



## Beyond the price tag: the costs and benefits of going green

Today it's not enough for manufacturers to make the cheapest or best-quality on the market if the product, or its production, use and disposal leave a big environmental footprint. Product stewardship requires key stakeholders to share responsibility for product impacts – an idea that's slowly catching on in Australia, reports Sue Neales.

When Anthony Halas, the Australian owner of the Seafolly brand of swimwear, caught a plane to visit his clothing factory in China last year, he experienced something of an epiphany. His awakening came in-flight after watching *An Inconvenient Truth*, the influential climate change movie produced by former US Vice President Al Gore.

'Personally I was not aware what our environmental footprint is,' says Halas. 'It is now one of our goals to establish how heavily Seafolly treads upon the Earth and find ways to reduce the impact.'

'We are looking at our offices and factories to understand how much energy and materials we use, where they come from and what the complete impacts are.'

On returning to Australia, Halas sought assistance from sustainability consultant, Frank Hubbard, of Worthwhile Projects. Frank contacted Stephen Gale from Hatch global engineering consultancy, who started Halas's company off with a sustainability audit, not only looking at Seafolly's carbon emissions, but at inputs such as energy and water – 'the big picture stuff', as Gale puts it.

That, according to Gale, is the furthest point reached by the growing number of Australian companies now attempting to address climate change and their greenhouse gas emissions.

But while most companies are still at the stage of identifying their company's carbon footprint so that they can reduce

or offset them, some, like Seafolly, have moved to the next stage of environmental 'accounting' – product life cycle analysis (LCA).

### You can't change what you don't know

LCA requires producers to understand the entire life cycle of their products so that they can undertake effective product stewardship or extended producer responsibility (EPR) programs. Put simply, LCA is a tool for assessing the total environmental impact of a product, from the extraction of raw materials to processing, transport, use, reuse, recycling or disposal. For each stage of production, the impact is measured in terms of

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resources used and environmental impacts caused.

The benefit of an LCA is that the business can identify the most effective improvements it can make to reduce its impacts and make more efficient use of resources. LCA can also be a powerful tool for comparing the environmental credentials of similar products and services for the marketing of 'green goods'.

The first step of an LCA usually involves identifying all stakeholders in the 'cradle to grave' product chain. The company can then assess how stakeholders measure up in terms of carbon neutrality, environmental impact, water and energy conservation, recycling and community commitment.

'This is scary for most businesses,' says Gale. 'Their first reaction is they don't really want to know what their suppliers are doing, or how their customers are getting rid of their product at the end of its life, because they feel it is beyond their zone of control.'

'I can understand that, but it will not help anyone in the long run because this

issue is what companies will have to start addressing over the next five to 10 years. Current and proposed sustainability legislation is all about internalising currently externalised costs.'

**... the landfill problem is now so great, by 2050, potentially 85 per cent of Australia's total carbon emission budget will be accounted for by methane gas emitted from landfill.**

Gale points out that companies can use their 'purchasing power' to specify to suppliers exactly what they want. 'Their ultimate power is to change suppliers to one who fits in better with their business objectives,' he says.

For Seafolly, the tougher decisions came further down the production chain. Synthetic garments have high embodied energy and do not break down easily in landfill, and there are currently no recycling options for fabric or textiles.

Gale hopes that in the long run, Seafolly will invent a new type of recyclable synthetic fabric. 'What I think you might see is a small-to-medium company like Seafolly joining with other like-minded companies

to gain enough critical mass so that they can put pressure on textile manufacturers in China to get what they want.'

**End-of-life focus in Australia**

In Australia, a growing awareness of EPR has seen more companies focus on the recycling or safe disposal of discarded or out-of-date products. This is linked with a general move by the business sector to help cut carbon emissions by recycling materials, and saving energy and water

**Carpet tiles with a 40 per cent smaller footprint**

Like Anthony Halas from Seafolly, US manufacturer Ray Anderson became committed to sustainability following an 'epiphanous moment' – in Anderson's case it was reading Paul Hawken's *The Ecology of Commerce* in 1994.

Anderson's company, Interface, is a US-based floor coverings manufacturer that operates in more than 100 countries, including Australia.

The company says its ecological footprint has been reduced by 40 per cent since 1994, when it began pursuing Anderson's 'Mission Zero' goal to become the world's first fully sustainable corporation with a zero environmental footprint by 2020.

One of its key divisions, InterfaceFLOR, produces a commercial flooring system based on durable modular carpet tiles that can be individually replaced or relocated as needed. InterfaceFLOR claims that its EntropyRE range, for example, reduces waste by 90 per cent

compared to broadloom carpet.

The carpet tiles also incorporate a recyclable backing, which means that used tiles can 'become the "food" for new product'.

In July this year, the Australian InterfaceFLOR announced a 'climate neutral' program, through which greenhouse gas emissions (GHG) calculated over the life cycle of its carpet tile products are being reduced by efficiency measures and carbon offsets.

GHG calculations – verified and certified by the Climate Neutral Network – include data for raw material acquisition and processing, manufacturing, transportation, disposal/recycling and energy used to vacuum and maintain the product.

Rob Coombs, President, Asia Pacific InterfaceFLOR, says the company itself accounts for only 15 per cent of the carbon emitted during the life cycle of its products. Suppliers and distributors account for the



**InterfaceFLOR carpet tiles are modular in design and installation so that individual tiles can be easily replaced if an area of flooring is damaged or stained; wastage is dramatically reduced compared with broadloom carpet.** InterfaceFLOR

remaining 85 per cent.

The Australian company also pays to offset all carbon emissions generated by its employees in travelling to and from work.

'By reducing energy usage, water consumption and waste, InterfaceFLOR has streamlined its operations, become more efficient and reduced its costs,' says Coombs.

It's a familiar story at Interface. 'From Day One, sustainability has saved us money, not cost us,' Ray Anderson has said. 'And it has earned us a tremendous amount of goodwill from our customers, something that cannot be measured or duplicated.'

**More information:**  
InterfaceFLOR,  
[www.interfaceflor.com.au/](http://www.interfaceflor.com.au/)

in the virgin materials extraction and processing stage.

Product stewardship is not yet fully regulated here, but some co-regulatory (joint government/industry legislation) and self-regulatory mechanisms are in place – for example, for the lubricant oils<sup>1</sup> and cardboard packaging<sup>2</sup> sectors.

There are also non-regulated voluntary industry schemes, such as MobileMuster, and individual company initiatives such as that of battery company Uniross, which is working with Sustainability Victoria to collect batteries from discarded cameras, laptop computers, phones and power tools for recycling.

Another company, Dulux Paints, won a Banksia Award this year for its free recycling service, Paintback, through which it collects thousands of litres of old household paints from the nation's sheds and garages. Preventing paint waste from polluting landfill – reusing it instead as a source for new fence paint or cement kiln-fuel – has saved 85 tonnes of greenhouse gas emissions to date and returned 15 000 litres of paint to the manufacturing process.

But what about other consumer products, such as the 18 million old tyres that Australians dispose of annually? Around 70 per cent are either illegally dumped or thrown onto tips, resulting in a loss of valuable materials and the release of toxic gases when landfill is burnt.

Federal and state environment ministers have announced plans for both a waste-tyre product stewardship scheme, and a take-back scheme for electrical goods, computers and whitegoods to cut back on the 45 million electrical products dumped each year into landfill.

Nevertheless, Jeff Angel, Director of the Total Environment Centre, is impatient with the slow pace of federal government intervention. He says that while NSW and Victoria have some form of legislation that encourages recycling and environmentally conscious procurement policies in the public sector, Australia lags behind other developed economies.

He criticises the federal government's co-regulatory and self-regulatory approach, calling instead for national laws backing drink bottle and can refunds, taxes on landfill, and manufacturer responsibility for the growing mountain of televisions, computers and whitegoods

<sup>1</sup> Product Stewardship (Oil) Act 2000, [www.oilrecycling.gov.au/recycling](http://www.oilrecycling.gov.au/recycling)  
<sup>2</sup> National Packaging Covenant 1999, [www.packagingcovenant.org.au/](http://www.packagingcovenant.org.au/)



**Battery company Uniross and Sustainability Victoria are collecting batteries from discarded cameras, laptop computers, phones and power tools for recycling.** Sustainability Victoria

being dumped in tips around Australia.

Angel says the solution would be to introduce recycling levies. 'It would be great if the product and packaging companies got with the trend and became willing participants with environmental groups in constructing comprehensive deposit and recycling schemes underlain by regulation.'

Sustainability consultancy Warnken ISE has concluded that the landfill problem is now so great, by 2050, potentially 85 per cent of Australia's total carbon emission budget will be accounted for by methane gas emitted from landfill.

Unless urgently addressed, this latent greenhouse gas liability, which has been

described as a 'ticking time bomb', will restrict the growth of Australian industries by accounting for a large proportion of total national carbon emission limits well into the future.

Angel believes that doing nothing is not an option. Business-as-usual projections of landfill emissions in Australia show an increase from the 1990 level of 15.4 million tonnes of harmful carbon dioxide equivalent gases per year to nearly 50 million tonnes annually by 2050.

#### 'Free riders' and misleading claims

John Gertsakis, Executive Director of industry association Product Stewardship Australia (PSA) also takes issue with the



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federal government's preference for co-regulatory schemes with industry. He says the PSA prefers full government regulation of product chain-of-responsibility, with laws making compliance on issues such as recycling mandatory.

'Otherwise, you will get "free riders" – companies who wait until it suits them to come on board and other companies who are early pioneers that take all the risks,' says Gertsakis.

There is also the problem of misleading environmental claims that undermine

consumer confidence in 'green' products. Earlier this year, retail giant Woolworths was caught out marketing its home brand of toilet paper and tissues as being made from 'sustainable forest fibre'. Woolworths later admitted its supplier was Asia Pulp and Paper – a company known to rely on logging Sumatran rainforests for pulpwood – and it had not independently checked APP's sustainability claims.

Graeme Samuel, Chairman of Australia's chief business watchdog the Australian Competition and Consumer

Commission, says the ACCC is keeping a close eye on sustainability claims made by retailers and manufacturers in the wake of the Woolworths toilet paper fracas.

**Sustainability alliances**

An interesting outcome of companies taking a chain-of-custody approach to business is that many are now forming alliances.

For example, Visy Industries has joined with recycling consultants and the Total Environment Centre to tackle the issue of organic waste in landfill. Rotting paper, cardboard, food, garden and wood waste take up to 50 years to decompose when dumped in rubbish tips, all the while emitting 'landfill gas' – mainly methane, which has a global warming potency 25 times that of carbon dioxide.

Likewise, the Australian document management and services company Fuji Xerox has been remanufacturing components removed from photocopiers and other office equipment at its Eco Manufacturing Centre in Sydney. This is in line with the global organisation's vision of 'cradle to cradle' manufacturing, where materials traditionally disposed of in landfill are treated as a resource for product manufacture.

Some materials, such as toner, have proven difficult to reprocess, so Fuji Xerox has identified alternative pathways to landfill – for example, using toner as a reduced-footprint fuel for large operations such as cement kilns.

Fuji Xerox's chain of custody approach has led to it working with technology services group EDS in Australia to streamline its document output environment. This has reduced EDS' paper and printer use and slashed its carbon emissions from printing operations by 79 per cent. As a bonus, it has reduced operating costs by 20 per cent.

In fact, as companies like Fuji Xerox and EDS have discovered, taking on extended producer responsibility can bring financial as well as environmental benefits.

**More information:**

Total Environment Centre, [www.tec.org.au](http://www.tec.org.au)  
 Product Stewardship Australia, [www.productstewardship.asn.au/](http://www.productstewardship.asn.au/)  
 Sustainability Victoria Design for Sustainability Program, [www.sustainability.vic.gov.au/www/html/1645-design-for-sustainability.asp](http://www.sustainability.vic.gov.au/www/html/1645-design-for-sustainability.asp)  
 Global Footprint Network, [www.footprintnetwork.org/](http://www.footprintnetwork.org/)

Rounding up Australia's discarded mobile handsets



MobileMuster is the national recycling program originally put in place by the mobile phone industry in 1999 in a bid to cut down on the waste created annually by the public's disposal of outmoded mobile phones, electronic chargers and batteries.

More than 8 million new mobile phones are sold each year in Australia. The Australian Mobile Telecommunications Association (AMTA), which includes all major mobile phone manufacturers, estimates there are 16 million disused mobile phones sitting in the drawers and cupboards of Australia's homes and offices.

Mobile phones are not biodegradable and contain metals and toxic chemicals such as arsenic, cadmium and lead that can leach into groundwater and make landfill a health risk in the longer term.

Funded by a voluntary levy paid for by handset manufacturers and carriers on every mobile phone imported into Australia, the MobileMuster has seen 454 tonnes of handsets, batteries and mobile phone accessories returned into recycling bins at 2000 drop-off points in places such as Telstra and Optus shops, Crazy Johns and Cartridge World stores, local council offices and ANZ

Bank branches. Schools and businesses also run their own internal musters.

About 90 per cent of the plastics, electronic circuits and metals in a mobile phone collected via the scheme are recovered, yielding gold, silver, copper and nickel, which are reused in new products – and preventing toxic cadmium, arsenic and lead from reaching rubbish dumps and landfill.

According to AMTA many people don't actually throw their phones away but either give them away or keep them, saving them, at least temporarily, from landfill. AMTA's Recycling Manager, Rose Read, says that since the recycling program was relaunched as MobileMuster in 2005 there has been an 'increase in the recycling rate of phones discarded by consumers from 19 per cent to 30 per cent'. AMTA says the MobileMuster aims to triple the annual collection rate by 2008.

Jeff Angel, Director of the Total Environment Centre, argues that after seven years of operation, mobile phone recovery rates are unimpressive. Angel sees a need for tighter government regulation of the mobile phone industry before the 'mountain of toxic phones' temporarily being stowed by their owners are eventually dumped.