on the Central Coast of NSW and the legal disputes that followed. Among other details, it was stated that based on an independently prepared hydro-geological report:

the Department of Water and Energy (DWE) considered that there was sufficient evidence to indicate that extraction of up to 66ML of groundwater from the site should not adversely affect the aquifer in the long-term provided the existing monitoring and management plan was continued. Consequently DWE recommended that the extension of the licence to 66ML be granted on a permanent basis.

Despite this, the website reports, the local council had recently rejected the organisation's application, and "on 1 October 2008, The Land and Environment Court of NSW upheld CCA's appeal". The website further reports:

In 2006, CCA put out an offer to other water users in the Peats Ridge area to fund the installation and maintenance of equipment to monitor water use. CCA has been working with Landcare Australia, the Hawkesbury Nepean Catchment Management Authority and the National Centre for Groundwater Management at the University of Technology Sydney to scope out how a monitoring and regeneration program might work.

Suggesting that they were referring to an experts' report (but not making that clear), the web page continued,

a 'Kulnura Mangrove Mountain Water Sharing Plan' indicated 'that on a long-term average, each year 9,007 megalitres of water is recharged into the aquifer from rainfall and river flows. Under the plan 2,444 megalitres of this recharge is allocated for water users, while the bulk remains for environmental flows.

Lion's '2008 Sustainability Report' explained that,

water was sourced from municipal authorities (79 per cent) and from groundwater (21 per cent). In South Australia, we draw some of our water from an artesian well. We provide fresh water from the well to the local community in exchange for a gold coin donation, which is used to support local causes.

### *May 2013*

CCA continued to provide some related disclosures, but interestingly, little now on ground water extraction and the tensions at Peats Ridge in NSW. It would seem that that episode of tension had now largely been resolved. Most related disclosures from CCA were now related to effluent management, and so are included in the section that follows. None of the other eight case organisations provided any disclosure in 2013 that could be specifically described as information of 'sources of (Australian) water'.

### *September 2014*

While BAT, GF and IE continued to provide no reporting under this category, several other companies were now providing some related disclosures. Most of those limited disclosures however, were provided by foreign parent companies and provided little specific detail in relation to Australian operations. CCA again devoted some attention to the contentious issue of ground water extraction.

Under ABH, the Campbell Soup Company now reported estimated impacts of water use in each of the multinational's geographical locations. Their 2014 CSR report stated, "each year, we perform a site-by-site mapping of water usage and cross-reference the World Business Council for Sustainable Development (WBCSD) Global Water Tool to include near- and long-term water scarcity." A table was then provided with the geographic locations of all global facilities, noting the type of operation in each case, and whether the 'annual renewable water supply per person' was 'extremely scarce', 'scarce', 'stressed', 'sufficient' or 'abundant' in each location for the year 1995, with projected values for 2025. Interestingly, according to these estimations, Campbell's Australian operations suffered the most from water scarcity.

In their 2013 sustainability report CCA offered two pie charts to represent their sources of water use. First, total water use was broken down by geographic region. Second, a percentage breakdown of total water use by source (municipal, groundwater, surface etc.) was provided. In their 2014 Sustainability Report, the US parent (CCC) provided a similar pie chart breaking down total water use by type. CCA also took the opportunity in 2014 to respond to criticisms regarding bottled water:

CCA believes criticism of bottled water by activists is misplaced. CCA's use of groundwater for water bottling is sustainably managed through stringent hydrogeological assessment prior to any withdrawal commencing and continuous monitoring at the source during withdrawal. Since

2008 CCA has been performing Source Vulnerability Analysis (SVA) on all its groundwater sources to ensure they are sustainably managed.

Clearly, CCA was trying to get on top of the dialogue about bottled water into 2014, and seeking to present itself as an authority and a responsible manager. The US parent reported on a global target to 'replenish 100% of water used in our finished products' and 'improve water efficiency by 25% (compared to a 2010 baseline).' Replenishing 100 per cent of water use seemed hugely ambitious, and raises a number of questions, including how that could be done (through collection of rainwater?; recycling?), and how would they use it (internally?; to return to the environment?). The website suggests that much of the answer to the latter question is 'communities and nature'. This could mean a variety of things including simply channelling rain water from factory rooves into nearby creeks (as opposed to channelling it into storm water drains).

Kirin (the Japanese parent of Lion) provided a very general statement that the majority of their operations were located in large urban areas and hence had a considerable impact on local water sources. However, specific data dissecting by geographic location and volume/type of water used, was not provided. Lion provided a little more detail noting that for 'health reasons', food and beverage producing organisations had limited opportunity to recycle water. Nonetheless, they noted that some vineyard operations utilised rainwater, and that their King Island dairy used groundwater as a major source. Relevant water volumes in each case were however not provided.

Concerning SA, the Japanese parent Asahi, provided some reporting on the group's impacts on ground water sources in the Mt Fuji area from which 100 million 'cases' of bottled water were produced annually. Unilever PLC also did not geographically specify any of their operations or provide data on the volume of water taken from each site. However, they did provide a general statement about efforts to assess the impact of water use at various sources:

to understand where we have manufacturing sites in water-scarce locations we use a combination of publically available and bespoke tools to identify risks in our direct operations and supply chain. Water scarcity ratings are then validated with local knowledge and publically available data provided by regional and site teams.

## Effluent levels and management procedures

*March 2009*

Some disclosures on this issue were provided by ABH, BAT, CCA, GF and Lion.

ABH's Australian website reported an environmental policy which committed to limiting effluent outflows. The USA Campbell group's 2008 CSR Report outlined the company's comprehensive internal water treatment processes, which were designed to meet product quality requirements and environmental concerns. The report added that:

in all Campbell plants around the world, we have implemented water reduction measures and established systems to ensure that the water used in our operations is appropriately cleaned and treated before it is returned to the environment. A substantial amount of the water is cleansed and reused within our plants to clean vegetables and reduce our fuel and steam requirements.

BAT's Australian 'Occupational Health and Safety, Environment and Quality Policy', outlined very generally that BAT's aimed to "continuously monitor emerging environmental issues, prevent pollution caused by our activities and continue to reduce environmental emissions of noise, odour, liquid, gaseous and solid wastes from our operations." BAT's 2004 Australian 'social' report disclosed that some treatment of waste water occurred on site before disposing through sewerage. The 'Sustainability reports' provided on the UK parent website disclosed consolidated global waste water discharge levels for 2005 and 2006. 'Water stewardship' was listed as the first priority of environmental management within CCA's 'Corporate Responsibility Report 2008' with several pages of description of key plant level wastewater treatment achievements. A web page devoted to GF's 'Environmental Management System' reported that the organisation had programs including specific modules addressing water conservation, waste management and preventing soil and water contamination.

Lion's 'Environment Program' outlined the organisation's focus on improving waste water management. Elsewhere, Lion disclosed that its Castlemaine Perkins plant had also "reduced our effluent discharge per litre of beer packed by a massive 67 per cent since 1990". A '2008 Sustainability Report' further elaborated that "most of our breweries discharge their waste water to municipal treatment plants, which discharge to water bodies after treatment". The disclosure continued that some wastewater was used to irrigate park and golf courses and so on: "In FY08, Lion Nathan's estimated discharge of waste water was 2,600 megalitres, which is more than 5 per cent less than last year". Under a section on

biodiversity, the report disclosed some general detail on wineries that had been participating in wetland re-vegetation projects.

### *May 2013*

ABH, BAT, CA, GF, IE, and UA disclosed little or no details on effluent impacts in 2013.

CCA continued to provide some related disclosures. Its 2011 'Corporate Responsibility Report' gave some general statements that all plants and production facilities met regulatory standards in relation to the treatment and discharge of waste water and that:

all CCA Australia's manufacturing operations discharge only to government or privately operated treatment facilities which then treat wastewater to primary, secondary or tertiary level before discharge. Each facility is licensed by the receiving corporation to discharge wastewater with limitations on both quantity and quality of discharge so as not to affect the receiving corporation's ability to treat the wastewater before final discharge. Individual CCA sites in Australia treat wastewater on-site to differing levels depending on the requirements of the receiving facility.

Kirin, Lion's Japanese parent simply stated that "we treat wastewater before discharging it into rivers and oceans". Asahi, SA's Japanese parent, disclosed total global effluent discharge of 8,357,000m<sup>3</sup>. In 2013, UA disclosed that in 2012 the company invested in a number of effluent recycling projects at sites in South Asia which reduces consumption by 60,000 m<sup>3</sup> per year and saves €17 million per annum. General statements were made about a commitment to reduce environmental impacts. Somewhat curious metrics were provided such as: "since 2008 we have saved the equivalent of around 1.5 million litres of water for every person on the planet". As with many disclosures by the UA group, it was unclear whether some or all of these statements related to issues within Australia, or for the multinational more broadly.

## *September 2014*

ABH, BAT, CA, GF, IE, and UA disclosed little or no details on effluent impacts in 2014.

CCA's 2013 'Sustainability Report' repeated precisely, the disclosure provided about in its 2011 'Corporate Responsibility Report'. The 2013 report also outlined treatment procedures for effluent:

at a minimum a site will treat effluent to a primary level, solids removal and or pH adjustment, etc. before then discharging to the municipal treatment works. Each facility which utilises the municipal treatment option is licenced and regulated by the receiving facility to do so and is limited in both quantity and quality of effluent so as to not grossly affect the receiving corporations' ability to treat the wastewater before final discharge.

CCA's US parent, CCC, reported six globalised targets regarding quality requirements for treated effluent. For example, the group seek to ensure a pH of 6.5-8 and total suspended solids of <50mg/l. CCC also reported on their progress towards goals of returning water to the environment "at a level that supports aquatic life."

Lion provided an overview of a 'Pollution Monitoring Report' which outlined a recent NSW EPA groundwater assessment at their Lidcombe factory site. Lion's Japanese parent, Kirin, provided a general statement about compliance with laws and regulations within all countries in which it operates, along with some comment on the in house processes used to treat waste water. Data was not provided on the volume of effluent or on particular contaminants within it. SA's Japanese parent, Asahi, disclosed total global water discharges (in cubic metres) from 2009 to 2013. The disclosure explained that an anaerobic process was used to control wastewater quality. All of this appears to relate to Japanese operations (and does not relate to any foreign subsidiaries). Comment is also provided that Asahi is an early adopter of these technologies in Japan.



## Impact of effluent on the environment

### March 2009

Limited disclosures on this issue were provided by any of the nine case organisations on this issue.

BAT's 2004 Australian 'social' report disclosed the destination of waste water (all to municipal treatment plants) and that "the use of water by BAT Australia does not affect Ramsar-listed wetlands<sup>4</sup>". 'Sustainability Reports provided on the UK parent website stated that the organisation had no impact on protected water bodies. In relation to the organisation's impact on biodiversity, the report disclosed that "measuring our impact on biodiversity is complex", but nevertheless "it is something we are working hard to achieve". They added that "we aim to develop a style of reporting that is comprehensive without being overly complex", suggesting that reporting was expected to evolve in coming years.

In Lion, a distinct Dairy Farmers website disclosed:

during the year the Co-operative has been working with Sydney Water and the NSW EPA to improve waste treatment processes and facilities at Wetherill Park. Unfortunately, in March 2007 a small spillage occurred from a waste treatment tank at the site, which caused an off-site odour impact. As a result of the incident, the NSW EPA issued the Co-operative a penalty notice and a fine of \$1,500. Since then, the Co-operative has implemented various measures to reduce the risk of re-occurrence and currently has tenders out for a significant capital expenditure project to improve waste treatment at the site which is expected to be implemented in two stages over the next 18 months.

UA maintained a specific web page addressing 'biodiversity' which noted that "our water sustainability initiative considers biodiversity as a critically important factor in the management of water resources... Examples of partnerships include the Living Lakes program and the Pasig<sup>5</sup> and Brantas<sup>6</sup> river projects". It was unclear from that page where these two rivers were. However, a link to a global web page on the

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<sup>4</sup> The Ramsar Convention on Wetlands of International Importance (1971). The Convention's mission is "the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world".

<sup>5</sup> Philippines

<sup>6</sup> West Java

multinational's 'SWIM' program (involving investment in 'sustainable water management programs') indicated that they were not in Australia. A 'Unilever and Water' report on the company's Australian website went on to reiterate projects undertaken under the organisation's 'SWIM' program, which "incorporate[s] a practical approach to helping Unilever and our partners ensure that the community water partnerships we engage in are effective and successful". The Australian website also contained a link to a report on the multinational's 'Living Lakes' program. This program was "a network of environmental partnership organisations striving for the protection of lakes worldwide". The program "suggested ways for businesses, NGOs and others to work together to promote lake and wetland quality". While several lake sites were part of this project, none were in Australia.

### *May 2013*

Limited disclosures were provided in 2013 from CA, CCA, GF and Lion. In most case, related disclosures provided only very general insight.

In 2013, CCA disclosed a policy on wastewater treatment which stated that they were committed to complying with regulation and having no adverse effect on aquatic life. Some detail was also provided on recent effluent impacts including the fact that in 2010 and 2011 there were some trade waste agreement breaches but none resulted in regulatory penalties. The company also discloses that Coca-Cola South Pacific was awarded the 'Banksia Environment Award 2010' for improving effluent quality from sugar cane farms in Queensland which impact on the Great Barrier Reef. The website also disclosed the company's 'national water scholarship' which was apparently run through the 'National Centre for Groundwater Research and Training'. There was no further disclosure about either of these resources; both could be a part of strategies targeted to address pressures regarding the company's extraction of groundwater for bottled water products.

GF provided some vague disclosures in 2013 on breaches of trade waste discharge limits. Information was provided that those sites now undertake 'cleaner production technique', have undergone training with the local water authorities and have developed plans to resolve those issues. As in 2009, the language utilised by GF was very much focused on regulatory compliance. Kirin, Lion's Japanese parent, continued to state that wastewater was treated "before discharging it into rivers and oceans". Some comment was also now provided on how this was done using "anaerobic and activated sludge methods".

## *September 2014*

Disclosures on this issue had declined again by 2014. Asahi provided a general statement about a Japanese environmental preservation project undertaken by employees and their families: “the preservation activity for water source forest areas aims to create and maintain healthy forests and to preserve water sources on a permanent basis. The program involves tree planting, underbush cutting, thinning and pruning.”

## **Investment in water savings infrastructure**

### *March 2009*

Clearly, some of these organisations were investing in expensive water specific infrastructure as disclosed by ABH, BAT, CA, CCA and Lion.

An ‘Arnotts and the Environment’ webpage disclosed that one ABH site had managed to make “significant progress in the past 18 months in reducing waste and water consumption by installing, among other things, a \$390,000 waste-water treatment plant”. The volume of reduced water consumption was not provided. BAT’s 2004 Australian ‘social’ report disclosed that there had been no recycling of water from 2001 to 2004. ‘Sustainability reports’ provided on BAT’s UK parent website disclosed for 2006, that the amount of water recycled and reused had increased in recent years, and was being used for “sanitary and garden maintenance purposes”. CA’s UK parent provided a number of specific disclosures relating to their Australian operations:

at the Australian confectionery factory we recently installed rain water harvesting infrastructure for toilet flushing, cooling towers, boilers and gardens which has saved 4m litres per annum.

CCA’s ‘Corporate Responsibility Report 2008’ highlighted that a rainwater harvesting system had been installed in their Northmead (Sydney) plant. Lion disclosed that the Penrith production site, had recently installed a water recycling system. In addition, it was reported that related investments had resulted in ‘one off’ costs of \$84,000 and that, as a result, the Penrith site now saved \$139,000 and 30,800 KL annually. A distinct Lion Nathan web page detailed a number of ‘water conservation case studies’. For example, the organisation was “implementing new, water efficient processes and purchasing water efficient equipment. For example, new pasteurisers and cooling towers at Castlemaine Perkins save 150,000 KL water per annum” and “reviewing our processes which use water and applying cleaner

production principles to continuously reduce consumption". The page provided detail of a \$16 million water recycling initiative at the Castlemaine Perkins brewery in Milton, Queensland. It was reported that approximately one-third of that cost had been funded by the local water authorities as a part of government efforts to encourage water efficiency initiatives in business. That plant will:

generate ultra-high pure water for use for non-product applications and provide energy for steam generation through the biogas generated from the digestion process. This will reduce our water consumption by around 40 per cent and bring Castlemaine's usage to world's best practice at around 2.2 litres of water per litre of beer produced.

### ***May 2013***

By 2013, disclosures on this issue had diminished, suggesting a decline in related investments in recent years.

The Arnotts Biscuits Holdings Pty Limited (ABH) website noted that the company's Marleston bakery has installed a \$390,000 wastewater treatment plant which would appear to be the same investment reported when we last looked in 2009. CCA's 2011 Corporate Responsibility Report disclosed that the company has invested \$8 million in 'infrastructure, expert hydrologists and technology' with respect to water. A key function of all of this vague reference to investment could simply be monitoring the quality of water as an ingredient in order to meet product quality standards (rather than a distinct 'environmental' objective).

IE provided some comment in 2013 on an 'advanced water treatment plant' constructed at a site in Queensland in 2009, which now allowed the company to "treat our water to extremely high standards, reducing our reliance on local water supplies". SA disclosed some detail in 2013 of a rain harvesting system installed in their Melbourne site which was estimated to save 7.5 million litres of water per annum.

### ***September 2014***

Generally, in 2014, disclosures on this issue had diminished further.

In their 2013 Sustainability report CCA outline two water saving investments. First, reference was made to the \$450m investment in PET bottle self-manufacture or “Blowfill” (bottle design, construction and filling) technology. The water related benefit in this investment was that it was expected to result in less water consumption per unit of output. Second, they explained that “since 2006 CCA has invested more than \$8 million into infrastructure, expert hydrogeologists and technology to ensure our water sources are sustainably managed. Every potential water source undergoes a stringent hydrogeological assessment process.”

CCA’s US parent, CCC, disclosed that “together with partners such as WWF, USAID, The Nature Conservancy, Water for People, United Nations Human Settlements Programme, and the United Nations Development Programme, we have invested more than \$300 million in replenishment programs globally.” UA provided a link to the parent’s 2013 Annual Report, which stated that globally, the group had invested €1.6 billion in six new factories that include eco-efficiency technologies such as energy-efficient motors and rainwater harvesting for re-use in water-stressed locations.

### **Other - reference to the GRI and ASX Corporate Governance Principles**



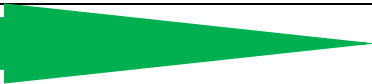
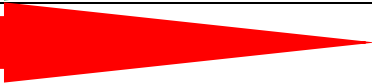
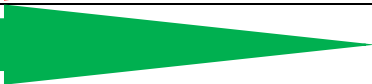
Reference was made in 2014 to utilising the reporting guidelines provided by the GRI within the foreign parents only of ABH, CCA and SA. Responses to each indicator are incorporated as appropriate, within the findings, above. All related 2014 disclosures referred to version G3 (rather than the now current G4). While Arnotts Biscuits and Snack Brands Australia did not refer to the GRI, the Campbell Soup Company disclosed that the GRI’s G3 reporting guidelines were used. The Coca Cola Company also disclosed that they employed the GRI’s G3.1 reporting guidelines to evaluate their water use and water savings/recycling. While Asahi (the Japanese parent of SA), disclosed that they utilised GRI’s G3 reporting guidelines, their Australian subsidiary SA, did not explicitly make any reference to utilising the GRI.

No reference to our subject matter of investigation was made by any of the companies listed on the Australian Stock Exchange in our sample to the ASX’s current ‘Corporate Governance Principles and Recommendations’. It will be interesting to observe whether this changes when the third edition, which contains the new Recommendation 7.4, comes into effect for financial years commencing on or after 1 July 2014.




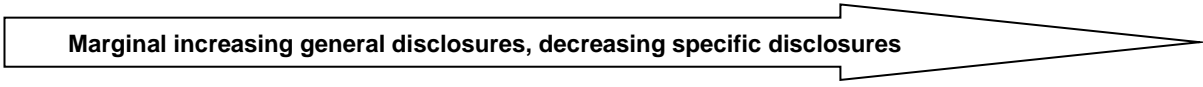
## Discussion

Figures 2a, 2b, 2c, 2d, 2e and 2f, provide an overview of the extent to which the water related disclosures provided by each of the target organisations in 2009, 2013 and 2014, addressed the six identified water related issues for potential disclosure. Some disclosure responsiveness to the drought was evident in 2009, with a range of largely qualitative and descriptive disclosures focused, in particular, on explaining water saving strategies. Limited insight was also provided into details of water consumed, and investment in water related infrastructure, including internal water treatment plants, water recycling facilities and some rain water capture and reuse infrastructure. Several were beginning to provide some indication of the ratios of water used per unit of production. These disclosures can provide significant insight into water efficiencies for internal management and external stakeholders, particularly where supported with statements about how the ratios have been achieved and any limitations in their water management methodologies or practices. Such disclosures become increasingly useful for a community concerned about water usage and keen to know that the large water consuming organisations are targeting water efficiency as a management strategy. In general, the disclosures support evidence that these organisations were making efforts at this time to manage their water usage (Egan 2014). The disclosures suggest that most of these investments were relatively low cost, including the development of a culture of water consciousness within the workplace, enhanced reporting tools, sub-meters, and water efficiency nozzles on hoses. Larger related capital works suggest greater motivation and/or pressure to improve water usage efficiency.

In general however, there was reluctance among most of the organisations in 2009 to disclose details of the sources and effluent impacts. The lack of detail provided on the total water usage by each organisation as well as total water disposed, is surprising given that several of these organisations claimed to be using the GRI (one requirement of which is disclosure of 'total water withdrawal'). The failure to provide significant insight into total water volumes used, including a dissection of where those volumes are used in the business, may suggest concern about exposure, considering Australia's drought threatened supplies. The absence of disclosures about effluence may suggest an assumption that it is the relevant local authorities, rather than water consumers, who are responsible for the sensitive disposal of sewage. Alternatively, these food, beverage and tobacco organisations may have considered such impacts to be secondary, or perhaps of lesser interest, to readers of these reports.

Figure 2a. Water consumed		2009			2013			2014		
Organisation targeted		Volumes	Vol/unit	Insight into % change	Volumes	Vol/unit	Insight into % change	Volumes	Vol/unit	Insight into % change
Arnotts Biscuits Holdings Pty Limited (ABH)	Domestic	x	x	✓	x	x	x	x	x	x
	Foreign Parent	x	x	x	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>1</sup>
British American Tobacco Australia Limited (BAT)	Domestic	✓	✓	✓	x	✓	✓	x	✓	✓
	Foreign Parent	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>1</sup>	x	✓ <sup>1</sup>	✓ <sup>1</sup>	x	✓ <sup>1</sup>	✓ <sup>1</sup>
Cadbury Australia (CA)	Domestic	x	x	x	x	x	x	x	x	x
	Foreign Parent	✓ <sup>1</sup>	x	✓ <sup>1</sup>	x	x	x	x	x	x
Coca-Cola Amatil Limited (CCA)	Domestic	x	✓	✓	x	✓	✓	x	✓	✓
	Foreign Parent	x	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>1</sup>	x	✓ <sup>1</sup>	✓ <sup>1</sup>
Goodman Fielder Limited (GF)		x	x	x	✓	✓	✓	✓	✓	✓
Inghams Enterprises Pty Limited (IE)		x	x	x	x	x	x	x	x	x
Lion Pty Limited (Lion)	Domestic	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Foreign Parent	✓ <sup>1</sup>	x	x	✓ <sup>1</sup>	x	x	x	✓ <sup>1</sup>	x
Schweppes Australia Limited (SA)	Domestic	x	x	x	x	x	x	x	x	x
	Foreign Parent	✓ <sup>1</sup>	x	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>1</sup>
Unilever Australasia Pty Limited (UA)	Domestic	x	x	✓	x	x	✓	x	x	✓
	Foreign Parent	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>1</sup>	x	x	✓ <sup>1</sup>	x	✓ <sup>1</sup>	✓ <sup>1</sup>
<b>Summary</b>		<b>2009 to 2014</b>								
Disclosures on total volumes consumed		Decreasing								
Disclosures of volumes consumed/unit of output		Increasing								
Disclosures providing insight in change across time		Increasing								
Disclosures on domestic websites		Decreasing								
Disclosures on foreign parent websites		Increasing								

**Notes:** 1. Disclosures provided by the foreign parent about water volumes consumed were limited to global consolidated total only.

Figure 2b. Water savings strategies		2009		2013		2014	
Organisation targeted		General statements	Insight into specific initiatives	General statements	Insight into specific initiatives	General statements	Insight into specific initiatives
Arnotts Biscuits Holdings Pty Limited (ABH)	Domestic	✓	x	✓	x	x	x
	Foreign Parent	✓ <sup>1</sup>	x	✓ <sup>1</sup>	x	✓ <sup>1</sup>	x
British American Tobacco Australia Limited (BAT)	Domestic	✓	✓	✓	x	✓	x
	Foreign Parent	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>1</sup>	x	✓ <sup>1</sup>	x
Cadbury Australia (CA)	Domestic	✓	✓	x	x	x	x
	Foreign Parent	✓	✓	✓	x	✓	x
Coca-Cola Amatil Limited (CCA)	Domestic	✓	✓	✓	✓	✓	✓
	Foreign Parent	✓	✓	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>1</sup>	x
Goodman Fielder Limited (GF)		✓	x	x	x	✓	x
Inghams Enterprises Pty Limited (IE)		✓	x	✓	x	✓	x
Lion Pty Limited (Lion)	Domestic	✓	✓	✓	x	✓	x
	Foreign Parent	x	x	✓ <sup>1</sup>	x	✓	✓
Schweppes Australia Limited (SA)	Domestic	✓	✓	✓	✓	✓	x
	Foreign Parent	✓	✓	x	x	✓ <sup>1</sup>	x
Unilever Australasia Pty Limited (UA)	Domestic	✓	x	✓ <sup>1</sup>	x	✓	✓
	Foreign Parent	✓ <sup>1</sup>	x	✓ <sup>1</sup>	x	✓ <sup>1</sup>	✓
<b>Summary</b>							
General disclosures of efforts to improve efficiency							
Disclosures of specific efficiency initiatives							
Disclosures on domestic websites							
Disclosures on foreign parent websites							



<b>Figure 2c. Water sources</b>				
<b>Organisation targeted</b>		<b>2009</b>	<b>2013</b>	<b>2014</b>
Arnotts Biscuits Holdings Pty Limited (ABH)	Domestic	x	x	x
	Foreign Parent	x	x	✓
British American Tobacco Australia Limited (BAT)	Domestic	x	x	x
	Foreign Parent	x	x	x
Cadbury Australia (CA)	Domestic	x	x	x
	Foreign Parent	x	x	x
Coca-Cola Amatil Limited (CCA)	Domestic	✓	✓	✓
	Foreign Parent	x	x	✓
Goodman Fielder Limited (GF)		x	x	x
Inghams Enterprises Pty Limited (IE)		x	x	x
Lion Pty Limited (Lion)	Domestic	✓	x	✓
	Foreign Parent	x	x	✓
Schweppes Australia Limited (SA)	Domestic	x	x	x
	Foreign Parent	x	x	✓
Unilever Australasia Pty Limited (UA)	Domestic	x	x	x
	Foreign Parent	x	x	✓
<b>Summary</b>				
Domestic companies respond to specific issues of community concern. Some trend towards general risk focused statements by foreign parents towards 2014.				

<b>Figure 2d. Effluent levels and management</b>				
<b>Organisation targeted</b>		<b>2009</b>	<b>2013</b>	<b>2014</b>
Arnotts Biscuits Holdings Pty Limited (ABH)	Domestic	✓	x	x
	Foreign Parent	✓	x	x
British American Tobacco Australia Limited (BAT)	Domestic	✓	x	x
	Foreign Parent	✓	x	x
Cadbury Australia (CA)	Domestic	-	-	-
	Foreign Parent	-	-	-
Coca-Cola Amatil Limited (CCA)	Domestic	✓	✓	✓
	Foreign Parent	x	x	✓
Goodman Fielder Limited (GF)		✓	x	x
Inghams Enterprises Pty Limited (IE)		x	x	x
Lion Pty Limited (Lion)	Domestic	✓	x	✓
	Foreign Parent	x	✓	✓
Schweppes Australia Limited (SA)	Domestic	x	x	x
	Foreign Parent	x	✓	✓
Unilever Australasia Pty Limited (UA)	Domestic	x	✓	x
	Foreign Parent	x	x	x
<b>Summary</b>				
A mixed response. Some decline in disclosures from 2009 however, some increased focus on related issues by foreign parents.				

<b>Figure 2e. Effluent impacts</b>				
<b>Organisation targeted</b>		<b>2009</b>	<b>2013</b>	<b>2014</b>
Arnotts Biscuits Holdings Pty Limited (ABH)	Domestic	x	x	x
	Foreign Parent	x	x	x
British American Tobacco Australia Limited (BAT)	Domestic	✓	x	x
	Foreign Parent	✓	x	x
Cadbury Australia (CA)	Domestic	x	x	x
	Foreign Parent	x	x	x
Coca-Cola Amatil Limited (CCA)	Domestic	x	✓	x
	Foreign Parent	x	x	x
Goodman Fielder Limited (GF)		x	✓	x
Inghams Enterprises Pty Limited (IE)		x	x	x
Lion Pty Limited (Lion)	Domestic	✓	x	x
	Foreign Parent	x	✓	x
Schweppes Australia Limited (SA)	Domestic	x	x	x
	Foreign Parent	x	x	✓
Unilever Australasia Pty Limited (UA)	Domestic	✓	x	x
	Foreign Parent	✓	x	x
<b>Summary</b>				
Limited disclosures. No consistency in any one organisation across the years. And a general decline in related disclosures into 2014.				

<b>Figure 2f. Investments in water infrastructure</b>				
<b>Organisation targeted</b>		<b>2009</b>	<b>2013</b>	<b>2014</b>
Arnotts Biscuits Holdings Pty Limited (ABH)	Domestic	✓	✓	x
	Foreign Parent	x	x	x
British American Tobacco Australia Limited (BAT)	Domestic	✓	x	x
	Foreign Parent	✓	x	x
Cadbury Australia (CA)	Domestic	x	x	x
	Foreign Parent	✓	x	x
Coca-Cola Amatil Limited (CCA)	Domestic	✓	✓	✓
	Foreign Parent	✓	x	✓
Goodman Fielder Limited (GF)		x	x	x
Inghams Enterprises Pty Limited (IE)		x	✓	x
Lion Pty Limited (Lion)	Domestic	✓	x	x
	Foreign Parent	x	x	x
Schweppes Australia Limited (SA)	Domestic	x	✓	x
	Foreign Parent	x	x	x
Unilever Australasia Pty Limited (UA)	Domestic	x	x	✓
	Foreign Parent	x	x	x
<b>Summary</b>				
Some emphasis on related disclosures during the drought, however these declined into 2014.				

In 2013 and 2014, these patterns of water related disclosures altered somewhat. A first observation is some pattern of declining disclosures made on Australian websites, with some increase in disclosure by foreign parent organisations. These trends might be explained by the fact that while drought conditions declined in Australia over this period, a greater focus on water related risks was emerging globally at this time, including a focus on the regulatory, reputation, and physical risks of water usage (Orr and Pegram, 2014). A second trend to note in 2013/2014, was that the growth in disclosures provided by foreign parent entities, was focused on water usage and saving strategies, but placed less emphasis on other issues (such as effluent management). A third observation is that in 2013/2014, something of a focus on more general and less specific disclosures developed. For example, where organisations had previously provided detailed insight into specific case studies of how water efficiencies were being achieved, they now provided increasingly simple 'motherhood' type statements suggesting, for example, that water efficiency 'is important to us', or, that 'we are constantly seeking to improve efficiency'.

Generally in 2013/2014, there was a decreasing focus on disclosures of total volumes of water consumed, an increasing focus on disclosures of volumes consumed per unit of output (or water usage KPIs), and an increasing focus on disclosures providing insight into change across several years. Domestic companies appeared to be increasingly responding to specific issues of community concern as they arose. Here we find that the scope, depth and utility of disclosures on resource usage was improving within a selection of large Australian water consuming organisations into the late 2000s. However, with little support from water authorities as drought conditions abated, some complacency and decline in the disclosure practices was evident in the 2010s. Contrary to the arguments of Adams and Frost (2008), we argue that increased regulatory and social pressure for water management change in the late 2000s drove industry to develop increasingly sophisticated voluntary water related disclosures. While those disclosures provide external users with more detailed insight into the challenges and limitations of water management practice, our findings continue to support observations in past studies that a key objective for organisations in voluntary disclosure practices continues to be responding to, and managing, stakeholder and community concerns, and a need to present the organisation in a positive light.

## Conclusions

In summary, this study suggests that large water consuming organisations were increasingly acknowledging that water was an important resource into the late 2000s. This demanded efforts to manage consumption more efficiently. The *2005 New South Wales Water Savings Order*, which required all of these organisations to develop plans for water savings, appears to have been critical in driving the technologies that enabled these detailed water related disclosures. Nonetheless, many of these organisations did not appear to be taking the opportunity to disclose as much as they could. There may be several reasons for this reluctance to disclose, including that some were private companies (such as Inghams Enterprises Pty Limited and now Snack Brands Australia Pty Limited) and some were relatively small domestic subsidiaries of large multinationals (such as Cadbury Schweppes Pty Limited and Unilever Australasia Pty Limited). Certainly, little disclosure focused specifically on water management initiatives within Australian subsidiaries was provided on any foreign parent websites. What can be concluded from the disclosures, is that increasingly specific information about internal water management was able to be disclosed and to a large extent, where community interest and pressure is sufficient, organisations see value in making such disclosures.

The decline in disclosure practices in 2013/2014, suggests that valuable investment in water management and disclosure practices in the late 2000s may be eroding. Australia is understood to be subject to regular cycles of drought followed by precipitation abundance. With climate change, these cycles are expected to be more severe. Water authorities therefore owe it to the Australian community to put in place mechanisms to encourage the industrial sector to not only maintain, but also further develop, existing water management and reporting practices. Such support should not depend on the pressure of acute drought conditions. It is a shame that valuable learning on efficiency and reporting within the corporate sector in the late 2000s may be eroding because of cutbacks in government funding. Europeans have lived on this large, dry island for more than 220 years and one wonders how long it will take until we appreciate and embed mechanisms to ensure strong corporate sustainability strategies, particularly in the realm of such a sensitive, vital and finite resource?

These findings also provide some insight of relevance for the development of the current draft Australian Water Accounting Standards (AWASs). The current Water Accounting Conceptual Framework (WACF) suggests that the scope of 'reporting entity' for those accounting standards will probably remain limited to water utilities (that is, entities that store and transfer water). Our study reveals, however, that water consuming organisations are also, apparently, increasingly collecting, compiling and reporting data that addresses the objectives of the AWASs. The current AWASs require targeted reporting entities to disclose details of their water usage and storage, and 'note' their water

policies, quantification approaches, water rights, allocations and so on. It is apparent that large water consuming organisations are increasingly able to also provide equivalent information should they be required to do so. It follows that if such organisations are not captured as reporting entities by the WACF, there may be a lost opportunity to report data of relevance to the National Water Initiative.

Not only are these large water consuming organisations increasingly capturing data that helps them to understand their own water impacts, they are also increasingly capturing, storing and using water holdings of their own through such technologies as water treatment and recycling plants. Considering the spirit underpinning the definition of 'reporting entity' in the WACF, some method of appending or including such holdings within the national account may be of use in a nation dependent on having an accurate understanding of its total water supplies. At the very least, 'water accounting' should not be seen as limited to activities undertaken by water utilities and related organisations. Water accounting is also undertaken within, at least, the larger water consuming organisations. However, that commitment may now be eroding. Water authorities should therefore be provided greater support and encouragement to maintain this important trend.

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