

milieu

SHARING OUR WORLD, CARING FOR OUR ENVIRONMENT

June / July 2006



**Energy
label - check!**

Love your pocket,
love the environment,
love that label!

Nanyang Polytechnic
Environmentally friendly campus

Making every drop count
An entertaining challenge

Powered by PASSION

3 different sectors

“Many people think of the SEC as a government agency. Perhaps it’s because of the word ‘council,’” Howard surmises. But as part of the people sector in the 3P Network, the SEC plays a very different role from the government (public sector).

“The role of groups like the SEC is to get in close with companies and the community and inspire them. In representing a broad spectrum of stakeholders, we provide feedback and suggestions on several platforms,” he says.

“In contrast, the role of the government is to provide the framework that is pro-sustainability. By this, I mean sound policies, legislation, enforcement, and infrastructure.”

In the beginning, the SEC initiated its own projects. As it grew successful in reaching out to a broader audience, corporations, schools and the wider community began taking more ownership of the environment. Happily, these groups in the private and people sectors began to organise their own projects. As a result, the SEC now plays more of a supporting role to them.

2 big issues

The SEC is fronting two major campaigns this year - the 10-litre Challenge and the Climate Change Awareness Programme (CCAP). “Though we have done well on supply issues, more can be done to address demand and conservation,” notes Howard.

As for climate change, people tend to perceive it as a long-term issue. However, as Howard points out, the potential impact on almost every aspect of life on Earth makes the problem too serious to be ignored. “The CCAP hopes to create an emergence of a carbon conscious generation and that’s why we are starting *now*.”

Because the young are most receptive to environmental issues and are proactive, the SEC has tailored the initial stages of the CCAP and 10-litre Challenge to target schoolchildren. But it has not forgotten the grown-ups. Howard explains that the SEC hopes to encourage both young and old to be environmentally friendly in day-to-day habits. “It isn’t just about cost savings – adults should think about the planet their children and grandchildren will be inheriting.”

And you can bet that Howard walks the talk. “At home, I place reminders everywhere to switch off lights and ensure that the fridge door is closed properly. I want my kids to practise good habits. In the office, we’ve banned drinking straws and disposable cutlery and crockery.”

Some SEC programmes:



Every day, all over Singapore, people are doing their part to care for our environment. Read about it in *Milieu*, and see how you can make a difference – because it’s your environment too.

Milieu is a bi-monthly newsletter by the Ministry of the Environment and Water Resources (MEWR), in collaboration with the National Environment Agency (NEA), PUB and 3P (Public, Private and People) owners of the environment.

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A valuable partner to the MEWR family, the Singapore Environment Council (SEC) has been tirelessly raising public awareness of environmental issues and coordinating various environmental groups. *Milieu* talks to SEC's executive director, Howard Shaw, about the non-government organisation's role and its plans.

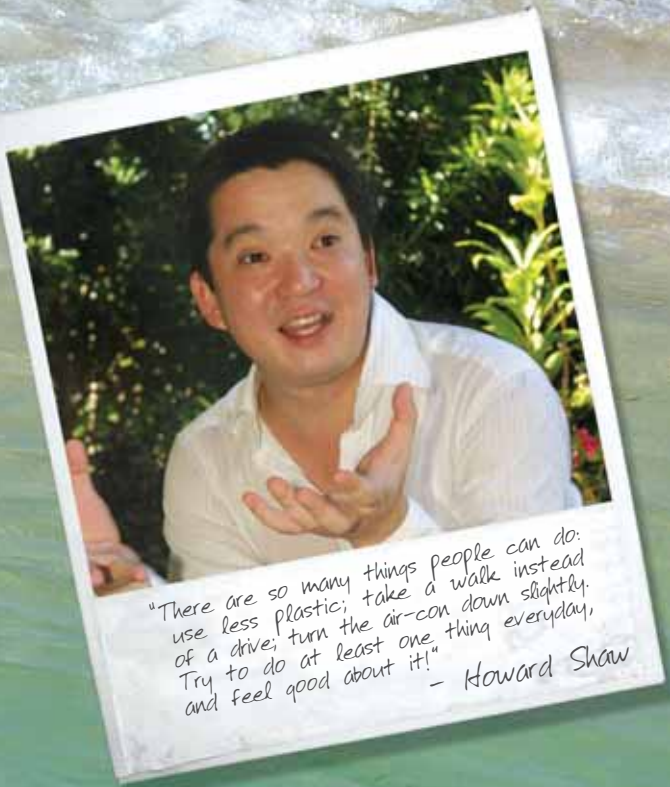
1 tall order?

In the bigger picture, Howard sees a challenge in getting people to stop thinking of Singapore as a stand-alone environment. "For people living in Singapore, it's easy to become complacent about water – but even in the immediate region, the threat of water shortages because of drought or contamination is very real. Whatever happens in the region or beyond will ultimately have a bearing on us," he comments.

"In the same spirit that has Singaporeans donating generously when a natural disaster occurs in the region, we'd like to see Singaporeans involved in and committed to international conservation projects. We'd like people to contribute to a longer-term objective, one which will ultimately affect them."

If that sounds like a tall order, Howard can take heart from the SEC's many volunteers who have made a start. He modestly tells *Milieu* that "volunteers provide the ideas and passion that power our organisation."

Do you have the passion? If you would like to contribute your time or donations to the SEC, please contact SEC at info@sec.org.sg or visit <http://www.sec.org.sg/> for more information.



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Energy label - check!

by Dawn Lee, Corporate Communications Department, NEA

Energy labels are gaining popularity with consumers and retailers alike – even before they become mandatory. Milieu finds out why.

Shopping for appliances can be daunting. You're bombarded with different designs, features, sizes, prices, conflicting opinions and, of course, sales promotions. And you know you'll have to live with your decision for a very long time.

Save now, pay later?

Wendy Wong can empathise. This executive engineer with NEA's Resource Conservation Department recently went shopping for a fridge and air-conditioner. She has this reminder for prospective buyers: "There are two costs: the upfront cost, which is what you pay at the point of sale, and the operating cost, which you pay throughout the lifespan of the appliance."

A less energy-efficient air-conditioner might cost \$50 to \$200 less than an energy-efficient model. For refrigerators, the price differential is probably \$20 to \$30. But don't be dazzled by these upfront savings. "An inefficient model means higher electricity bills," Wendy says. "So you could end up spending a lot more down the road, especially with the rising cost of electricity."

Wendy's advice is to narrow your search to products bearing the energy label – the more ticks, the more energy-efficient the appliance.

Label of love

The Energy Labelling Scheme started on a voluntary basis in 2002. Now, 20 per cent of models on the market are labelled – and customers are loving it. Albert Chi, a technical officer in the same department as Wendy, says: "Some retailers have had so much positive feedback, they now display only labelled models."

In 2007, energy labelling fridges and air-conditioners will become mandatory, as it is in many other countries. These two household appliances were earmarked first because together, they account for 40 to 65 per cent of the average household's electricity bill.

Eventually, Albert and Wendy hope, there will be labelling for all appliances. Indeed, consumers stand only to benefit.

*Love your pocket,
love the environment,
love that label!*



Environmentally

friendly

luxury

Last December, Smart Automobile began operating Singapore's first fleet of taxis to run on compressed natural gas (CNG). These 100 Mercedes-Benz E200 CNG limousines emit 20 percent less carbon dioxide than petrol-driven models, and generate less particulate matter of 2.5 microns (PM2.5) than even Euro IV-compliant diesel taxis. *Milieu* gets the inside story from someone who has experienced a CNG taxi firsthand.

by Francis Tan,
3P Network Division,
MEWR

Neo Teck Leng loves reading up on the latest car trends, such as the push for green vehicles. So, when Smart advertised for hirers for its CNG taxis, he applied and was delighted to be selected.

A CNG taxi has a 1.8-litre supercharged petrol engine that can run on gas. The gas is stored in five cylinders, two of which are concealed in the boot's spare tyre well. It's completely safe too – CNG vehicles have been safely used in many countries, including Germany, Italy, Malaysia and Thailand.

"I'd heard about CNG taxis two years ago when NEA had a pilot study," says Teck Leng. "I knew then that their performance is comparable to conventional vehicles, and when I finally got my hands on one, I wasn't disappointed. Pickup is smooth, the engine is quiet and, if I run out of CNG, I can switch to using petrol."

Although rental of a CNG taxi costs a little more, Teck Leng notes that the difference is made up by the savings in fuel cost.

"Since there is not much difference in my expenditure, I thought, why not opt for a Mercedes CNG taxi? It's a luxury model, my passengers are more comfortable and I enjoy the quiet engine. What's more, I'm doing my part for the environment."

Next time you see a CNG taxi with its trademark leaf logo, hop in and be pleasantly surprised!

CNG more than makes cents

Teck Leng used to drive a diesel taxi. By his own estimates, this is how the running costs of a CNG taxi stack up against a conventional diesel taxi:

Item	CNG Taxi	Conventional Taxi
Rental	\$110	\$92
Fuel (500 km)	\$30 (CNG)	\$50 (Diesel)
Daily Operational Cost:	\$140*	\$142*

**Estimates only. Not scientifically measured.*

A Class Act

A sprawling campus the size of 60 football fields, with a complete range of academic, sports, arts – and even retail – facilities, catering to about 15,000 students. It's a hive of activity almost round the clock. How can a campus with this much going on be environmentally friendly? *Milieu* investigates.

The Nanyang Polytechnic (NYP) campus calls itself a green campus – and it has the awards to prove it too. NYP was the first educational institution to receive the ISO14001 certification in October 1999 and the Green Mark Platinum Award for Existing Buildings in 2005. Since then, it's won at least seven awards, one of which is an international award (the ASEAN Energy Award).

"Our management decided to adopt the green campus concept during the campus planning stage, as it fulfils one of the polytechnic's corporate goals which is to strive for 'Excellence in Environment!',"

explains Koh Swee Guan, NYP's Director of Estates Management and Chairman of its ISO14000 Committee.

Designed for green

Everywhere you look, the campus integrates simple but effective green features. Water features and greenery soften and cool the space. And rain sensors shut off the irrigation system so that, on rainy days, all that lush planting gets watered by Mother Nature.

There are other efforts to conserve water too. Ground water is collected for irrigation and cleaning purposes. NYP has also

switched to using NEWater for their cooling towers. According to PUB, NYP achieved 35% savings in water consumption by reviewing consumption habits; reducing water usage and reusing water whenever possible; and repairing leaky fittings promptly to avoid wasting water. The school was certified as a Water Efficient Building in May 2005.

North- and south-facing walls and windows have overhangs to shade them from the sun, while those facing east and west have minimal glass to reduce the 'greenhouse effect'. At the same time, the campus is designed to make the most of natural



Cooling towers use NEWater



Rain sensors cut off irrigation during heavy rain



Rainwater collected is used for irrigation



How NYP stays 'green'

- sun control overhangs for windows
- minimal glass windows facing east or west
- landscaping, including skyrise greenery
- energy-efficient lighting
- rainwater harvesting
- integrated building management system
- environmental management system
- promotion of environmental awareness and good practices

lighting and ventilation. All these help keep electricity bills down.

Then there is the Integrated Building Management System, which automatically switches lights and air-conditioning off when rooms are not in use.

The people factor

However, all this hardware counts for nothing unless the users are on board. As Mr Koh notes, "the key to efficient energy management and promotion of a green campus is to engage all staff and students in a collective effort to continuously improve our systems and implement new green ideas."

This includes having a suggestion scheme for students and staff, which has yielded energy-saving ideas like switching off selected street and carpark lights at night but without compromising on safety.

The school has also set up the GEO Council to inculcate campus environment awareness, create environmental awareness beyond the campus, and conduct activities to develop personal and corporate responsibility towards the environment. In this way, NYP is spreading the green message far and wide.

"My team at GEO Council has organised various green activities such as a coastal clean-up, green talks and fairs," says Jason Pan Zhongsheng, a third-year Engineering student who is President of the GEO Council.

Bringing the message home

For Jason, the message has really hit 'home' too. "I've witnessed how recycling programmes are implemented in NYP and I've been inspired to do the same at home."

And that's part of the good education that NYP is giving its students.

Making every drop count

by Joy Tan, 3P Network Department, PUB

A challenge has been issued to all Singaporeans – to use only 155 litres of water per person each day by the year 2012. This is the Singapore Green Plan 2012 target. *Milieu* speaks to Lim Chee Leong, a PUB engineer, on how PUB is spreading the message to Singaporeans.



Singaporeans have reduced their daily water usage from 176 litres a day per person in 1994 to 160 litres last year. To bring that number down by another 10 litres, the MEWR family has introduced the 10-litre challenge. And to show Singaporeans just how easy it is to save 10 litres a day, a PUB team, working with the Singapore Environment Council, has come up with a fun and interactive website.

“The Singapore Environment Council has a good track record of educating Singaporeans on environmental issues,” says Chee Leong. “They were keen to host the website, and we are working together to encourage more Singaporeans to take the challenge.”

An entertaining challenge

The 10-litre challenge website features an attractive interface full of water-saving tips and games to keep visitors entertained. Says Chee Leong, “We strongly believe in educating Singaporeans on saving water from a young age. Hence the website is designed to appeal to the young. We are now working on Phase 2 of the website, which will address a wider audience. It will introduce the working principles of water saving devices.”

When asked if he’s one to walk the talk, Chee Leong replies bashfully, “Like what’s illustrated on the website, I try to practise water conservation habits, such as keeping my showers short and washing clothes at a full load. I’ve also installed water-saving devices such as thimbles in my home.”

The 10-litre challenge also includes various initiatives, such as Water Volunteer Groups (see page 9), a labelling scheme for water-efficient appliances, and promoting the use of dual-flush low-capacity flushing cisterns.

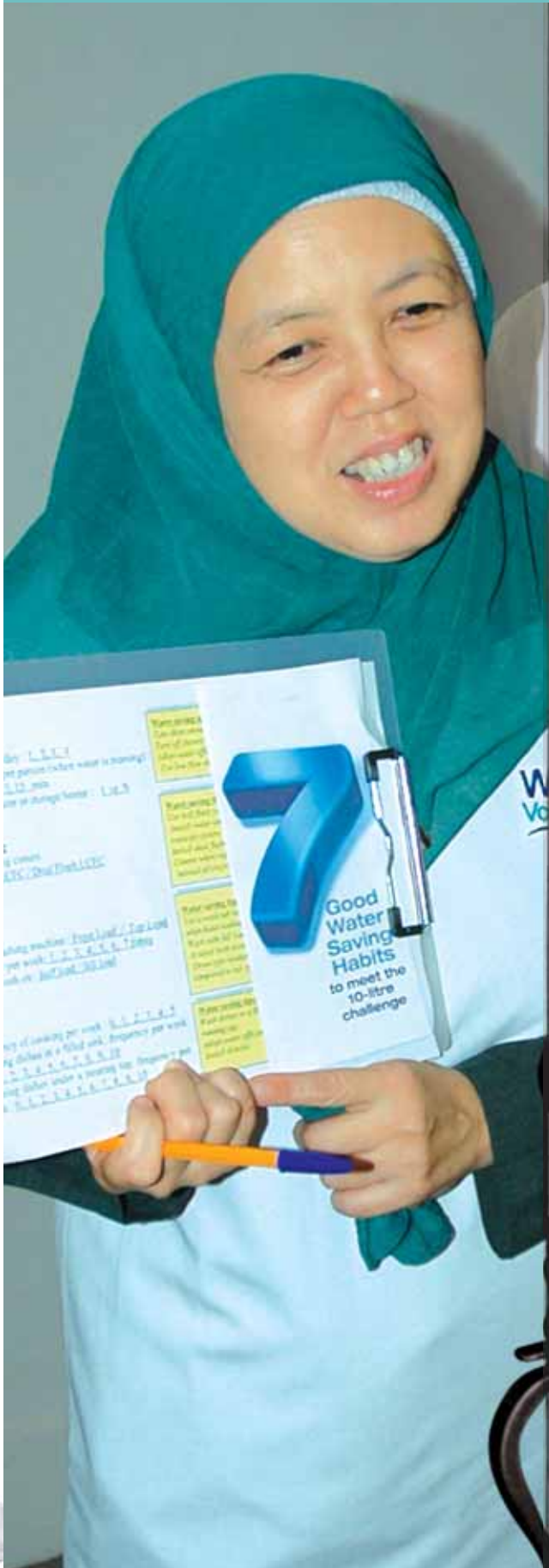
Big Tips

- Shortening your shower time by 1 minute saves 9 litres of water.
- Repair leaks and dripping taps promptly.
- Choose a water-efficient washing machine.

For more tips, visit the 10-litre challenge website at www.sec.org.sg/10litreachallenge.

Who's that at the door?

The next time someone rings your doorbell, don't assume she's out to sell you something. It might just be a member of a new 'street force' that PUB has got going door-to-door – the Water Volunteer Group (WVG).



Mdm Fauziah bte Saidin works as a home-help and cleaner at a home for the elderly. And for the past three months, she's devoted one evening a week to another good cause, as a Water Volunteer.

Under the WVG programme, grassroots volunteers from resident committees, voluntary welfare organisations and other groups are accompanied by PUB officers on household visits. The purpose of these visits is to educate the households on water conservation. The volunteers focus on encouraging residents to adopt good water-saving habits, while the PUB officers help to install simple water-saving devices in the homes.

Good reception

Most of the families targeted under this programme are lower-income families. Mdm Fauziah helps to explain how, by adopting certain habits, they can reduce their monthly water bills. She has received a warm welcome from most of the 100 households she's visited so far. It helps that "most people we visit realise that they can save more water simply by installing a thimble in their taps," she says. "They just need some advice. And most people *want* to save more water, because they know that it will save them money."

But what motivates this mother of three to set aside precious time for the WVG visits? In part, it is her memories of water-rationing when she was young, that remind her not to take water for granted. Practising what she preaches, Mdm Fauziah uses the soapy water from her washing machine to wash the toilet at home. "We should do our best to conserve water – because water is precious."

By June 2006, 22 WVGs had been set up in 18 constituencies. The results have been encouraging, with households reducing water consumption by 5% to 15%. Needy families in particular will benefit from the savings on their water bills.

The Water Volunteer Group (WVG) programme is the latest PUB initiative under the 10-litre Challenge. It was launched to enhance the Water Efficient Homes Programme started four years ago. The aim of the WVG programme is to further reduce per capita domestic water consumption from the current 160 litres per day to 155 litres by the year 2012.

PUB is working together with 3P partners: the People's Association and Community Development Councils to form the WVGs. To find out how to join a WVG, email aw_lay_khang@pub.gov.sg.

Learning under the sun

by Cheong Shuying Sheela , 3P Network Division, MEWR

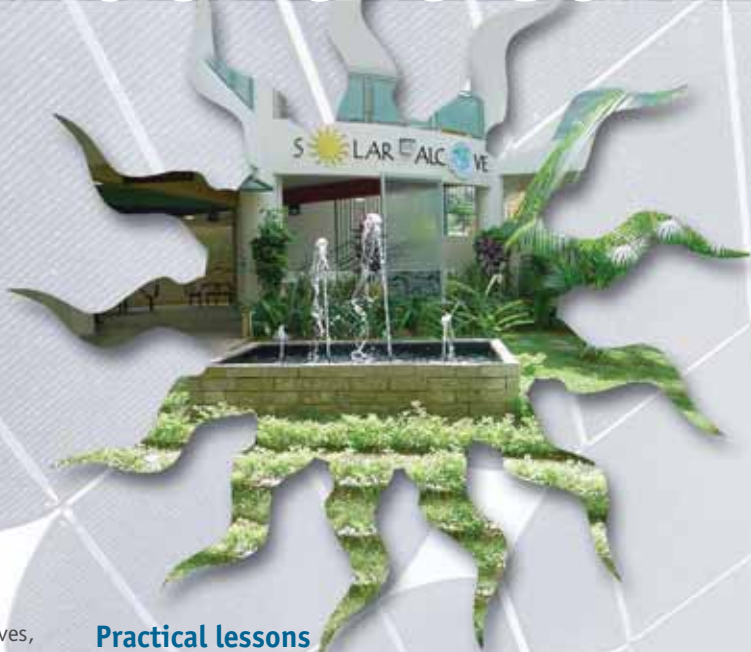
The sky is grey, yet the solar-powered water fountain at Marsiling Secondary School still bubbles away merrily. How is this so? The answer to this question – and many others – awaits students and visitors to Marsiling’s Energy Conservation Learning Centre (ECLC).

The ECLC opened in April 2005 and has several main objectives, including promoting energy conservation awareness and instilling energy-saving habits in students, parents and teachers. In addition to showcasing student projects (such as the solar-powered car that clinched first prize in the fastest car category at the 4th National Junior Solar Sprint Competition in 2002), the centre houses a mini-library.

Never too young

“In setting up this centre, it is our hope that students will embark on innovative projects to solve energy consumption problems,” affirms Koo Kay Kee, a Physics teacher and member of the ECLC steering committee. The ECLC has also become a Learning Journey site for students from other schools, including primary schools.

Although energy savings from the solar-powered water fountain amount to only 20 cents a day, the true importance is in showing students a clean, green alternative energy source. The solar-powered water sprinklers in the school’s Herbs and Spices Garden use no electricity either. Energy is stored in batteries to power the sprinklers even on cloudy days.



Practical lessons

Students are also brought to the school rooftop to observe the installation of solar panels and to understand conservation habits they can implement.

Student involvement is critical. Besides the ECLC, each class in Marsiling has ‘energy stewards’ who ensure that fan and air-conditioning settings are set at a temperature that balances comfort and energy-saving considerations. In the washrooms, motion-sensors switch on the lights when someone enters, and switch them off after five minutes.

According to Mr Koo, “the school is the first in Singapore to integrate the teaching and learning of science and geography for lower secondary students in environment education.”

Mr Koo has this to add: “In showing students our current environmental situation, we encourage them to think of future-oriented solutions and bring this message home to their parents and community”.

“ The Centre gives me an opportunity to build projects using solar cells and motors. It also has reference books which have taught me the importance of conserving energy. ”

- Bryan Lai, Secondary 3 student



A Friend of Water

by Natalia Lew, Secondary 1 student, Dunman High School

MAY
22

I'm an adopter of Geylang River! :)

[Permalink](#) [Comments\(16\)](#) [TrackBacks\(0\)](#)

Our school adopted the Geylang River in August 2005. It's part of PUB's Our Waters programme. We go to 'our' river regularly to clean it up.

Today, we headed down to Geylang River. Man, was the river polluted! *groan* The river is our source of drinking water - but what did we find? 400 plastic bags; 350 cigarette butts, wrappers and lighters! Hundreds of straws; food wrappers, drink cans and bottles, newspapers, clothing, shoes... the list goes on!

I'm aching all over now, but feeling a big sense of achievement from the clean-up.



MAR
22

.:: World Water Day ::.

[Permalink](#) [Comments\(9\)](#) [TrackBacks\(0\)](#)

Our Minister for the Environment and Water Resources, Dr Yaacob Ibrahim, announced the Friends of Water programme, which recognises those who help conserve water and keep water clean. My school is the first recipient!

500 of us pledged our commitment to the 10-litre Challenge. Check it out here: www.sec.org.sg/10litreachallenge/.

It's cool! A calculator works out our water consumption, and offers tips on reducing it. Play the games! Definitely more fun than homework... *groan*



FEB
14

A date with Wally ... and Darryl!

[Permalink](#) [Comments\(12\)](#) [TrackBacks\(2\)](#)

Water Wally popped over to visit us today, sharing with us the importance of taking care of our water resources. Say hi!

And Darryl David, who was the host of the event, conducted an experiment. He passed a jug of clean water around and each of us dropped something in. Oh boy, the water became dirty really fast. Imagine if that was a river or drain. All that dirty water would flow right into our reservoirs!!

So now, would you guys carelessly litter into our drains and reservoirs? To that, I give a resounding "NO!"



No ifs, ands or butts

by Daniel Heng, Corporate Communications Department, NEA

According to the World Health Organisation, tobacco use is the leading preventable cause of death across the globe - claiming some five million lives a year.

请勿在此处吸烟
**SMOKING
PROHIBITED**

Smoking causes lung cancer, bronchitis, asthma, stroke, heart attacks and other cardiovascular diseases. No wonder many countries have stepped up their anti-smoking laws. Some countries even ban smoking in private vehicles.

Just last October, NEA extended Singapore's smoking ban to bus shelters and interchanges, public toilets, community clubs, open-air stadiums and swimming complexes. Since 1 July 2006, this ban has been further extended to hawker centres and coffeeshops, places often patronized by families. Smokers may now 'puff' only in designated smoking corners away from the crowd. And a few establishments have gone totally smoke-free.

Stubbing out smoking

For Environmental Health Officers like Stephen Ong, it is important to strike a balance between the dual role of enforcer and educator.

"It's often a challenge getting offenders to understand how passive smoking affects others, including their family members," he says. "But enforcement is necessary because some offenders, despite frequent reminders, continue to blatantly disregard the law." For this reason, NEA will enforce the ban strictly against all offenders.

However, NEA recognises that enforcement alone is not enough. Cooperation from smokers, hawkers and coffeeshop owners is vital. Fortunately, Singaporeans generally support the ban, and NEA is looking at extending it to more areas in future. "I think the smoking ban is a good move," says Marie Loh, a regular patron at coffeeshops. "At least I can now enjoy a meal without the lingering smell of cigarette smoke, even if there's smoking in the designated corner."

And with greater awareness and the positive influence of those around them, smokers will hopefully call it quits - for the sake of their families, our environment and their own health.

Smoked out!

Since 1 July 2006, smoking has been banned in the following places:

- Hawker centres
- Coffeeshops
- Other non-air-conditioned eating establishments

The ban will also be extended to entertainment outlets such as pubs, bars and discos from 1 July 2007.

