

Sustainability – the state of play

Sustainability remains firmly on every manufacturer's agenda as raw material & energy prices rise and the relentless squeeze on margins forces companies to reduce their waste and optimise the efficiency of their production and their supply chains

By Claire Rowan – managing editor



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45% of shoppers say they would be prepared to stop buying their favourite brands if they refused to commit to measuring their product carbon footprint, according to the Carbon Trust'

Nowhere is the need to act sustainably more keenly felt than in the food & drink industry, where manufacturers rely so heavily on agricultural raw materials and water to create their end products – the food industry accounts for 23% of the world's use of resources, according to the European Commission - and where the emotional part that food and drinks play in the lives of consumers is fundamental to their purchasing choices. With the World Wildlife Fund reporting that consumption of the earth's natural resources currently exceeds its capacity to renew them by 30%, the pressure is on for companies to address their own actions not just to save the planet but in response to economic necessity, consumer & retailer pressure, or legislative compliance.

The evidence for this need is addressed by the recent research by the Carbon Trust in the UK,

which revealed that 45% of shoppers claim that they would be prepared to stop buying their favourite brands if they refused to commit to measuring their product carbon footprint. Forty seven per cent said they would be more likely to choose products with carbon labelling over those without. Although shoppers cannot always be trusted to act on their stated intentions, the fact that the number of consumers registering a desire for products that measure their carbon footprint has doubled from 22% in the past year suggests that consumer pressure is likely to be seen in practice rather than just rhetoric. To reinforce this evidence, BrandZ, the global corporate reputation study carried out by Millward Brown, calculated that on average 20% of sales are influenced by corporate reputation, with environmental reputation being found to influence directly about 2% of all sales. Its research found that the most successful companies typically

also demonstrate a strong environmental performance.

"Retailers are investing in understanding their supply chain emissions, verifying the carbon footprint of their products and communicating with their customers because they can see the huge value and potential at stake," said Harry Morrison, director of the Carbon Trust's Certification programme, which has seen brands such as Walkers Crisps and Quaker Oats among others adopt its Carbon Reduction label on hundreds of products. "These trends stretch beyond the UK. Aldi in Australia is the first Australian retailer to launch a carbon footprint label in its stores. Government sponsored programmes to measure and communicate product carbon footprints are also gaining momentum in Japan, Korea and France."

The Centre for Retail Research predicted that sales of products

with carbon labels will surge to £15.2 billion by 2015.

Manufacturers globally are responding to this growing wave of pressure and not least Unilever, which leads the field with its Unilever Sustainable Living Plan. The Plan contains over 50 targets that are designed not only to halve the environmental impact of Unilever's branded products, but also to help more than one billion people improve their health and well-being and ensure that the company sources 100% of its agricultural raw materials sustainably.

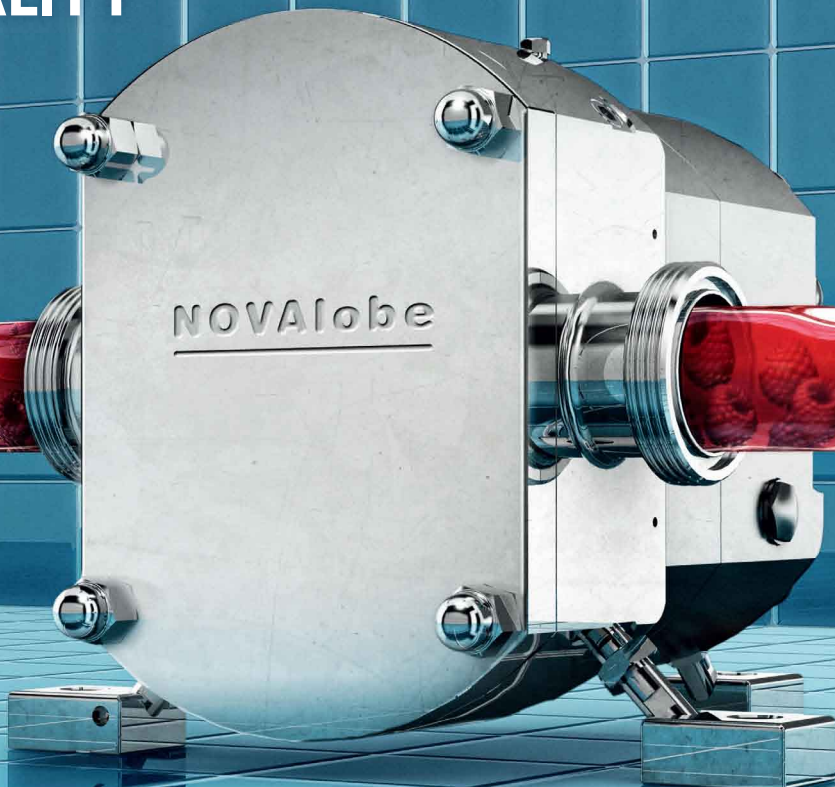
'Our impact goes beyond our factory gates. The sourcing of raw materials and the use of our products by the consumer at home have a far larger footprint. We recognise this and so our plan is designed to reduce our impacts across the whole lifecycle of our products. This full lifecycle approach is both ambitious and, we believe, unique amongst global FMCG companies,' states the report.

Unilever is in the vanguard of companies in establishing a coherent environmental strategy for both their in-house operations and throughout their supply chains.

'While most companies have effective procedures for managing financial and other operational goals, processes for managing sustainability goals are still maturing,' states a new report from Green Research, an independent research firm focusing on cleantech, alternative energy and sustainability. 'A quarter of the sustainability executives

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surveyed for the study say its companies have set 'aspirational' sustainability goals and lack a clear plan to achieve them.'

The report, *Setting & Managing Sustainability Goals: Trends & Best Practices for Sustainability Executives*, found that despite the best intentions, even 'some excellent companies are challenged to execute on the sustainability goals they announce'. It discovered in its interviews with senior sustainability executives in major companies in the USA, Europe and Asia such as ADM, Heinz, Bunge, Danone, General Mills, Kellogg's, Kraft Foods, Nestlé and Tyson, that over 40% of respondents said that the progress being made on sustainability goals was reported to senior management only semi-annually or annually. 'More frequent reporting offers greater control and lower operational risk, but gathering environmental data is still cumbersome at many companies.'

The report, which also serves as a benchmark on which companies can set their own goals, suggests that companies craft their sustainability goals in consultation with internal and external experts and stakeholders, combining bottom-up and top-down analysis to produce goals that are material, achievable, quantitative and time-bound. It highlights that publicly stated sustainability goals serve to demonstrate commitment and help galvanise internal staff and drive results. However, companies with immature management or measurement practices are advised to start with internal goals and aim to go public over time.

Companies seeking to measure and quantify how they are performing in terms of their sustainability objectives are increasingly turning to Life Cycle Assessments (LCA) and the report predicts that the aggressive use of LCA and life



Molson Coors contributed to this year's Carbon Disclosure Project's Water Disclosure report

cycle thinking will become 'table stakes' at leading companies over the next few years.

'For a start, an LCA gives visibility of the full cost of an approach, allowing effective cost reduction decisions and the identification of waste reduction opportunities. On the revenue generation side, LCAs can be used to convey life cycle benefits to customers to win new business,' for example, according to the Green Research study. However, the benefits are not just financial as LCA can help companies respond rapidly to the requests for detailed environmental impact information increasingly being required by retailers and consumers, and legislators.

Tools have already been developed to help companies fulfill on a useful and efficient LCA programme by companies such as PE International in Germany, which is the provider of the solution for Unilever - the GaBi software family; and Carbonostics from Bluehorse Associates in the UK.

'To have a clear picture of a products' carbon emissions output at all stages in its design and manufacture is invaluable and will allow an organisation to identify where reductions can be achieved and ultimately provide

this information to the end user,' said John Connors, CEO of the Supply Chain Carbon Council, which has recently accredited Bluehorse Associates' web-based, Carbonostics Lifecycle Analysis solution. Bluehorse Associates has recently joined the Council as a preferred supplier within the programme promoting the application of LCA software and methodologies for product level carbon footprinting, and is keen to stress that the industry will need to apply more information & communications technology in future in order to fulfil on the growing need for visibility in product emissions at all stages of production and the supply chain.

GaBi is an all-in-one software tool for modelling products and systems - and the associated GaBi Reader allows users without any prior experience to carry out full-scale LCAs on products and processes. Users can compare scenarios using variables such as material type, mass, transportation mode and distance, power consumption during use and disposal method, and display different alternatives graphically side-by-side.

Ultimately, companies must have some system in place to monitor and measure the complex sustainability matrix involved in

establishing a true picture of their environmental performance in terms of products and processes, and their impact along the entire supply chain. Without measurement, it is impossible to assess what improvements have been made or to identify areas that need attention.

'True sustainability leaders are companies that do not just manage their sticky issues, they embrace them,' said Todd Cort, CEO of the US arm of the international corporate sustainability agency, Two Tomorrows Group, which has recently published its 2011 Value Rating report.

The Rating highlights that the leaders in the sustainability stakes are those that are investing significantly in the long term rather than taking 'existing practices and passing them under the sustainability lens to give a compelling green picture of the company.'

Whilst these practices may have positive environmental impacts, they are fundamentally profit driven, and the Tomorrows' Value Rating warns that 'this can turn to green-wash when the sticky issues are ignored or given little consideration'. To this end, companies such as Unilever,

Campbell's, Danone and Nestlé have been identified as Aaa rated companies by Two Tomorrows.

"None of our leading companies are held back by fundamental questions about their sustainability. Where there are concerns, we can see that they have mapped out a clear path for transitioning their business into a different model," said Mark Line, executive chairman, Two Tomorrows. "Our leaders are starting to go one step further than the rest of the pack, such that their machinery for delivering sustainability is becoming part of the way they do business. Their staff and management get it and they want it. These companies tend to exhibit huge brand strength – and they have wedded their sustainability approach to all those things that made their brand strong in the first place."

Water

Water – critical as it is to food and beverage manufacturers – is creeping inexorably up the sustainability agenda. Figures highlight that demand for water is likely to outstrip supply by 40% by 2030. And, although, as yet, it has not reached the level of awareness of climate change generally, water – in terms of policies, strategies or plans – has risen to become a board level issue for 57% of respondents to this year's Carbon Disclosure

Project (CDP) Water Disclosure global report, compared with 94% for climate change.

"As water sits at the nexus of so many global issues – from food security to economic growth, from energy supply to health, to mention only a few – all sectors of human activity are affected," said Peter Brabeck-Letmathe, chairman of Nestlé as he picked up the Stockholm Industry Water Award, which recognised Nestlé for its leadership, performance and efforts to improve the water management in its supply chain. The honour also acknowledges the company's efficient operations and its work with suppliers, particularly farmers. "While many governments have overdrawn their financial accounts, we all have massively overdrawn our water accounts."

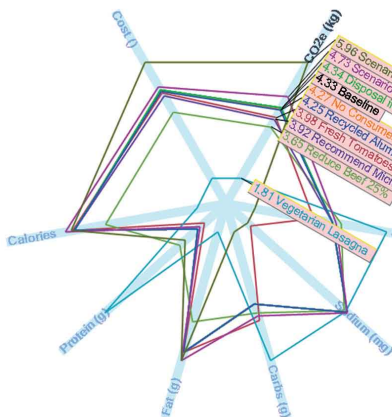
Nestlé, which invested CHF 175 million (€142 million) in environmental sustainability programmes and initiatives during 2010, came second in the consumer goods sector in last year's Carbon Disclosure Project's (CDP) Carbon Disclosure Leadership Index and contributed to the CDP's Water Disclosure Project. It has established its own Water Resources Review (WRR) programme focusing on five areas: water quantity; water quality; regulatory compliance; site protection; and relationships with other stakeholders. To date,

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Water has become a board level issue for 57% of respondents to this year's Carbon Disclosure project Water Disclosure global report



extract energy and nutrients from wastewater,” said Will Sarni, director & practice leader, enterprise water strategy, Deloitte Consulting LLP in the USA. “The Carbon Disclosure Project Water Disclosure report is an important effort, along with other global initiatives, in transforming how we manage one of our most essential natural resources.”

Michael Glade, director of water resources & real estate for Molson Coors, which responded to the CDP this year confirmed the importance of water to the global manufacturer:

“Water is a precious resource and the importance of protecting local supplies should not be underestimated at a management or board level. It is only through a transparent disclosure of all water users and knowledge sharing that companies can move towards a more secure water future.”

This sentiment is one that is increasingly being heard at board level as sustainability issues rise up the corporate agenda to influence all elements of the supply chain.

‘Sustainability has become a new battleground of supply chain competitiveness and it is gratifying to see a significant number of respondents indicating that they are stepping up their efforts on sustainability initiatives,’ stated this year’s *Chief Supply Chain Officer Report* by SCM World, the global institute for supply chain learning. ‘Companies are increasing efforts across internal operations (63%); internal product design (56%); immediate suppliers (51%); the extended supply network (51%); and customers (51%). The important point here is that the results do indeed indicate that sustainability increasingly forms an integral part of companies’ supply chain improvement journey.’

Bluehorse Associates has recently received accreditation from the Supply Chain Carbon Council for its web-based Carbonostics Lifecycle Analysis solution

the WRR has been conducted at 67 Nestlé Waters sites – more than half of the company’s total bottled water facilities – and has also been rolled out to food factories (21 sites in 2009/10). Its deployment is designed to enable the risks and key issues in local water resources management to be identified, and specific action plans toward sustainable water use to be established. Sites are being prioritised by their position in Nestlé’s Water Stress Analysis, which in turn is based on external indicators such as water poverty, watershed stress and internal local indicators.

“We are witnessing the creation of a new paradigm for water management. This includes initiatives such as improved water data acquisition and analytics, improved water efficiency, energy efficient water treatment technologies, and a move to



Peter Brabeck-Letmathe, chairman of Nestlé (left) receives Stockholm Water Award from Peter Forsssman, chairman of the Stockholm Water Foundation

Investment projects

Elga Process Water, a Veolia Water & Solutions company, is working with Robert Wiseman Dairies to help the company achieve its target of reducing water use across its network of dairies by 25% by 2015. The company, which produces one and a quarter million litres of milk per day in the UK, used to treat and discharge around 400m³ per day of process wastewater. Now, 200m³ of that process wastewater is recovered by reverse osmosis and recycled for use in the dairy.



Robert Wiseman Dairies is using a reverse osmosis system from Elga Process Water to help meet its water use reduction target of 25% by 2015

The Elga Process Water MegaRO reverse osmosis technology uses a membrane to remove 99% of residual COD (chemical oxygen demand), dissolved salts and bacteria from the treated wastewater, resulting in a waste water with at least the same quality as mains water.



Marston’s Brewery has saved £60,000 (€70,000) in energy and hot water costs following installation of steam traps from Spirax Sarco

“Because the operating cost of the MegaRO is low, the recovered water actually costs less than mains water even after including capital amortisation,” said Eleanor Walton, project manager, Robert Wiseman Dairies. “We expect to get a payback on the £130,000 (€160,000) investment in about two and a half years.”

Marston’s Brewery in the UK, which produces around 300,000 barrels of beer per year, has saved £60,000 (€70,000) in energy and hot water costs following an upgrade of its steam traps. By preventing steam escaping into the brewery’s condensate recovery systems, the new steam traps, supplied by Spirax Sarco, have also improved the site’s environmental image by eliminating the visible steam emissions from the plant.

For news of how a company’s inventory can impact its carbon footprint see: <http://www.foodbev.com/article/your-inventory-footprint-seeing-beyond>; for a closer look at developments in Sustainable Sourcing see the February 2012 issue of *Food &*

Beverage International and to keep up-to-date with the major initiatives in the industry check out Sustainability News in each issue of *Food & Beverage International* (subscribe at: www.foodbev.com/magazines) and take a regular look at www.foodbev.com