

# Carbon Footprints

## The Beginning

No one can be unaware of the dangers posed to our environment and society in general by climate change.

Whilst scientists are still uncertain about the detail of its cause and effects there can be no doubt that with a rapidly growing world population and increasing levels of resource consumption and pollution, human activity is a major factor influencing the changes being seen in world weather and climate patterns.

At Boots we wanted to understand what part the products we make and sell contribute to greenhouse gas emissions such as CO<sub>2</sub> and to see if there were ways we could produce products with lower “carbon footprints”. It has been estimated that over 40% of world greenhouse gas emissions arise from products and their use. The carbon footprint of a product often extends beyond the product itself and can include for example energy used in transportation or in the use of the product at home

In the summer of 2006 work started with a small team of experts within Boots. By lucky coincidence at the same time the Carbon Trust<sup>1</sup> with whom we were working on energy efficiency projects in our stores, were researching the impact of everyday products on climate change. As a result we joined forces on a project to measure the Carbon Footprint of a typical Boots product; -shampoo.

## The Project

The study analysed two different shampoo formulations: Botanics Moisturising Shampoo and Botanics Colour Enhancing Shampoo. The project followed our Product Journey approach, considering the complete life cycle of the product from raw materials through production and retailing to use at home and disposal of waste. The greenhouse gas emissions across the full product journey were measured. Additionally the project considered a range of different improvement options covering:

- The different raw materials and manufacturing processes used
- 6 different packaging options (looking at outsourced and own-manufactured bottles and the effect of recycled pellet content)
- 2 different distribution options (storage at regional distribution centres and “Singles-to-Stores”)

The analysis was used to quantify carbon emissions, and to identify carbon reduction projects for future implementation.

The results showed that by far the greatest portion of the shampoo carbon footprint was within the consumer use phase. This resulted from the amount of hot water used to wash the hair, the frequency of washing and the efficiency of methods used to generate hot water in the home. Excluding the consumer use phase 58% of the shampoo products’ carbon footprint was generated by packaging. However the incorporation of 30% post-consumer recycled polymer in the bottles reduced the overall carbon footprint by 10%. A further 10% reduction could be obtained by implementation of the improved “singles to store” distribution system referred to above.

The work on shampoo products carbon footprinting meant that Boots were ideally placed to be at the forefront of the trials on product carbon labelling. In March 2007 the Carbon Trust launched the first ever carbon-labelling scheme for products. Boots alongside Walkers Snackfoods and Innocent drinks were the first companies to trial the scheme.

The approach Boots has taken is slightly different to the other trials. Point of sale material has been introduced highlighting the reductions made and providing consumers with advice on reducing personal carbon footprints. Research has shown that the concept of carbon footprinting is taking hold with consumers.

At a time when the issue of climate change is rarely out of the press, this presents an opportunity for manufacturers and retailers to demonstrate business responsibility.

## **The Future**

Boots Botanics Moisturising and Colour Enhancing Shampoos with a reduced carbon footprint of 20% went on sale in July 2007. Over the coming months we will be getting feedback from customers on the new products. At the same time the Carbon Trust are engaged in a public consultation of the carbon labelling scheme. Work is also underway to refine the methods used to calculate carbon footprints so that more products can be measured more quickly.

The area of carbon footprinting and labelling is one where the UK leads the World. There has been great interest shown internationally in this work from countries such as Germany, Norway, South Korea and the USA. As leaders in carbon footprinting Boots have been asked to present their work at several international conferences.

The Carbon Trust is a private company set up by government in response to the threat of climate change, to accelerate the transition to a low carbon economy. The Carbon Trust works with UK business and the public sector to create practical business-focused solutions through its external work in five complementary areas: Insights, Solutions, Innovations, Enterprises and Investments. Together these help to explain, deliver, develop, create and finance low carbon enterprise.

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