

MESSAGE IN A BOTTLE

Every year, billions of empty water bottles end up in landfills around the world. The little Australian town of Bundanoon has totally banned the selling of bottled water, and the idea is catching on, reports **Graham Simmons**.

IN BALI, PURA TIRTHA EMPUL IS the island's most visited sacred spring. Every full moon day for over a thousand years, people have been making the pilgrimage to Tirtha Empul to partake of its waters. In Bali, water is life.

It's not just in Bali. Across the planet, clean and fresh drinking water has long been universally acknowledged either as a birthright or a goal to be achieved. Throughout southern Africa, for example, the installation of wells with hand-operated pumps has seen the near-total eradication of cholera. And places like Hepburn Springs in Victoria (Australia) still have old-style capped springs with hand-operated pumps, from which visitors can draw as much sparkling mineral water as they wish, all free for the taking.

But the right to clean and inexpensive drinking water has now in many countries been usurped by the vast profits to be made from selling bottled water. At the same time, access to sources of the fresh, living product becomes more and more difficult. As a result, discarded plastic bottles now litter the landscape; the consumer is financially worse off; and the environment suffers.

Dr Peter Gleick of the Pacific Institute



In Bundanoon, Australia, new-style water stations have replaced bottled water.

in America estimates that over 30 billion litres of water a year are packaged and sold in the USA alone. Of this total, only 30 to 40 per cent of the plastic bottles used as packaging are recycled. That leaves some 20 billion bottles going into landfill, forming vast 'plastic rafts' in waterways, clogging mangrove habitats, or disfiguring public parks and reserves.

Worldwide, it is estimated that some 150 billion litres of bottled water are produced every year. If the average PET plastic bottle holds 500 ml of water and 30 per cent of all bottles are recycled, the result is still more than 200 billion empty plastic bottles a year left to litter the environment. Each of these bottles can take up to a thousand years to fully decompose.

Both in France and the US, the average citizen now drinks over 100 litres of bottled water a year. America's National Resources Defense Council (NRDC) conducted a four-year study of bottled water marketed in the US, finding that some 22 per cent of brands tested showed at least some signs of contamination. It was further found that water stored in some types of plastic bottles for longer than 10 weeks is liable to leaching of hormone-damaging chemicals called phthalates.

But despite the cost and the environmental damage the consumer is still bombarded with advertising promoting bottled water as an essential fashion accessory!

“Bottled water is the best manifestation of the gullibility of the human race,” says Huw Kingston of the little town of Bundanoon, in the highlands just southwest of Sydney, Australia.

On Kingston’s initiative, Bundanoon became possibly the first town in the world to ban sales of bottled water. A town meeting in March 2009 voted 355 to one in favour of outlawing the sale of drinking water in bottles – and all 14 food and drink retailers in the town agreed to play their part in implementing the ban. As an alternative to bottled water, the company Street Furniture Australia (SFA) designed a special water station, the Arqua, consisting of a water bottle refilling post and a highly innovative Fountain Head drinking fountain with water cascading down a curvilinear blade that is designed to prevent drain blockage and the accumulation of litter – problems that have

always plagued the traditional drinking fountain (or ‘bubbler’).

“To get all the retailers on-side, we had to prove to them that they could do better by not selling bottled water,” says Kingston. “In fact, they found that they could make just as much money from the sale of refillable water bottles.”

“Bundanoon was a way of provoking a significant debate on the issue of bottled water,” says John Dee, “founder of the organisations Do Something! and Go Tap! (aka the Bottled Water Alliance). “But it’s not possible to ban bottled water

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in all communities. Bundanoon set a unique example, in that the whole town agreed with the move. But in future, we want to proceed a little differently, by targeting specific institutions like schools and universities.”

And it didn’t take long to get universities involved in the project. In January 2011, the University of Canberra announced that by World Water Day on 22 March 2011 it would ban bottled water across its entire campus. The ban is being phased in across all restaurants, cafés,



Huw Kingston instigated the move to ban bottled water in Bundanoon.

retail outlets and vending machines on campus, and will stop the sale of some 140,000 bottles of water every year.

To get a perspective on this move, I spoke with the University of Canberra's Vice-Chancellor, Professor Stephen Parker. "Environmental Science is a really strong discipline at the University of Canberra," he said. "We have an Environmental Students' Society, and they came up with the idea for a bottled water-free day. We looked at the idea and thought it should be expanded upon. Our strategic plan commits the university to reducing its ecological footprint, so the ban on bottled water fits naturally into our overall strategy."

The 13,000 students and staff of the University of Canberra will be able to drink free water from SFA water fountains and bottle-refilling stations of the same type as



Bondi municipality has installed water stations all along the boardwalk of its famous beach.

those installed in Bundanoon, or from WaterVend machines that dispense chilled and filtered water into the customer's own refillable bottle, at a fraction of the cost of pre-bottled water. "You have to do this as a whole package," says Professor Parker. "We worked on this idea with Washington University in St Louis (Missouri, USA), where they banned bottled water in 2009 before a full range of alternatives had been put in place. In the end, it's about getting people to drink more water, not less!"

OTHER INSTITUTIONS, including Australia's Charles Sturt University, are also looking to follow the University of Canberra's lead. Municipal authorities are also taking action against the ubiquitous presence of bottled water. Dr Christina Kirsch, an elected councillor with the Warringah Shire Council on Sydney's

northern beach-shore, has spearheaded a move to provide drinking stations throughout the municipality. In this she has worked closely with the adjacent Manly Council, which has installed water stations at key points along its main pedestrian plaza The Corso, as well as on the beachfront.

"We don't want to ban bottled water altogether," says Dr Kirsch. "Instead, this is about giving people freedom of choice. They should be able to choose whether they want clean, fresh water or the bottled product."

In installing the new water stations, Manly Council adopted some refinements not found in the original Bundanoon model. The four key elements in the Manly design are:

- More vandal-resistant, wheelchair friendly and hygienic facilities than



Councillor Christina Kirsch and daughter Carwyn take water from a public water station in Manly.

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Clean water has meant the end of cholera in rural areas of Southern Africa.

- old-style drinking fountains;
- Prominent signage that makes it easy for people to spot and use the water fountains;
- Taps that allow people to refill water bottles with free filtered water; and
- A filter that removes chlorine, lead and harmful microbes (but not fluorides) from the water.

There was some difficulty in persuading conservative-minded councillors on Warringah Council to go along with these measures, according to Dr Kirsch. “We got around this problem by bypassing the legislature,” she says. “Instead, we amended the regulations to make it compulsory to install water stations as an ‘essential service’ as part of every upgrade of public infrastructure.”

Fountains dispensing free filtered water

have now been installed on all ferries plying Sydney Harbour between Circular Quay (in the city centre) and Manly. And other municipalities including Bondi and Randwick Councils in the greater Sydney area and the City of Bendigo in Victoria are also coming on board. At Bondi Beach, arguably the most famous and popular beach in Australia, water stations spread along the boardwalk service a steady stream of grateful ‘customers’.

Even some major companies are joining the campaign. The Bendigo Bank, for example, encourages staff to drink tap water instead of buying bottled water. “Bottled water has a much higher carbon and water footprint than tap water and also costs 200 to 10,000 times more,” says the bank.

HOWEVER, THERE is still a long way to go before alternatives to bottled water

become widely available. One major area of concern is at city railway stations, where dehydrated passengers can either search in vain for a water source or pay inflated prices for bottled water from vending machines. “We’ve been lobbying behind the scenes to get water fountains installed on every railway platform in Sydney,” says Jon Dee. “But the infrastructure and installation costs are a major hurdle. It may be more practical to install WaterVend machines – at least the customer will get a reasonably priced product, and the environment will benefit from the use of refillable bottles.”

The final word on bottled water comes once again from Professor Stephen Parker. “It was a great marketing coup by the bottled water industry to get people to buy in bottles what they could already get for free,” he says. “But now, the planet may be striking back.” ■