



EXPRESS!

#8

All About Environment

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Foreword from the editor

Welcome to the inaugural official print edition of EXPRESS! Since its humble beginning in Sep 2005, EXPRESS! has transformed in both content and style to become the premier lifestyle publication for youths in Singapore, focusing on environmental issues and how they impact our lives. While the publication will continue to be available online, we hope that the print edition will help spread the word of environmental conservation even further to both eager environmentalists and occasional readers alike.

In this 8th issue, EXPRESS! features articles that tease out the connections and contradictions in the way the world views environmental protection and conservation. As the price of oil continues to soar, bio-fuel has caught the attention of not only ardent environmentalists, but also financial analysts and farmers alike. For people like us who care deeply about the environment, we can and must learn two key lessons from this bio-fuel discussion. Environmentalists should refine their arguments on the costs and benefits of policy or business decisions on the environment. However, such a narrow focus is no longer sufficient for the world we live in today. No matter how fervent we feel for our Earth, our convictions only make sense to others if we better appreciate the interwoven web of causes and effects that ties environmental concerns with the realms of security, economics, politics and entertainment.

Therefore, from bio-fuel, business to luxury goods, we hope that you will have a better understanding of the environmental concerns that straddle different parts of our lives. More importantly, we hope that you will then make informed choices in your various spheres of influence to protect our environment.

Pak Shun

VOLUNTEER EDITOR

Ng Pak Shun
pakshun.ng@eco-singapore.org

VOLUNTEER COPY EDITORS

Heather Chi
Yuhui Balasingam-Chow

VOLUNTEER WRITERS

Kenneth Goh
Yong Rui Yan
Yeo Jing Wen
Elaine Koh
John Yip
Eva Ellinghausen
Lim Linin
Sonya Petcavich

IMAGE SOURCES

ECO Singapore
morgueFile www.morguefile.com
stock.xchng www.sxc.hu
Stockvault www.stockvault.net

VOLUNTEER DESIGNER

Octopus Ink
www.octopus.sg

[Elaine](#), currently age 18, is studying Diploma in Hospitality and Tourism Management in Temasek Polytechnic. She has always been interested in doing her part for the environment and knew that action speaks louder than words. She enjoys playing Squash as a CCA and her ultimate wish is to try all kinds of chocolates from all over the world. She also loves to eat (big on snacking!) and reads to pass time and as a form of entertainment.

Call it interesting or just hyperactivity, [Eva](#) loves doing many different things. From salsa dancing, learning French, playing poker with cousins to swimming at ungodly hours of the morning before work, she has decided to dedicate some of her energy into saving the environment. And no, she doesn't claim that she can fit into a sexy superhero suit or wave a magic wand to save the environment, but hopefully her interest in journalism and marketing will be handy in helping to raise awareness and garner support for the cause.

[Jing Wen](#) is a final year student at Nanyang Technological University, currently waiting eagerly for graduation. She is an avid nature-lover, and hopes that by writing for ECO Express, it can pave the road to greater environmental awareness for her. She is also a self-confessed foodie, who simply cannot resist a good meal. Lastly, she loves outdoor sports such as rugby, and her current craze is scuba diving, where the marine world awaits to be explored.

[John](#) is a 30-something freelance writer. He has an abiding interest in all things environmental but hereadily admits to being less

than environmentally conscious at all times. So, he pitches in whenever the guilt gets too strong and writing for ECO EXPRESS! is his little way of making a difference, however small it may be. He fancies himself as a modern-day Renaissance Man who delves into an eclectic mix of topics, from philosophy to business, current affairs, history and anime. Yes, anime. Japanese animation. You do not want to get him started on that hobby, if you value your time and sanity.

[Kenneth](#), aged 20, is currently serving his national obligation -Opps service, which is basically what every guy in Singapore needs to go through at his age. Besides counting green as his favourite colour, he is a self-confessed newbie to the environmental scene who has a disdain for using plastic bags. Writing for ECO EXPRESS! should (hopefully) count as a baby step to greater awareness for the environment for him. A passionate foodie, he enjoys flexing his leg muscles by joining the queues in front of any Sunday-Times certified food stores. He loves exploring food haunts around Singapore and is a freelance writer for a Food Magazine. Besides eating, he counts reading up on celebrity gossip and listening to feel-good music as therapy.

[Linin](#) is an 18 year old embarking on her studies in NUS Arts and Social Sciences. The life that is ahead of her is still unknown but she will thread through with gusto and imagination. Frugality is something that she tries to achieve and she believes that this is an important concept that others should learn especially when it concerns the environment and our resources. Linin counts

sports as her favourite past-time and she engages in various sporting activities ranging from touch rugby to amateur futsal.

[Rui Yan](#) is waiting to enroll in university at the moment, and is only just acquainting herself with the entire massiveness of environmental issues. She enjoys being in the sun and swears by regular doses of it to stay sane. She cannot wait for whatever is coming next. Except for worse effects of global warming that is...

[Heather](#) is a 19-year old freelance writer/reporter who is currently pursuing in a degree in Geography at the National University of Singapore in order to pursue her life mission of engaging in development work in the Southeast Asian region. She has founded a local anti-hunger group, Food for All, to support local food rations programmes, increase awareness of hunger and food security issues as well as encourage food appreciation. In addition, she is very involved in local civic society, and volunteers with groups such as Shan You Counselling Centre, ONE (SINGAPORE), The Choice Initiative, ECO Singapore, Social Entrepreneurship Forum, SYINC, Migrant Voices and the Pop and Talent Hub Market. She is also a published poet and firmly believes in the power of writing to advocate and inspire.

[Yu Hui](#) works as an analyst by day, churning out reports and insights in digital marketing activities. He does his little bit to reduce his carbon footprint, like turning off one of the bathroom lights and blacking out his monitor if the computer hasn't been used for a while.

[Sonya](#) spent half a year in Singapore studying at NUS and interning with ECO Singapore. She is now a third-year business student at the University of California, Berkeley, where she is currently trying to re-adjust to the crazy homeless people at Berkeley, poor renditions of Chinese food in the United States, and not speaking Singlish. She is passionate about ocean conservation, especially as she lives near the beach and surfs almost everyday. Interning with ECO Singapore was one of her best experiences while abroad, and she hopes to see the organisation expand overseas.

[Pak Shun](#) is a civil servant who likes to write and comment on how others write! ;) He hopes to make a positive contribution to the environment by first understanding the latest discussions and arguments with regard to climate change and global warming, and then ensuring that others are aware of these issues as well.

A little design studio in Selegie, [Octopus](#) enjoys making books and websites. Xiao Ling jumped at the chance to design Express, as it gave her a chance to learn how to design responsibly. Eco-friendly print design may sound like an oxymoron, but print media is still a great way to disseminate information and opinions. Awareness in responsible design still isn't prevalent here, and Octopus hope to learn more about it, starting from www.designcanchange.org. This issue, however, was brought to you by Yizhen, our favourite intern.

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Environmental Challenge
Organisation (Singapore)
87 Beach Road
Chye Sing Building
#06-01
Singapore 189695
tel. 6333 5543
fax. 6333 5537
www.eco-singapore.org
news@eco-singapore.org

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The Prince and the E(nvironment) by Eva Ellinghausen



H.S.H Prince Albert II of Monaco officially opens the beginning of Earth Day at the Science Centre.

Meeting a prince is any girl's dream, but coming face-to-face with His Serene Highness Prince Albert II of Monaco was neither intimidating nor dreamy as one might expect.

In fact, the reality is that he is flesh and blood like the rest of us — as is the reality that global warming is happening and it's happening now.

The prince, who represented Europe, was in Singapore to receive his award for "The Champions of the Earth". Established in 2004, this award is presented by the United Nations Environment Programme (UNEP) every year to seven of the world's most outstanding environmental leaders.

In 2005 and 2006, Prince Albert followed in the footsteps of his grandfather, Prince Albert I, by venturing to the Arctic to see first hand the impact of global warming. He was soon inspired to establish the Prince Albert II of Monaco Foundation that, according to its website, "aims to be a catalyst for environmental projects."

At a press conference held at the Science Centre on Earth Day, April 22, Prince Albert answered questions from the floor, which consisted largely of junior college students. He talked about his interest in the environment and how cities like Singapore can be regional leaders for green technology in the area.

"As an economic giant in this region, it also means that you have the responsibility to show leadership [in environmental technologies] in this area," Prince Albert recommended. Professor Peter Ng elaborated that Singapore can help regional countries like Indonesia and the Philippines by sharing with them how to use such technologies to improve energy efficiency. "When they (neighbouring countries) become richer, we become richer," he said.

On the topic of Monaco and the environment, Prince Albert noted that Monaco itself is working on constructing more efficient transportation systems that will reduce carbon emissions. Ironically, Monaco is hosting the Formula 1 Grand Prix this May, which is bound to require a lot of energy and consequently use

up precious fossil fuels. Yet, Prince Albert shared that emphasis should be placed into developing technologies that will help to make such practices more environmentally friendly.

"It's not a question of banning automobiles or rejecting automobile sport, but it's trying to bring them into the process of creating better solutions," he said.

He added that, at an automobile show in Geneva a few weeks before this conference, there were already talks of newer engine models that use energy more efficiently. "Perhaps Formula 1 cars as well will be totally hybrid in the future."

Following the press conference, Prince Albert made his way to the Business for the Environment Summit (B4E) at Suntec Convention Centre for a panel discussion. Among the panelists were the other Champions of the Earth winners, including Dr. Balgis Osman-Elsha, a senior scientist from Sudan who is also an author of the Intergovernmental Panel on Climate Change (IPCC) reports, and Dr. Atiq Rahman, Executive Director of the Bangladesh Centre for Advanced Studies (BCAS).

Dr. Rahman, who is leading the BCAS as South Asia's sustainability think-tank, said that it is everyone's responsibility to "rise together and deliver a better future for this planet or we will all sink together. By integrating environment and development, we are trying to show that North and South and rich and poor do not have two different fates."

Dr. Osman-Elsha, who has worked on a range of research projects in her native land, and also won the Nobel Peace Prize with the IPCC last year, regarded receiving her Champions of the Earth award as an honour. She added, "It gives you the feeling and the power to do more and I think the proudest moment is yet to come. We have no other planet—there is only one Earth: this is the message!"

Echoing the general consensus that climate change required urgent action, Prince Albert stated, "The world is facing an unprecedented threat. We must assume our responsibilities without delay and rise to the challenge that history has placed upon our path."

Did you know that Prince Albert II of Monaco...

- ↳ Is the son of the late American actress Grace Kelly, who was also the first US actress to be printed on a postage stamp?
- ↳ Is following in the footsteps of his grandfather, Prince Albert I of Monaco, who was an avid explorer of oceanography and created many instruments in his day for scientists to study the various marine species?

ECO Singapore wishes Prince Albert and the rest of the environmental leaders the very best in spearheading initiatives that will bring the world one step closer to sustainable development. **E!**

The Future is in Our Hands

by Eva Ellinghausen

In a time when industrialisation is everything, businesses have to start thinking for the environment outside their offices.

As cliché as it may sound, the fate of the world we live in lies in our hands.

We can decide whether to let the “grown ups” deal with it. But we also have to be aware that many scientists predict the real problems caused by global warming are not going to materialise in their lifetimes but in ours – the youth. So, it is our responsibility to push for better environmental practices in order to curb the damage that has already been done.

If we do have the power to change the future, then how should we act in order to achieve this goal? I was at the Business for the Environment Global Summit 2008, held at Suntec International Convention and Exhibition Centre, on April 22. I took the opportunity to look up world leaders, such as Göran Persson, the ex-Prime Minister of Sweden, and two of this year’s “Champions of the Earth” winners, Dr. Balgis Osman-Elsha of Sudan and Dr. Atiq Rahman of Bangladesh, to find out about their views on how youths should be striving for better control of the environment.



Do you believe that youths should urge governmental bodies and companies to change policies to be more eco-friendly?

Persson: It's partly their responsibility, but it's also partly their parents' responsibility. They (parents) have to realise that if they don't succeed [in making a difference now], the youngsters will have a huge problem to handle in the future. The best thing for a young boy and girl today is to have a good education, because this is knowledge about how to solve all these problems. And then also to act environmentally friendly in your daily lives, for example, by creating awareness about this problem. Don't waste, don't destroy. Be careful because we only have one Earth.

Do you think that we've reached a stage where we should move forward from creating awareness to actually carrying out effective strategies?

Persson: That's right. I'm extremely worried listening to those who say we are going to wait until 2010 for certain plans, [because] no, we do not have that time. We have to act now and put pressure on governments and companies and also the youths. Youngsters who want to go into NGOs and work to have an effect on changing policies have a lot to do. It is a dangerous situation today, you have to act and act now.

What would you like to tell the youth about what they can do for a greener future?

Dr. Osman-Elsha: I'm targeting this message at the youth of today, the youngest generation, because they are going to face the consequences of climate change and they should be equipped with knowledge and skills in order to create a change. And most importantly they should act now — there is very little time left.

What is the role of youths in addressing environmental issues today?

Dr. Rahman: The future depends on the youth, so they first have to understand the problem and find solutions that they can handle. For the larger issues, they can push it on to the right groups that can deal with such issues. For smaller issues that they can handle on their own, they should try to do so. Overall, they must form a larger group so that they can discuss among themselves and identify what they can do themselves. **E!**

Evidently the key message that was brought up by all three of these world-renowned environmental leaders is that time is running out. If there is any hope for a more secure future, it has to be put into practice now.

Who Said Using Paper isn't Sustainable?

by Sonya Petcavich

Double A sets a new standard for the paper production industry

Thailand's Advance Agro Public Company Limited is a leading 'green' paper producer in the Asia Pacific region.

Double A paper, its paper brand, is sold in over 100 countries and its market expansion is expected to continue (Double A began selling its paper in the US earlier this year). Besides its commercial successes, the unique and environmentally friendly manufacturing process makes the company different from its competitors in the paper industry. On 5th Jun 08, at the opening ceremony of the Double A RE-Live! @ Atrium (an 11-day environmental carnival by youth), I sat down with Mr. Thirawit Leetavorn, Double A's Senior Executive Vice President, to find out more about Double A's environmentally friendly initiatives and how they spread their green message around the globe.

Would it be accurate to say that Double A is a carbon-neutral firm? Could you tell me more about Double A's initiatives and processes in promoting sustainable development?

In terms of emissions, the Double A process is designed so that any carbon emissions created will be absorbed by the trees that we plant and harvest. All the water we use in our production process comes from rain water collected in our purpose-built reservoir, and our paper mills are powered by electricity produced with waste (biomass) from the chopped trees. This means we don't have to get water from natural lakes and rivers and we do not have to buy diesel. We actually generate surplus amounts of energy from the biomass fuel we have, and that is sold to the local power grid. With 1.5 million farmers in Thailand growing over approximately 150 million Double A paper trees, even though our mill discharges limited amounts of CO2 emissions, the large number of trees offsets any pollution our production process creates. We commissioned a well-known Australian research company to study the environmental cost of paper production and they found that the impact recycled paper has on the environment is 9 cents (AUD) per ream, whereas the environmental impact of our paper is only 4 cents (AUD) per ream. This difference comes from our stages of production, which have been developed to complement one another and minimize resource usage. For example, our mill uses only a tenth of the water that

most other paper manufacturers use. The only truly external inputs which we utilize are the chemicals that act as paper fillers. Yet when compared to the industry standard, we still use only nominal amounts of chemicals.

Does it take a long time to develop quality environmentally-friendly paper?

Yes. First, the work starts with the raw material source. There are two types of paper you can use: short fibre paper and long fibre paper. But the problem with long fibre pulp is that the texture of the paper will be very coarse. We're the only producers who use a high concentration (90%) of short fibre pulp, which makes our paper very smooth. And by doing so, we can guarantee our customers an almost zero jam rate when using Double A paper. We test our paper on a number of machines, running 150 copies per minute - a very high rate - and our paper runs exceptionally well through the machines. Not too many papers can actually perform like that.

In addition, after sourcing the best fibre to produce the fine and smooth paper, Double A came up with the environmental friendly concept of Farmed Trees. This means that trees are planted in the unused spaces between the Thai farmers' rice, sugarcane, cassava, corn and tapioca crops, and no land clearing takes place to plant or harvest Double A's Farmed Trees.



Top: Double A's mascot adds a fun dimension to Re-live!
 Right: The Double A mascot greets Re-live! volunteers

The 7 Easy Green Habits are:

1. Taking public transport
2. Using refillable stationery
3. Rejecting and reusing plastic bags
4. Turning off electrical appliances completely off instead of standby mode
5. Recycling paper
6. Cutting down the use of water heaters
7. Changing from air-con to fan, or setting the air-con temperature at 25 degrees or above.)



Suppose I'm a consumer looking for printing paper. The way you market your paper- do you explicitly label the processes involved in producing Double A paper? Do you think if buyers were to see all these processes involved, then they would be more likely to buy the Double A brand?

Unfortunately, when most people buy paper, the two main things they look at are quality and price. Then they may consider the relevant environmental issues. We are the only paper company that has been willing to come out and talk about the way we make our paper. An Australian industry expert once commented to me that "it is very brave of Double A" to openly share our production methods. We definitely need to talk more about our production methods, but those alone will not be able to convince consumers.

Events like today [RE-Live!] are very good because they are part of the whole environmental awareness package that we are pushing. We'd like to see more events similar to 'Re-live!'. Double A enjoys working with students; we encourage them to come up with projects like 'Re-live!' and in turn, we support the projects because to us, that's the way to get the message out. Students are a bit more passionate about these issues and their motives are very clear. Double A's message is not a simple one; when you first read the Double A production processes, you must have thought "wow, ok, the reservoir, then the pulping process, then the biomass... what is this biomass?" It's not an easy and brief message to print on our product packaging, and most shoppers will not spend 5 minutes reading about a company's production technique. If you want to learn more about our products, it's through your own efforts. Hopefully consumers will look at our label and want to learn more about our message.

To send your message to a broader audience, do you sponsor any student groups or school campuses with Double A paper? How about stationery stores?

Currently, we don't sponsor any student groups. Part of Double A's philosophy is that we believe it's best to help people to help themselves. For instance, if you had a student store and wish to sell Double A paper, we would allow you to sell it properly and then any profits we earn from the paper would be given back to the student group. We have done these kinds of initiatives in universities throughout Taiwan and Thailand. In terms of retail outlets such as stationery stores, we have Double A copying centres throughout Singapore and Southeast Asia and supply many private enterprises with paper products.

How would Double A encourage young paper users to be responsible in their usage?

The fact of the matter is, you're never going to get to a paperless world. Paper will always be used and we anticipate paper consumption to grow around 3-4% per year. Taking that into consideration, youths have to make the right choice. The way Double A produces paper using farmed trees is a sustainable choice. So make the right choice and reuse paper. Ensure that you choose the double-sided printing option which our brand is good for.

To conclude, if there were a piece of advice you could give to youths like me, what would it be?

First, I would encourage everyone to pledge the "7 Easy Green Habits," which are simple, everyday methods to become more environmentally friendly. Second, I would encourage everyone to get involved with an environmental cause. And of course, I would tell youths to choose the right type of paper from an environment standpoint: Double A paper.

Business for the Environment- A Global Summit?

by Yong Rui Yan



Achim Steiner, executive director of the United Nations Environment Programme (UNEP), welcomed delegates to the Business for the Environment summit on 22 April 2008. He hailed it as a “critical part of the conversation” in response to climate change, especially from within the Asian business community.

The summit, which was held at the Suntec International Convention and Exhibition Centre, aimed to further explore the role of business in slowing the impact of climate change, centring on partnerships, resource efficiency and renewable energy. The two-day event saw participation from numerous multinational companies and non-governmental organisations (NGOs), and boasted an impressive speaker list that included Göran Persson, former Prime Minister of Sweden, Georg Kell, executive director of the UN Global Compact, and David Suzuki, award-winning scientist, broadcaster and environmental activist. It was to be a promising conference, if this list was anything to go by.

Yet, the conference was more a combination of soliloquies rather than the hoped-for conversation and dialogue.

The issue of who was to lead businesses in becoming more environmentally friendly came up intermittently throughout the various panel discussions. Kell spoke of ‘business statesmanship’, a term that was dangerously ambiguous on the direction towards which the community should move. After all, what is the very heart of business but profit making? As a consolation, the conference often came to the conclusion that resource efficiency and innovation in production were essential and strategic to long-term survival and growth.

Public policy leadership also garnered votes. Melinda Kimble, Senior Vice President of the UN Foundation, saw public policy action as crucial to “driv(ing) global negotiation”. The roundtable discussion led by various governmental personnel and political figures vaguely underscored the difficulties to be expected in environmental public policy.

The panel discussion between representatives from various NGOs, such as the Emirates Environmental Group (EEG), WWF International, and Centre for Environment and Development (CED), Sri Lanka, was lively and spirited, even if haphazard. Uchita de Zoysa, executive director of the CED, left an impression with his fiery outcry at the lack of acknowledgement towards the failure to achieve the Millennium Development Goals. Chairperson of the EEG, Habiba Al Marashi, emphasised that the practical way forward to engage different sectors was through a multi-stakeholder approach. Sasha Gabizon from Women in Europe for a Common Future pointed out her organisation’s cautious attitude towards cooperation ethics before accepting corporate partnership. If diversity of opinions were to be rewarded, then the panel would have received a perfect score.

The format of the discussions was distinctly styled along business, governmental and NGO lines. If anything, it resulted in somewhat incongruent conversations. There were plenty of points put forth, spanning from highlighting resource-efficiency measures to expression of concern for the unreliability and incompatibility of the stock market with long-term development and environmental goals. There were even impassioned speeches that sought to remind all of the disparity between victims and perpetrators of climate change.

However, rather than exploring new ways business could further the environmental agenda or vice versa, “rehash” was more the word of the day. One aim that the conference seemed to fall especially short of was progress in the search for a more comprehensive method of partnership and collaboration. Tellingly, Aron Cramer, President and CEO of Business for Social Responsibility, suggested that the global challenge was less about partnership and more about systemic changes.

Fortunately, solace was found in that there seemed to be many opinions on how we should tackle this global challenge. As one speaker put it, “permanent dialogue” is an indispensable factor in our endeavour to alter the collision course that seems set for us. What we should worry about is if it only remains as permanent dialogue. E!



From left: Speakers Georg Kell, Achim Steiner and HE Maumoon Abdul Gayoom.

Business for the Environment- A talking shop

by Lim Linin

At the Business for the Environment summit on April 22, Dr David Suzuki, a Canadian science broadcaster and long-time environmental activist, touched on a very relevant topic of why the global arena was still moving at a slow pace in adopting sustainable and environmentally friendly practices.

This was despite overwhelming consensus that climate change has been taking place, and the phenomenon has been anthropogenic in nature (i.e. caused by humans).

"The terms 'ecology' and 'economy' come from the same root word, 'okios', which means 'home' in Greek," Suzuki explained in his keynote address. "The economy should, rightly so, be the management of home while ecology is the study of home."

The current system that we are so used to -- where the economy is prioritized over everything else -- is not sustainable at all. A quick analysis of the summit would highlight the irony of this situation.

While it would be idealistic and, at best, naïve to expect this global summit to be a vast improvement over similar dialogues, in reality it seemed like a green façade. The summit was supposed to foster part-

nership and cooperation between businesses and non-governmental organisations (NGOs). Instead, it seemed to function more like a stage where respective companies, organisations and countries showcased 'how green they were' and thus be free from criticisms. Vested interests would always exist, but it was sad to see that, even at this juncture where the climate crisis threatens to be a global disaster unlike any other, the leaders who could make that much of a difference seemed oblivious to it.

By disregarding ecology in the economy and calling them externalities (i.e. external effects not factored into cost-benefit analyses), we have been making a grave mistake.

So we need systematic change and a shift in mindsets, but how do we achieve this? The entire summit centred on how business could capitalise on the green tide that was coming our way. But do we need to look beyond market forces? Should we account for environmental impact in economic indicators? And who will effect such change?

The consultative process of the summit was too slow, and this was surprising since all of these business leaders were supposed to be fast and efficient. In truth, nothing of significance seemed to come out of it. The 3P partnership of "people,

public and private sectors" was so widely highlighted, but true interaction and cooperation between these parties did not seem to happen. In the first place, it was still questionable as to whether NGOs could be wholly representative of the people sector in this partnership.

In the end, it seemed more like an opportunity that was lost -- again. The potential to drive a more sustainable global future could not be fulfilled. These leaders and decision-makers looked more like they were trying to find loopholes and opportunities for greater profit at the expense of the environment. Instead of coming together for the environment, it appeared that they came for themselves.

What we are consoled with, at least, is that the true power lies with consumers. Businesses and corporations sing to our tune and if we demand for greener products and greener practices, they would oblige. The profit-driven cannot ignore the green tide that is coming our way. Perhaps the decision-makers that would really effect change would not be the big multinational companies or global leaders, but individuals like you and me demanding for and getting a better environment for all of us to live in. **E!**



Food or fuel:

When the cost of a bag of Thai fragrant rice shoots up by 60 cents or 13 per cent in the space of just a few weeks, every Singaporean is inevitably affected¹. A nation of foodies cannot help but notice that our food has become more and more expensive.

A quick look at the news will show that we are not alone. Rice shortages have been reported all over the region, from Indonesia to the Philippines. In some cases, the price hike has led to growing panic; many Filipinos have started to hoard rice, which creates more shortfalls and, ironically, leads to even higher prices.

This has become a serious problem and everyone wants to know why. One reason in particular will be familiar to environmentalists who have been championing the use of cleaner fuels to reduce our carbon emissions, especially from cars.

We are referring to, of course, biofuels.

Two types of biofuels

Biofuels can be defined as liquid fuels produced from biomass for either transport or burning purposes. They can be made from industrial and civilian waste, but more often, they come from agricultural products.

There are two major types of biofuels: bioethanol and biodiesel, which together account for more than 90 per cent of global biofuel usage². Out of these two types, bioethanol is getting the brunt of media attention, because it is more widely produced than biodiesel.

Bioethanol is a distilled liquid produced by fermenting sugars from sugar plants and cereal crops, for example, corn, wheat, sorghum, sugarcane and beet. It can

Is biofuel development depriving developing countries of valuable food?

Do we have to choose one or the other?

by John Yip

be used in pure form, but is usually mixed with petrol before being used in vehicles equipped with specially adapted engines.

Biodiesel is produced from the reaction of vegetable oil, ethanol or bioethanol and a catalyst. The vegetable oil comes from crops such as rapeseed, sunflower, soya, palm and coconut. It can also be produced from animal fats and waste cooking oil. Like bioethanol, biodiesel is seldom used in its pure form. It is usually mixed with automotive diesel to be used in specially adapted cars.

Food converted to fuel

The obvious criticism against biofuels is that too much farmland has been diverted to produce crops for fuel instead of food. Lester Brown, a well known activist on food politics from the US, described the boom in bioethanol as "a competition between 800 million people in the world who own automobiles and the three billion people who live on less than US\$2.00 a day."³

According to the United Nations Food and Agriculture Organisation (FAO), the conversion of corn to ethanol is a primary reason for a sharp decline in global cereal stocks. This led to a rise in grain prices in the first half of 2006.

Meanwhile, the rising price of crude oil has increased the demand for alternative sources of fuel. Bioethanol is one such alternative and it has the added advantage of being a renewable source of energy, unlike fossil fuels. As such, bioethanol has suddenly become a very lucrative cash crop. Major cereal producers in the world, like Brazil, India and Thailand, are now rushing to plant as much cereals as they can, not for human consumption, but for bioethanol production instead.

↳ continued on next page



Is biofuel a competition between people who own automobiles and hungry people who need to eat?



Even if the US diverted its entire current corn harvest to biofuels, it would meet only 11 per cent of its current gasoline demand.

Brazil's bioethanol

So the critics do appear to have a very strong case. In our enthusiasm for biofuels, we seem to have forgotten our moral obligation in ensuring people have enough food to eat.

The problem becomes less clear however, when we look a little closer. It is not altogether evident that diverting farmland to bioethanol production completely explains the recent hike in global cereal prices.

Take Brazil for example. It is the world's leading producer of bioethanol from sugarcane. It produced 15 billion litres of bioethanol in 2004, equivalent to 38 per cent of world-wide production. Moreover, the South American country has been producing bioethanol since the 1970s, during the height of the "green revolution", when global food production had finally outstripped population growth. As such, Brazil could hardly be accused of profiteering from the recent popularity of bioethanol.

Furthermore, while Brazil is a major cereal producer, its total production only accounted for 2.81 per cent of total global cereal production in 2004⁴. In other words, even if Brazil were to completely abandon bioethanol production and switch back

to growing cereals for food, it will not make an appreciable dent on rising global prices.

Complacent governments

Clearly, the real reason for the sudden spike in cereal prices lies elsewhere. It is a result of a complex set of ecological and socio-economic reasons. But food experts generally agree that the main culprits are the governments of cereal-producing countries.

Put simply, these governments have been complacent. World agricultural growth for all food products has been slowing down since the 1960s, from three per cent per annum in the 1960s to two per cent in the mid-1990s⁵. The FAO has predicted the inevitable shortfall in food vis-à-vis world population growth since the late 1990s, but the relevant governments failed to take heed of these warnings.

As recently as last year, padi rice production rose by only one per cent, making it the second consecutive year that production growth lagged behind population growth. Given this trend, it was only a matter of time before demand outstripped the available supply of rice and other

foodstuffs, resulting in the higher prices⁶.

Corn is not carbon-efficient

So, yes, while biofuel production does contribute to the global shortage of cereal crop for human consumption, we should be careful not to be carried away by the media hype. It is not the only factor. Moreover, the solutions to food shortage lie in more government investments in agricultural research and infrastructure development, and not necessarily in the abandoning of biofuel production.

However, more can be done to reduce the ecological and economic impact of switching to fuel crops. For a start, we need to be clear about what we are trying to achieve with biofuels. Theoretically, biofuels provide a possible avenue to reduce our total carbon emissions, particularly from cars and machinery.

Cars are a major source of atmospheric carbon dioxide, the main greenhouse gas that causes global warming. But since plants absorb carbon dioxide as they grow, crops grown for biofuels should suck up

as much carbon dioxide as cars produce⁷.

Unfortunately, food and environmental experts do not agree on whether this is actually the case, particularly in the US, where almost 20 per cent of all available farmland has been switched to corn for bioethanol production⁸. Some studies show that corn is a very inefficient feedstock for producing bioethanol. One such study calculates that even if the US diverted its entire current corn harvest to biofuels, it would meet only 11 per cent of its current gasoline demand⁹.

On top of that, corn cultivation requires heavy use of farm machinery and artificial fertilisers. The machines add more carbon dioxide to the atmosphere, while fertilisers add to pollution concerns.

Grass and potatoes

Thus, it looks like corn is a bad choice for biofuel production. Fortunately, carbon-efficient alternatives are available.

Take the humble potato, which FAO is keen on promoting in Asia. The potato is already the world's leading non-cereal food commodity and potato consumption is expanding rapidly in developing countries. China is, in fact, the world's biggest potato producer, because the crop is very suited to the soil and climate¹⁰.

Research also shows that sweet potatoes, as a source of ethanol-producing starch, produce twice the energy traditionally generated by maize. In other words, potatoes are more efficient feedstock for bioethanol production than corn-related crops.

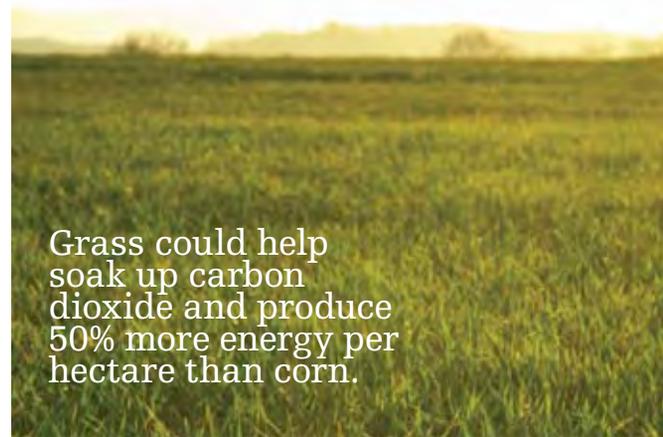
Emerging research also suggests that, rather than growing cereal crops for bioethanol production, it is better to grow wild grass instead¹¹. A piece of farmland needs to be left fallow after a few crop rotations in

order to "rest" the soil. During this fallow period, wild grass should be allowed to grow.

The grass could help to soak up carbon dioxide with very little human intervention. Also, scientists have discovered that wild grass produce 50 per cent more energy per hectare than corn. The net effect is a "carbon negative" process — precisely the effect that environmentalists hope to achieve via biofuel production.

More importantly, wild grass does not compete with food crops. It is used as part of the fallowing process to restore the fertility of the farmland in preparation for the next rotation of food cultivation.

So, it is possible to achieve a balance between biofuel production and food cultivation. It needs not be an either-or decision. Of course, more research still needs to be done, but at least a happy compromise can be achieved. **E!**



Grass could help soak up carbon dioxide and produce 50% more energy per hectare than corn.

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Singapore & the Environment:

Pursuing active sustainability by Benjamin Mak Jia Ming

Economic development has led Singapore to become a thriving metropolis in a globalised world within the short space of slightly more than 40 years, generating employment, providing basic necessities and education, and gradually developing a world-class standard of living.

But the key question to ask is: What is ultimately going to sustain Singapore and its people for the next century and beyond?

Pure economic development is not the answer, as can be seen from China, which while having risen spectacularly as an economic powerhouse in recent years, has simultaneously caused severe harm to its environment and people. Half of China's rivers are polluted, cut-

ting off clean water supply for millions, and severe air pollution from dirty coal burning in heavy industry has wreaked havoc upon the lungs of the Hong Kong people, causing 1,000 air pollution-related deaths annually.

Global warming in the Andes Mountains of South America has disastrously exacerbated the melting of the Andes glaciers, potentially threatening locals with mudslides from the runoff of the melted ice, reduced tourism revenue due to the disappearance of ski slopes, and the loss of the critically affordable hydroelectric power source.

As seen from the above examples, it is clear that the long-term sustainability of a country's environment in today's world threatened by major climate change is critical to ensuring its survival and prosperity, something Singapore's politicians have always kept close to their hearts.

It is hence essential that Singapore takes active steps to protect the local environment, both on principle and practical grounds; and indeed Singapore's government has had a positive record with this.

Since the early days of independence, the top leaders have embarked on key initiatives to ensure environmental protection, ranging from community awareness events like the Tree Planting Day to strategic policy in greening the island's roads and having green belts of trees to prevent the city centre from expanding uncontrollably beyond pre-defined boundaries. The government's tough stance on environmental protection is keenly reflected in law enforcement, ranging from Corrective Work Orders for errant litterbugs and the necessity to consult and seek permission from various government bodies before old trees can be chopped for purposes like

Economic development must be balanced with environmental sustainability for Singapore to prosper in the long term



facilitating the construction of new residential apartments.

On the principle front, Singapore needs to raise its responsibility as a committed global citizen. Having successfully industrialized and transformed itself into a thriving city, it is vital not to forget the critical roots of Singapore's fortunes: trade and co-operation with foreign partners.

In the same way, in the face of truly global threats like climate change, Singapore needs to exercise its commitment as a responsible global citizen in ensuring that at least its own environment is clean and friendly. While critics may label this as a useless step in the face of excessive pollution from countries like the United States and China, this is a defeatist criticism.

Furthermore, in Southeast Asia, where environmental problems like the haze continue to

pose a challenge to regional ties, Singapore taking active measures to protect its environment would set a key precedent for other nations to follow suit, in turn promoting regional interests. These measures would also reflect Singapore's steadfast commitment to the fight against global challenges, further improving Singapore's international standing.

On the practical front, protecting the environment would be a key fulfillment of the government's duty of care to the people. By being elected, the government has the responsibility to serve the people's welfare – which, beyond economic satisfaction, includes the providence of a suitable living environment to relax and raise their children in. By fulfilling this duty of care, the government is in effect providing the people with a suitable living environment. The track record of this can be seen in the numerous expatri-

ates who have moved to Singapore from smog-choked Hong Kong. This in turn meets the need for greater foreign investment and collaboration, meaning that while protecting the environment, we also serve the economic interests of the country.

A second key reason would be that protecting Singapore's environment effectively ensures the safety and survival – and hopefully eventual thriving – of the precious and wide local biodiversity, in areas like Chek Jawa and the Sungei Buloh nature reserve. The latter is home to many birds who come to Singapore to escape the cold winter months of the northern hemisphere, while the former contains much precious marine life, including beautiful corals, the best to be found on our local shores. The protection of this biodiversity would facilitate further scientific research on many of these yet unknown creatures, increasing the



Is this the necessary by-product of economic growth?

bank of scientific knowledge which will benefit the world, potentially by providing links to creating advanced medical drugs.

The protection of biodiversity would also mean that Singapore's unique natural heritage is passed down to the next generation of Singaporeans, ensuring that the preservation of Singapore's past is a holistic and comprehensive effort, stretching beyond the mere yellowing page or brown photograph, which would clearly provide a beneficial education for future generations on what their island is about beyond the textbook and the office. These efforts would also facilitate increased tourism, as more people around the world become aware of Singapore's natural wonders and want to visit them.

Most importantly, active environmental protection would prevent us from having to pay the heavy prices accompanying pollution and environmental disaster. This would hence allow our government to maximise its resource usage for the collective benefit of the population through improvements in health-care coverage and education. This is clearly a more desirable outcome, as compared to the catastrophic humanitarian and economic costs were climate change or any ever major environmental disaster ever to rear its ugly head on Singapore's shores – which we of course would hope never to happen.

Environmentally friendly practices like the reuse and recycling of products also increases the effective use of resources, saving costs and improving efficiency in working, making the government and people more competitive and even better able to face an increasingly challenging 21st century world than before.

Based on the above analysis, it is clear that adopting measures actively meant to protect the local environment will ultimately have clear long-term ramifications that are beneficial to the people. Even so, critics claim that such efforts will ultimately be ineffectual in tackling the environment problem at its root, because projected rapid population growth would swell the number of people consuming finite resources in Singapore, causing eventual catastrophe. However, while this argument does hold water to the extent that many people do indeed consume more resources relative to a smaller population, some major clarifications are needed to contextualize this notion.

Firstly, it is important to note that rapid population growth is mutually exclusive of exponential population growth that ultimately results in a resource crisis. In fact, the recently-set - 6 million population target by the government is meant to be achieved in the long term, and not be something which will be accomplished within a very specific

period of time. Secondly, this argument fails to consider the essential element of human innovation, which ultimately has made a significant impact on Singapore especially – if not for this, how would Singapore, an island with almost no natural resources to speak of and millions of mouths to feed, have survived and thrived over the past 40 years?

Rapid population growth will indeed pose a key threat to local environmental sustainability, but we must remember that this growth will continue to be regulated and monitored on a periodic basis, preventing Singapore's environment from entering into a tailspin. Human innovation will also play a role in ensuring that gaps, if any, are filled sufficiently, and that ultimately there will be no major population explosion resulting in a Malthusian catastrophe leading to social unrest and economic crisis.

A second key challenge is of course the Singaporean mindset, which tends to be rather ambivalent towards issues of environmental conservation and climate change, taking the view that these issues are in the domain of the government's responsibility, and hence pay little attention and lack a serious sense of ownership for the environment.

This issue of mindset is not something limited only to Singapore, but it is critical that the government examine and evaluate alternative

strategies to change the people's mindset and get them to understand the significance of the environment in their lives – that it underpins the very air that breathes life into them. While it is not possible for Singaporeans to immediately reach the standards of Germans in automatically disposing their domestic waste in the appropriate recycling bins, there are steps that should be taken beyond increased public campaigning and activism, including for example structural changes in the laws to deter environmental damage.

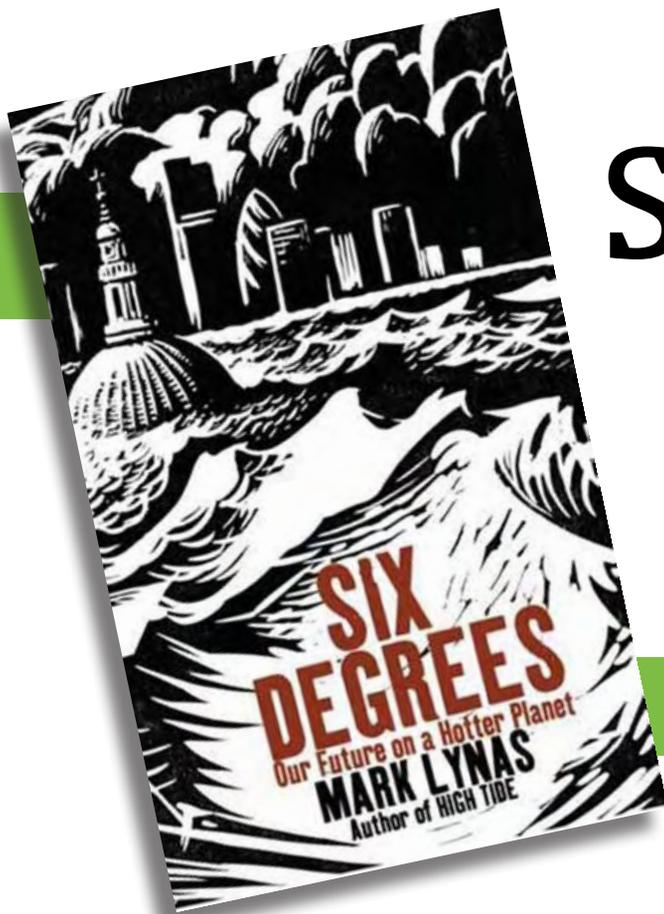
Singapore's government has spearheaded numerous efforts over the last 40 years to protect Singapore's environment. Barring no significant environmental disaster befall our island, I am confident that the Singapore of 2020 will be an environmental paradise, insofar as active sustainable policies are pursued and the people are incentivised to participate and take ownership of their living space. To quote India's famous independence leader Gandhi, "There is a sufficiency in the world for man's need but not for man's greed."

Singapore's government has actively pursued policies to promote environmental awareness and increase support for the natural local landscape. Insofar as we provide for our needs, I believe Singapore will prosper and grow, providing us and our children a life worth living. **E!**

This essay won the first prize in the National Youth Environment Forum 2007 Essay Competition.



The apocalypse nears as the Earth heats up



Book review by Yeo Jing Wen

Six Degrees:

Our Future on a Hotter Planet



When Hurricane Katrina struck New Orleans two years ago, Mark Lynas, like everyone else, was shocked.

At the same time, he realised that this was the window into the future, a glimpse of what would be in store if global warming continued to be ignored. Hence, he pored through thousands of scientific papers and laid out the effects of global warming while the Earth heats up degree by degree in his latest book, "Six Degrees: Our Future on a Hotter Planet".

Six degrees: what difference do they make? Before you brush this aside as something that tries to make you feel guilty about driving or flying, consider this: 18,000 years ago, the Earth was six degrees cooler. It was an ice age. So what happens if we move six degrees up the opposite direction?

At one degree, the Great Barrier Reef would reduce to rubble and we can wave goodbye to low-lying Pacific Nations. At two degrees, a third of species worldwide would face extinction, and we would be hit regularly by heat waves, although the human race should still get by.

By three degrees, the rainforest would become a desert, as it would burn into ash. The North Pole would have no ice for the first time in three million years. Millions would be "displaced as the Kalahari desert expands across southern Africa."

At six degrees, it would be practically living hell on Earth. We would not want a repeat of the end of the Permian period, which was the worst catastrophe that befell the planet – up to 95% of species became extinct. Lynas describes scenes of fireballs racing across the sky and crashing into cities with the force of an atomic bomb, "with all the remaining forests burning, and the corpses of people, livestock and wildlife piling up on every continent."

Having devoted one chapter to each degree rise in planetary temperature, the book suggests that it is time for us to choose our future. The planet is definitely going to heat up by one degree, but we've got to stop it there before it's too late.

But before the sceptics start arguing, the book does emphasise the long-term effects, thousands of years in this case. Lynas was careful in not going beyond the published scientific works, as he claimed at the outset. Alarmist? I think not.

I suppose a total ban on cars is impossible in the near future. However, I would definitely be switching to more walking and cycling. Hey, these serve as forms of exercise at the same time, so why not? In addition, small actions such as reducing the amount of waste and usage of plastics help as well. So spread the word, help in saving our planet together while we still can. **E!**

It's Cool To Be Green!

by Elaine Koh

Modern celebrities and enterprises have gone out of their ways to make a difference for the environment. It is time we do our part too.

Flip through the past month's magazines and I am sure that you would have noticed the similar themes focused on the ailing Earth.

MSN.com added "Green" to its list of regular columns. Movies and documentaries revolving around pollution, global warming and greenhouse effects sprung up over the years. Celebrities jumped on the green bandwagon, endorsing eco-friendly organisations to create awareness for the green movement. However, all of these are not a fad; they are here to stay.

Notable celebrities, such as Leonardo DiCaprio and Edward Norton, are strong advocates of the green movement. The former released a documentary, "The 11th Hour," in March, which looks at the current state of global environmental issues. This was the second most publicised environmental documentary, following the unforgettable one by the former United States vice-president, Al Gore, "The Inconvenient Truth."

The constant media attention has made many of us aware of the dangers of rising sea levels, increase in temperature and our over-reliance on diminishing fossil fuels. Along with the attention, it has also

brought us knowledge that everyone can make a difference – big or small, it is still of significance.

One of the things that we can do is to reduce our energy consumption. Many big establishments such as hotels have adopted energy conservation as part of meeting their corporate social responsibility. Not only do they do their part for the community, they also incur smaller utility bills!

The commitment from hotels ranges from simply putting up a reminder in the toilets to reuse your towels to laudable movements such as using organic bed sheets and other environmentally friendly furnishings. Hotel Triton and Fairmount Hotel are two of the leading hotels

with their environmentally friendly practices.

Hotel Triton uses only environmentally friendly cleaning products, has unique in-room designer recycling bins to encourage guest to participate in recycling, and implemented and audit low flow water systems to reduce water wastage amongst other practices. Fairmount Hotel is a leader in addressing green issues with its highly acclaimed Green Partnership Guide, a manual for companies to go "green". Fairmount also has programs dedicated to saving endangered wildlife such as Beluga whales, sea turtles and grizzly bears.

The number of such environmentally friendly hotels has risen



More and more celebrities are becoming environmentally conscious.



because many travellers are now demanding it. It is a result of the awareness that was created and the knowledge instilled in people that give rise to the popularity of green hotels.

Essentially, the green movement is connected like a chain. Awareness of the global environmental issues allows us to make wiser choices when it comes to making a purchase. As consumers, we drive up demand for environmentally friendly products, as we are aware of the difference we can make by purchasing carefully. This results in more establishments going the extra mile to be green. As a result, everything from clothes to furniture to groceries has in some degree become more "green".

Why not shop at www.ecoist.com, which uses materials made from old candy wrappers and discarded food packaging for their vibrant bags? U2 front man Bono, another noted environmentalist, designs fashionable clothes with his wife. He uses 100 per cent environmentally friendly production and sells his goods at www.edunonline.com. IKEA not only sells beautiful furniture that is also affordable, it also strives to minimise its damage to the environ-

ment by recycling.

Buying organic produce is more than just about being concerned with your health, but also the environment. These foods are grown without conventional pesticides or artificial fertilizers, which are harmful to the soil and water. Instead, farmers introduce natural predators to keep pests at bay. This increases the cost of farming, which explains why organic produce costs more. However, the reduced pollution makes it definitely worth the added financial burden.

In the past, information was not as readily available and campaigns for going green not as strong, so the generations before us may not have been as well informed. They did not see the need to purchase eco-friendly products, reduce their use of water or make an effort to recycle.

[We have no excuse for not caring about our planet. It is essentially our fault, as we are responsible for doing the most damage to Earth.](#) We know how fragile Earth is due to our over-exploitation of its natural resources, use of non-biodegradable materials and excessive pollution of the environment. **E!**

List of things that I do to reduce my impact on Earth:

- ↳ Being in a sports team means there are many water bottles and aluminium can drinks around the training area. Collect the bottles and cans and put them into recycle bins instead of just throwing it into rubbish bins.
- ↳ Purchase two big bottles of 100 Plus instead of six small bottles or even more cans. This reduces the amount of plastics and aluminium used and is also more cost-efficient.
- ↳ If you must use the air conditioner, set it at a temperature of 25 degrees Celsius.
- ↳ Never let the tap run while you shower. It is a waste of precious water!
- ↳ Buy organic and eco-friendly products, such as from The Body Shop.
- ↳ Switch off the main electrical board if you are going overseas.
- ↳ Bring your own grocery bag for shopping instead of using the plastic bags. NTUC FairPrice gives you a 10-cent rebate for purchases above \$12.
- ↳ Don't waste paper. Use both sides and then recycle them.
- ↳ Make your first car a hybrid, like what celebrities Sophia Bush, Cameron Diaz and Stella McCartney have done.
- ↳ Quit smoking. Not only will it benefit your health and those of others around you, it also reduces air pollution.
- ↳ Most importantly, tell your friends to care for the environment!

Dine in Green

by Kenneth Goh

4 Practical Green Dining tips to eating in and out - with a green conscience.

Picture this: a slice of homemade chocolate cake perched on a biodegradable tray-plate in front of you. Beside it, a recycled paper menu resting on an organic cotton table cloth. Mmmmm. Finished? Off you go to an ultra low-flow toilet to wash up!

Judging from the growing number of restaurants, hawker centres, supermarkets and *pasars*, food ranks high on the hierarchy of needs for most Singaporeans. Food isn't just for consumption; it requires preparation as well – and hence “greening” the entire meal involves choosing eco-friendly utensils, washing and cooking methods too! Here are 4 ways to make your dining experience in Singapore “guilt-free” and more sustainable. Bon Appetit!

Go green. Eat Greens.



1) Gorge on your (organic) greens

Planning a meal or preparing a salad? Go green by choosing, as far as possible, ingredients sourced from organic and bio-dynamic farms. Both types of farming eschew the use of hazardous synthetic pesticides and fertilizers, genetic engineering or irradiation, while the latter also incorporates traditional farming practices such as the use of animal manure fermented in special ways.

Organic food isn't all about your veggies and fruits. It includes organically grown meat, eggs, juices, rice and even beer and wine! Those with green thumbs can visit [Bollywood Veggies](#) (100 Neo Tiew Road) to source for fresh organic produce, all proudly grown in their 10-hectare farm. You can bring home their specialties “fruit-vegetables,” such as ladyfingers, corn, longbeans, cucumbers, bittergourd and pumpkins. Organic food followers also have [L'organic](#) (Blk 18 Unit A Dempsey Road) on their speed dial. This mother of organic grocery stores boasts over 60 varieties of vegetables and anything from pasta to baby food.

To save the hassle of traveling, head down to naturally marketplace by [Cold Storage](#) (#01-23B, Vivocity). It stocks an eclectic line of more than 1,000 organic products which are also sensitive to dietary requirements, such as lactose intolerance (unable to drink milk) and celiac disease (unable to consume products with gluten, such as wheat and rye).

2) Eat out = eat eco

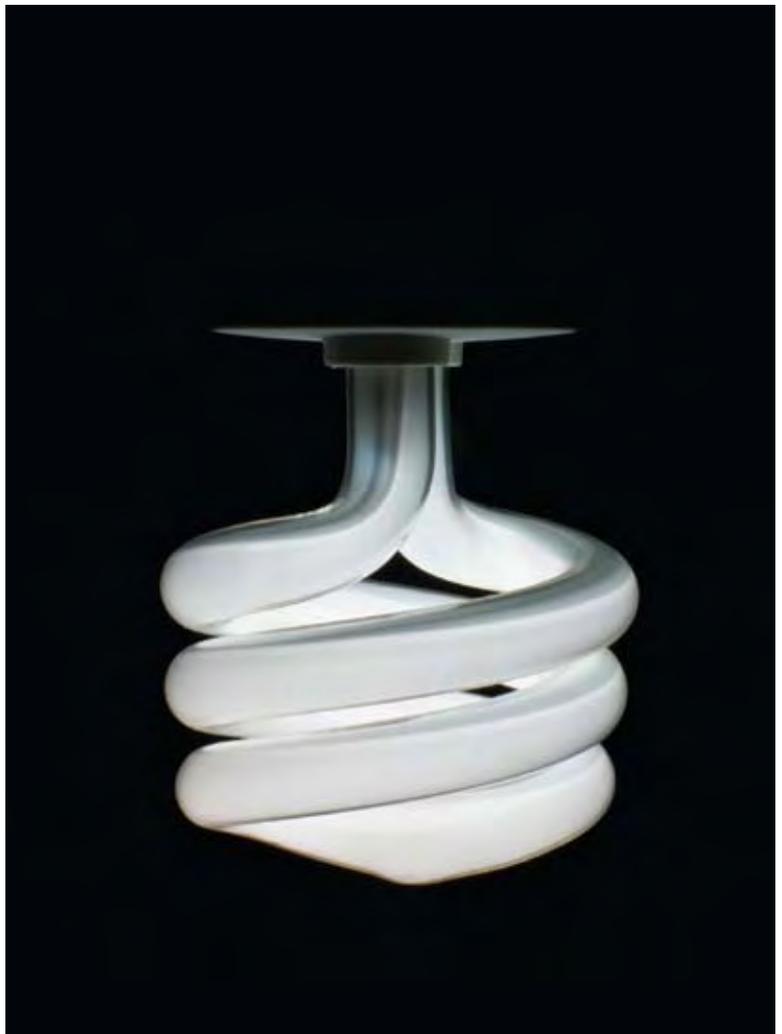
If you are too tired (or lazy) to whip up a dish, fret not. A growing number of organic restaurants sprouting across the island are throwing the spotlight on the use of organically cultivated ingredients in their wholesome cuisine. Most of the organic farms and grocery shops mentioned above come with their own in-house cafés and delis, which feature their own products in their menus.

The health conscious can also check out vegan social-enterprise café [Food #03](#) (109 Rowell Road), which serves delicious fusion treats such as *tempeh* burgers, spring rolls and banana pancakes (the famous “banana cow”!). Organic café [Green Connection](#) (5 Angus Street, Merchant Square) serves a wide range of healthy salads (topped with enzyme dressing to help digestion!) and local treats, such as tasty *tom yam* soup with brown rice *bee hoon*. For a slightly more upmarket night-out, there is also [The Garden, The Sentosa Resort and Spa](#), Singapore (2 Bukit Manis Road, Sentosa), offering a contemporary dining experience centred on wholesome organic food.

3) (Re)Use paper and more

Paper and food frequently come together: the ever-versatile paper can be used as serviettes, plates, trays and utensils. If you’re having a party or picnic, try using non-disposables (i.e glass, plastic plates and cups or metal utensils). If not, opt for chlorine-free, recycled, bio-degradable alternatives. The more courageous diners could also use recycled paper—recognized by its coarse, sandpaper-ish texture and light brown tint.

[Branch Homes](#) (www.branchhome.com) supplies unbleached bagasse plates made from compostable sugarcane fiber, a by-product of the sugar refining process. The entire cutlery set, including bowls, forks, spoons, trays, platters and knives, can also be made from potato starch. Other utensil alternatives include bioplastic plates and plates made from the leaf of the Areca tree. Closer to home, [12X12 café](#) (#01-002, Suntec City Galleria) serves food on 100 per cent biodegradable trays, made from potato starch and palm husk—don’t eat the trays,



Green Light

though. Over at [Fresh Origins](#) (#01-01, 1 George Street), gorge on greens from their takeaway boxes made from 100 per cent recycled paper.

4) Light up your life

There is no need for a sequel of Earth Hour by eating in near darkness. You can go eco-friendly without risking primitive candles.

When shopping for light bulbs, look for [SOFTONE Standard eco-light bulbs](#) (also known as compact fluorescent bulbs) by Philips. Glare-free, they emit warm-white lighting for great ambience. These light bulbs also use up to five times less power than conventional bulbs, and are available in 20W, 16W or 12W options. These bulbs can be easily found at most departmental or convenience stores in Singapore, such as Best Denki and Harvey Norman.

With so many green options laid out on your dining table, from planet-friendly utensils to organic cafes, dining in green has never been more easy and accessible. Now, you can tuck in peacefully, knowing that every mouthful of food chewed goes a long way in saving the environment. E!



Style meets sustainability



Go green yet stay chic

Green & Chic

by Kenneth Goh

Green and Gucci, at first glance, seem worlds apart.

How could luxury goods, the ultimate symbol of wasteful decadence, ever be environmentally friendly? After all, the sky-high prices for one of these bags could very well provide clean water for an entire African village. And let's not talk about the leather.

Green is the new black

All this is set to change. Welcome to the bold new world of eco-luxury. Following the high-profile boost from the Live Earth concerts and politician-turned-environmental-hero Al Gore, we are slowly seeing green seep into the designs of luxury goods everywhere. Or are we?

Louis Vuitton (LV), the French fashion giant synonymous with all things branded and leather, is making people green with envy over their latest creation: the chi-chi veg-tan handbag line, class of 2006 collection, which features decorative vegetables. But fads aside, LV is serious about the environment. It recently introduced an environmentally friendly initiative that aims to do away with plastic wrapping for deliveries, saving the fashion house 20 tons of plastic a year. New and refurbished concept stores will also boost a new lighting system that

will slash electricity consumption by 30 per cent.

Since you are what you wear, what better way to make a green statement than by green sleeves? Eco-couture has been seen strutting its way down the world of haute fashion, on the runways of Milan and Paris. These are wearable haute fashion pieces that hold their own in terms of design and shape. American fashion house, Loudermilk, is at the forefront of this movement – the firm uses 100 per cent biodegradable fabrics from the traditionally trendy vegan silks and organic laces to less orthodox options of spun milk and seaweed.

They don't do it quietly either. In recognition of their efforts, these environmentally-friendly businesses can apply for "LUXURY ECO" accreditation – a label that gives credit to organizations whose luxury-quality products and services are ecologically sound. Founded in 2002, the LUXURY ECO Stamp of Approval is spearheaded by Linda Loudermilk, founder of the eco-couture line, Loudermilk, which serves as her own luxury eco-certification. As of 2007, more than 50 companies have received this certification. London-based Nick and Milly, which makes vegan bath and body products, is one of the recent recipients of this prestigious label.

Style meets sustainability

Taking the green path is increasingly viewed as the only way businesses can move forward. With the rise of environmentally conscious consumers demanding accountability, even the simple act of using recycled materials could expand clientele, strengthen brand loyalty or even ensure business longevity. Being green is also a mark of brand exclusivity – the quality every fashion house thrives for.

"Green is chic," says Gerald Celente, director of the Trends Research Institute in Hudson Valley, New York. "If it wasn't so tragic, it would be funny how long it's taken for green to catch on."

According to a 2007 survey by marketing and advertising firm WPP Group, consumer spending on green products will hit an estimated \$500 billion next year and 77 per cent of companies said they anticipate spending more on environmental sustainability programs in the next several years.

With green alternatives popping up in haute fashion to hybrid cars – the Lexus RX 400h – and "sustainable" caviar, the green wave has arrived – and in great style too. **E!**

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