

SABMiller plans to improve the water efficiency of its breweries by 25% by 2015 compared to 2008 and reduce its energy and carbon footprint.



# Green brewing

**Andy Wales**, group head of sustainable development at SABMiller, discusses the responsibilities that come with being one of the world's largest brewers; among them, to find local solutions that can deal with water scarcity, and to develop regionally viable packaging systems with the best environmental outcomes, including reducing its carbon footprint.

**A** robust approach to sustainable development underpins SABMiller's ability to grow and its licence to operate. Furthermore, a well-managed growing business is good for wider economic development, leading to greater employment and investment in local economies and communities.

The company's sustainable development philosophy is not just about philanthropy, but rather about how changes in society and the environment will impact on its business both in terms of opportunities and the challenges they present. SABMiller manages sustainable development by looking at what is core to its business and how it can affect them, and it takes a value-chain approach to opportunities and challenges.

The company's aim is to secure economic benefits for the local communities where it

## Andy Wales

Andy Wales is group head of sustainable development for SABMiller. He leads the group's approach to prioritising economic, social and environmental issues. In 2009 he was selected as a Young Global Leader by the World Economic Forum and is a Fellow of the Royal Society for the Arts.



grows raw materials and brews beer, and also for shareholders who benefit from a sustainable business and a return on their investment. Environmental sustainability is also critical, whether in terms of using less water to make more beer or reducing the business's energy and carbon footprint.

Water is one of SABMiller's 'Ten Priorities' for sustainable development, and one of the three that have been adopted for global focus. The brewer depends on high-quality water and knows that water scarcity will increase in the long term around the world. The company has set a target to improve

the water efficiency within its breweries by 25% by 2015 compared with 2008. It is important that production plants are aware of their potential water vulnerabilities, and the water efficiency programme helps address this. But the bigger potential challenge is upstream in the agricultural element of beer. This is why SABMiller works with the World Wildlife Fund (WWF) to carry out water footprinting, to better understand the quantity, efficiency and geographical context of water used in the beer value chain so that this resource can be better managed. The insight provided by

water footprinting is used to develop programmes to improve water management.

Many consumer goods businesses, including SABMiller, have undertaken detailed research into the carbon footprints of products such as beer, carbonated soft drinks, fruit juices and potato chips. Given the growing awareness of water scarcity, water footprints are considered a natural next step, although there are key differences.

Just as the carbon footprint concept has assisted businesses and consumers in understanding the level of greenhouse gas emissions created by their activities, so water footprinting is creating awareness of how and where this resource is used.

Unlike carbon though, the impacts and issues around water are very local, historically within the confines of the watersheds and river basins of specific geographical locations. However, this is beginning to change through man-made interventions such as inter-basin transfers and, much more significantly, the movement of virtual (embedded) water between nations, causing a reliance on water management many miles away from where the virtual water is eventually consumed.

In carbon footprinting, the size of the footprint is a critical element in determining impact, while the critical element of a water footprint is in the detail of where water is used in relation to local pressures and scarcity. Water presents unique challenges in this regard, and attributing impact to individual users is far from straightforward.

Water footprinting enables SABMiller to understand which parts of the supply chain might face water scarcity or poor water quality, and means the firm can plan now to deal with these future challenges.

At the end of 2009, SABMiller launched the Water Futures partnership in partnership with the WWF. Co-funded by the German government, the partnership is focused on identifying new approaches to water management, particularly developing a robust approach to evaluating water risks throughout SABMiller's value chain and sharing best practice throughout its global operations on how to tackle these risks.

The initiative looks at four countries where the business has brewing operations: Peru, South Africa, Tanzania and Ukraine; all markets where water has been identified as a long-term risk.



SABMiller's environmentally friendly packaging initiatives include returnable bottle systems.

Fundamental to meeting sustainability goals are the company's partnerships with organisations such as WWF, the Nature Conservancy and local governments. In order to meet these objectives, different sectors cannot work alone. It is only together that these challenges will be resolved.

### Returns on packaging

Almost half of all SABMiller's products (by volume) are sold using returnable bottle systems. Using returnable bottles means packaging only needs to be manufactured once and then used again and again, saving raw materials and resources utilised in the manufacturing process. To extend the life of returnable bottles, the firm has developed scuff-resistant coatings. Under the Super Returnables campaign in Colombia, for example, its bottles can be reused over 40 times, compared with 20 times for traditional bottles.

In other parts of the business, innovative packaging systems that eliminate the need for individually packaged products in favour of a dispensing system have been developed. For example, MillerCoors has trialled a 1.5 gallon 'Home Draft' for its biggest brands, Miller Lite and Coors Light. Designed to fit into refrigerators for home consumption, this boxed product is 100% recyclable and eliminates the glass and aluminium packaging traditionally used.

SABMiller is also 'light-weighting' existing product packaging by reducing the amount of material used while maintaining the integrity of the packaging itself. Lighter packaging uses fewer raw materials and less energy to manufacture. Looking at it simply, a returnable bottle is generally the lowest carbon form of packaging, with PET very close behind, including any emissions generated by

recycling. After that comes cans followed by one-way bottles.

However, there are some markets where one-way glass and cans are the market standard and these are the places where SABMiller recognises it has a role to play in encouraging consumers to recycle. In some instances, the company has invested in projects to provide recycling facilities.

### Waste can be a resource

It is fortunate that the majority of waste from breweries is organic, and SABMiller believes organic by-products from brewing can be used as a resource.

Spent grains are usually sold to farmers as a relatively low-value animal food at the company's brewery gates. Being able to provide these spent grains in a dry form improves storage and utilisation of the material and the company has been piloting this at one of its breweries in South Africa. However, in some cases these grains could be better used as a source of energy for the brewing process through direct combustion, the generation of biogas or the production of fuel alcohol.

SABMiller has invested in a public-private partnership to fund the Biotechnology and Biological Sciences Research Council (BBSRC) Sustainable Bioenergy Centre in the UK. Research will cover widening the range of production sources to growing source crops more efficiently. The centre will also analyse the life cycle and distribution of potential sources to ensure their economic and social viability.

The company's Czech business is running a pilot project to review the relative benefits and costs of using spent grains to generate biogas compared to direct combustion. Sharing the results of this work will provide valuable learning for the group. ■

### Briefing: SABMiller

SABMiller is one of the world's largest brewers, the maker of international brands such as Pilsner Urquell, Peroni Nastro Azzurro, Miller Genuine Draft, and Grolsch as well as local brands such as Aguila, Castle, Miller Lite, Snow and Tyskie. In 2010 SABMiller's lager production totalled 213 million hectolitres. The company is also one of the world's largest bottlers of Coca-Cola products. [www.sabmiller.com](http://www.sabmiller.com)