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## In this issue

In this issue we continue to explore Biobanking, with a short introductory article by Simon Smith, who will also talk to us on the subject on 10 March.

Rosemary Pye is a noted educationist and local historian and she writes about the important role that environmental education has to play in our schools and the ongoing battle it has to obtain the resources and time needed to do so successfully. Can there be a more important issue for the long term health of the environment?

Climate action is something many of us talk about but are happy to leave to the politicians to act upon. New STEP member Deborah Burt writes about how a local community action group she is involved with have taken the matter into their own hands and are planning to build, with Federal Government and local investor

funding, a community owned solar energy farm in the Bega Valley. A model for communities elsewhere to adopt?

Is the environment part of the economy or the economy part of the environment? We take a look at the work of the Earth Policy Institute, who is clear that it is the economy which is a subset of the environment. In their book "Eco- Economy" they suggest a road map of how we get from where we are to the new "eco-economy." Finally, we again raise the politically too sensitive subject of population growth. We look at a new book released this month in Sydney. "Overloading Australia" takes a hard headed view on Australia's Third World population growth rate and the consequences it will bring.

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## STEP Walks, Talks and Activities

### Clean Up Australia Day - Sunday 1 March 2009 - 9am - 1pm - Thornleigh Oval, Handley Avenue

Australians are amongst the highest producers of waste per person in the world. Help to make a difference and join with Graham and Gail Jones, who will once again be leading a STEP Clean Up Australia site at Thornleigh Oval. Bring along some sturdy shoes and gloves, sun screen, water and a hat. Please register first at the table at the Oval, where you will be provided with collection bags and instructions.

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### March Talk - Tuesday 10 March 2009 – 7.45 pm - St Andrews Church Hall, Cnr Chisholm and Vernon Streets, Turramurra.

#### ***Topic: "Biobanking – definitely a friend for Conservation"***

Simon Smith is the Deputy Director General, Climate Change, Policy and Programs, NSW Department of Environment and Climate Change, NSW.

Simon heads the group responsible for delivering the NSW government's policies and programs on climate change, air quality, environmental water, flood preparation and coastline management, protection of native vegetation, and investment in landscape and biodiversity health and restoration. The Group also delivers industry and community sustainability programs, including a particular focus on energy and water efficiency, waste minimisation and recycling.

The Biobanking debate continues! For those STEP members who were fortunate enough to hear Associate Professor Shelley Burgin speak to STEP at our October AGM, this reply by Simon Smith will be of enormous interest. (See short introductory article on BioBanking inside on page 2).

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### April Walk – Royal National Park – Sunday 5 April 2009

Andrew Little will lead a walk in the Royal National Park, taking in the beautiful tall forest and extensive coastal views from the Cliff Track and to the rare littoral rainforest of Palm Jungle. A strict limit of 15 only is necessary. *Contact Andrew soonest to make your booking.*

**Where:** Meet at the car park adjoining Otford Lookout at 9.45 am for 10 am start  
**Contact:** Andrew Little, 9924 7212 (after 7.30pm)

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## STEP Inc

Community-based Environmental Conservation since 1978  
PO Box 697, Turramurra, NSW 2074

## **Biobanking – Definitely a Friend for Conservation**

*Article by Simon Smith Deputy Director General Department of Environment and Climate Change NSW (See also front page for details of Simon's March talk to STEP).*

BioBanking, a tradeable biodiversity credit scheme, commenced in July 2008, and is being implemented by the NSW Government to help address a continuing incremental loss of biodiversity and threatened species caused by population growth and economic development.

Biobanking provides science-based tools to calculate potential gains and losses for impacts on threatened species and then to reward developers whose proposals will maintain or even improve biodiversity outcomes with faster planning approvals. The Scheme creates a market framework where land owners can create biodiversity 'credits' by making binding perpetual commitments to manage nominated portions of land to protect and enhance biodiversity values, instead of developing or allowing these lands to degrade. These lands are known as 'BioBank Sites' and the credits they create can be purchased by anyone who wants to secure biodiversity gains. The scheme is the best of its kind in the world in terms of applied ecological science to decision-making, correcting market failures that at present work against conservation, and helping community members to understand the impacts of proposed development on native plants and animals in a robust and quantitative way.

Credit buyers will be either development proponents who want to (or who are required to) offset the impacts

of their proposals, or governments/philanthropic bodies who want to secure long term protection of particular sites or threatened species through a single transaction. When credits are purchased, a portion of the price is placed in a trust fund. This provides an in-perpetuity endowment of annual payments made to the site owner, covering the cost of land management.

The Scheme generates value by facilitating the location of conservation offsets onto sites best suited to conservation (large and removed from incompatible adjoining activities) rather than where land opportunity and conservation management costs are high (eg, small parcels located near existing infrastructure and settlements). Value is also generated because offsets can be consolidated and secured under specialist management.

The system is based on a world leading science-based methodology and extensive datasets that enable consistent and objective quantification of gains and losses at different sites and through time.

*Simon Smith looks forward to speaking in more depth with you about BioBanking on the evening of 10 March. In the interim, further information can be obtained at: [www.environment.nsw.gov.au/biobanking](http://www.environment.nsw.gov.au/biobanking)*

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## **Environmental Education Today**

*By Rosemary Pye, Rosemary is a long-term STEP member and works in the development of environmental education.*

Primary School environmental education for most students has always included hands on experiences both in the classroom and in the school playground with the occasional school excursion. Environmental education or "natural science" as it was known was considered an important part of the school program. However in recent years there has been less evidence in schools of teachers incorporating the principles of environmental education into their teaching programs and providing experiences in which their students learn about the environment, develop skills in investigating and acquire a concern for the environment.

### **Early Environmental education in NSW**

Records indicate that the first environmental education in NSW schools was in the form of 'object lessons' or elementary science. In the 1880's following the 1880 *Public Instruction Act* there was an enthusiasm for agriculture in the primary school curriculum that extended to the encouragement of children's school garden plots and in 1890 the introduction of Arbor Day.

At the end of the nineteenth century there was a strong movement for reform in education. The New Education movement recommended that instruction be less dependent on book learning and more concerned with real things. A new syllabus stressed that school students were to be more active, to learn by doing and to discover information for themselves. Object lessons were pensioned off in favour of nature study.

School excursions or "nature study" became accepted as valuable educational experiences for students. School gardens provided students with a nature study "workshop". Gardening and nature study held second place only to the 3R's. Teachers planned and detailed their weekly nature study activities in their teaching programs. Schools were expected to celebrate the environmental days – Arbor Day, Wattle Day and later World Environment Day and teachers incorporated the associated activities into their teaching programs. Nature study became "natural science" and was taught alongside the other primary school subjects.

The Gould League of NSW, established in 1910, sought to disseminate knowledge regarding our birds and to discourage the widespread activity of egg collecting by children. In the 1940s the study of birds and nature was part of every school curriculum. The League widened its range of programs to include all animals and nature studies producing a range of publications and resources for teachers thus developing Australia's first environmental education program via schools. At one stage it was mandatory for all State school students to be members of the Gould League. Students promised to care for the environment when they signed their membership card. Thousands of children entered the League's environmental competitions each year. The competition topic would become the focus of teachers' natural science programs in many schools. Teacher friendly resources supporting the topic were available from the League. In 1990, the centenary of Arbor Day,

the League published a booklet which contained sixty pages of lesson notes and activity sheets for classroom use during Arbor Week. It was publications like this booklet that teachers found most helpful and assisted in keeping environmental education alive.

In 1971 Field Studies Centres (FSCs) were established, providing opportunities for the observation and study of the natural environment. Consultants ran in-service courses to train teachers in the use of these FSCs and other environmental excursion sites as well as school grounds for hands on environmental education. FSC and Gould League officers sometimes visited schools to advise staff on the use of their own playground as a teaching resource.

### **Environmental Education gains status as a curriculum area**

During the 1980's environmental education emerged in response to concern for the quality of the environment at local and global levels and became a significant curriculum area in education systems throughout Australia.

Subjects became known as "Key Learning Areas" (KLAs) and environmental education was incorporated into the Science KLA. The NSW Department of Education published the Environmental Education Curriculum Statement K-12 the purpose of which was to provide guidelines for environmental education within the total school curriculum. The document suggested that students "think globally and act locally". It was mandatory for schools to ensure that environmental education was incorporated into the whole school curriculum. The Science Investigating K-6 Syllabus published in 1991 had a strong emphasis on the environment and included ideas for integrating environmental activities across the other Key Learning Areas.

### **What has happened to environmental education?**

The focus in schools today is on numeracy and literacy. These subject areas have always been foremost in the primary school curriculum. However with the introduction of Basic Skills testing in the 1990's the emphasis is stronger than ever on teaching children the "basic skills". Primary school teachers have tended to allocate most of their available classroom teaching time to teaching English and Mathematics. This then means that the other four KLAs - Creative Arts, PDHPE (Personal Development, Health and Physical Education), HSIE (Human Society and Its Environment) and SciTech (Science and Technology) receive less or

in some cases no teaching time despite the fact that they can be so easily integrated across all curriculum areas.

Teachers in State schools do not usually have the support of specialist art, music, PE or science teachers. They have difficulty in ensuring students reach the desired learning outcomes in all six KLAs. Very little time is given to science and environmental education teaching. Why? For many teachers their science and environmental knowledge is limited so they lack confidence. They need support to develop confidence and guidance in how to provide programs requiring few resources and to link science and environmental education with literacy and numeracy. Teacher training at the university level needs to address these problems and ensure new graduate teachers begin their careers with confidence in teaching all KLAs. It is important that children are not only introduced to the flora and fauna of their own school grounds but also at some stage experience local sites particularly those that are critically endangered.

Becoming aware of available teaching resources is the responsibility of all teachers when appointed to their schools. There are excellent teaching resources out there eg the recent National Parks and Wildlife Service resource on the Blue Gum High Forest of Sydney's northern suburbs and the Department of Education and Training's CDROM, Supporting SciTech in the primary classroom.

"Leadership for Sustainability" is the latest strategy launched by the Department of Education and Training at the end of 2008 in support of environmental education. The strategy aims to support schools with their planning so that young people will take leadership to ensure schools are sustainable. All schools are to develop and implement a School Environment Management Plan (SEMP) that is meaningful to the whole school community and is to be evaluated at regular intervals. It remains to be seen how successful this strategy will be with teachers trying to cope with the crowded curriculum, the stress of the National Assessment Program and, in many schools, excessive program planning.

Environmental Education continues to be a strong component of primary education and there are many teachers who are enthusiastic about the environment and do inspire and motivate their students. Teachers have a vital role in promoting responsible and positive environmental values and environmental education is an important investment in the country's future.

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### **STEP committee**

Barry Tomkinson – President  
Helen Wortham – Secretary  
Jim Wells – Treasurer  
John Burke – Vice President  
John Martyn

Tim Gastineau-Hills  
Susie Gemmell  
Michelle Leishman  
Andrew Little

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## Climate action group seeking to build community owned solar energy farm

Article by new STEP member Deborah Burt

In November 2008 Clean Energy For Eternity, (CEFE) Bega branch, secured \$100,000 of Federal Government funds for a feasibility study to explore the best way to bring about a 1 – 2MW community owned solar energy farm in the Bega Valley. A further \$1 million is available to fund the building of the farm under the Federal Government's Green Precincts Program, if the study proves it is a viable project. The cost of the solar farm is estimated to be in the range of \$10m - \$15m.

The project will provide a highly visible example of the potential for the region to shift to renewable energy and meet its target of 50% renewable energy by 2020. Most of the work for the feasibility study is being done by volunteer experts from both the South Coast and Sydney, with some paid consultants. Work has been divided into three major streams –

1. Strategic context to answer questions such as why a small scale power source when economies of scale would suggest something larger; why a community owned rather than a privately owned power station; why a farm rather than individual power sources on each owner's property; why solar when wind is cheaper; and why Bega when other sites have more sun. There are sound reasons which will be documented in the report to support the direction proposed by the project team.
2. Technical analysis to assess site requirements and suitable technology; grid connections; environmental assessments; system configuration and infrastructure and resourcing. There are many factors to be considered when selecting the best combination of site and technology from the options available. Four members of the community have already offered property to the project for consideration. A local media campaign is being conducted to find more possible sites.
3. Finance options which include identifying investor categories and their motivation for partnering with and supporting a community owned solar farm.

4. One of the more innovative investment options being explored by the team is to provide the opportunity to individuals who, because of their commitment to environmental sustainability would have invested in solar panels, but do not have access to suitable roof space.

This status of this project – government funding, significant community support, a large team of volunteer experts and the strong probability of its success is a testament to the handful of people who founded CEFE and the work they have done to garner community and government support for their goals. CEFE was founded by local orthopaedic surgeon Dr Matthew Nott who on New Year's Day, 2006 was on surf lifesaving patrol on Tathra Beach (near Bega). It was the hottest day on record for Tathra and Matthew was also reading "The WeatherMakers" by Tim Flannery at the time. On 21st May 2006, Matthew invited the community to join him in making a human sign on Tathra Beach - 3000 people wrote the words "Clean Energy for Eternity" along the sand, then the human sign dissolved and reformed as "Imagine". A revolution was born.

Since that time CEFE has launched LifeSaving Energy installing solar PV, solar hot water and a wind turbine on the roof of the Tathra Surf Lifesaving Club. This project is actively increasing the credibility of grid interactive renewable energy as part of the solution to climate change. It is now being picked up as a national project by Surf Life Saving Australia as part of their EcoSurf program, with the aim of having micro renewable energy installed on all 305 Australian surf clubs within two years. Iconic surf clubs around the country will then act as a point of information on grid interactive micro renewable energy for thousands of beach goers on a daily basis.

The Bega Valley solar farm project aims to provide another repeatable model for many other communities to achieve their own solar farm.

Below: Matthew Nott standing on roof of Tathra Life Saving Club next to solar energy panel



## It's the Eco - Economy stupid!

Barry Tomkinson looks at the thinking of the Earth Policy Institute (<http://www.earth-policy.org/>)

The Earth Policy Institute is non-profit, interdisciplinary research organisation based in Washington to provide a vision of a sustainable future. More importantly, it has a well developed plan for how to get from here to there. "For the first time since the oil age began, the world has the technology to wean itself from petroleum coming from the politically volatile Middle East," says Earth Policy Institute president Lester R. Brown in his book, *Eco-Economy: Building an Economy for the Earth*.

"A combination of wind turbines, solar cells, hydrogen generators, and fuel cell engines offers not only energy independence, but an alternative to climate-disrupting fossil fuels," said Brown. In *Eco-Economy*, Brown says the global economy is out of sync with the earth's ecosystem, as evidenced by collapsing fisheries, shrinking forests, expanding deserts, eroding soils, and falling water tables. This can also be seen in the earth's changing climate as rising temperatures lead to more destructive storms, melting glaciers, and rising sea levels.

In the new economy, which Brown calls an eco-economy, renewable energy will replace climate-disrupting fossil fuels and a recycling economy will replace the throwaway economy. Wind turbines will replace coal mines and recycling industries will replace mining industries.

The needed restructuring of the global economy has already begun, Brown reports. The shift from the fossil fuel era to the solar/hydrogen era can be seen in the contrasting growth rates of these energy sources in recent years. During the last decade, the use of wind power grew by 25 percent a year, solar cells at 20 percent a year, and geothermal energy at 4 percent annually. In stark contrast, oil expanded by only 1 percent a year and coal use declined by 1 percent annually. Natural gas, which is destined to be the transition fuel from the fossil fuel era to the hydrogen era, grew by 2 percent per year.

The restructuring is gaining momentum. For example, from 1995 to 2000, world wind electric generation expanded nearly fourfold, a growth rate previously found only in the computer industry. Denmark gets 15 percent of its electricity from wind. In the north German state of Schleswig-Holstein, it is 19 percent. For Spain's state of Navarra, it is 22 percent.

"Wind power has an enormous potential," said Brown. "According to a U.S. Department of Energy wind resources inventory, three of the most wind-rich states—North Dakota, Kansas, and Texas—have enough harnessable wind energy to satisfy national USA electricity needs. China can double its current electricity generation from wind alone. Europe's offshore wind potential is sufficient to meet the continent's electricity needs."

A quarter-acre of land leased to the local utility to site a large, advanced design wind turbine can easily yield a farmer \$2,000 in royalties per year while providing the community with \$100,000 worth of electricity. Money spent on wind-generated electricity tends to remain in

the community, providing income, jobs, and tax revenue.

As wind-generating costs continue to fall and concern about climate change escalates, more and more countries are turning to wind energy. France has announced plans to develop 5,000 megawatts of wind power by 2010 (1 megawatt supplies 350 homes in an industrial society). Argentina has followed with a plan to develop 3,000 megawatts of wind power by 2010 in Patagonia, with its world-class wind resources. The United Kingdom has accepted offshore bids to develop 1,500 megawatts of wind power.

Cheap electricity from wind farms can be used to electrolyse water and produce hydrogen, which can be used to power gas turbines that supply electricity when the wind ebbs. Hydrogen is also the fuel of choice for the new fuel cell engines that every major automobile manufacturer is now working on. The farmers and ranchers who own most of the U.S. wind rights could one day supply not only most of that the country's electricity, but also much of the fuel used in its automobiles.

The use of solar cells is also expanding rapidly. In remote villages where supplying electricity traditionally depended on building a centralised power plant and constructing a grid to distribute the electricity, it is now often cheaper simply to install solar cells. In inaccessible Andean villages, investing in solar cells may be cheaper than buying candles. The same is true for those villages in India where lighting comes from kerosene lamps. With the new solar cell roofing material developed in Japan, the stage is set for dramatic gains in this new energy source as rooftops become the power plants of buildings. For many of the nearly 2 billion people without electricity, solar cells are their best hope.

"The materials economy is also changing," said Brown. "The challenge is to shift from a linear flow-through economy to a comprehensive recycling economy. Progress is being made on this front, but not nearly enough. Some countries are advancing. For example, 58 percent of U.S. steel production now comes from scrap. In Germany 72 percent of all paper comes from paper recycling mills. If the entire world were to achieve this rate, timber needed for pulp production would drop by nearly one third."

In describing the transition to the eco-economy, Brown identifies both sunset and sunrise industries. Among the sunset industries are coal mining, oil pumping, clear-cut logging, and the manufacture of internal combustion engines and throwaway products. Among the sunrise industries are wind turbine manufacturing, hydrogen generation, fuel cell manufacturing, solar cell manufacturing, light rail construction, reforestation, and fish farming. Rapidly growing professions include ecological economists, wind meteorologists, recycling engineers, geothermal geologists, and environmental architects.

Another key characteristic of an eco-economy is population stability. Over the last few decades, some 31

countries in Europe plus Japan have stabilised their populations. One of the keys to this is improving the status of women. The more education women have, the fewer children they have. World Bank research indicates that investing in the education of girls yields an economic return perhaps four times that of investing in electric utilities.

Economic decision makers at all levels—corporate planners, government leaders, investment bankers, and individual consumers—all rely on market signals. But the market often does not tell the truth. For example, when we buy a gallon of petrol, we pay the costs of producing petrol, but not the health care costs of those who suffer from the polluted air, the acid rain damage, or the costs of climate disruption from burning it.

Sometimes we learn of the market's shortcomings the hard way. For example, by 1998, China's Yangtze River basin had lost 85 percent of its original forest cover. Partly as a result, flooding of the Yangtze River basin that year displaced 120 million people and caused \$30 billion worth of damage. In response, Chinese officials banned tree cutting in the upper reaches of the basin. Trees standing, they argued, were worth three times as much as trees cut.

The key to restructuring the economy is to restructure the tax system, to get the market to tell the ecological truth. As Øystein Dahle, former Exxon vice president for Norway and the North Sea observes, "Socialism collapsed because it did not allow prices to tell the

economic truth. Capitalism may collapse because it does not allow prices to tell the ecological truth." Restructuring the global economy will require ecologists and economists to work together to identify the indirect costs associated with a particular product or service. These costs can then be incorporated into market prices in the form of a tax and offset by a reduction in income taxes. "This restructuring of the tax system, which is the key to restructuring the economy, does not change the level of taxes," Brown emphasised "only their composition."

Building an eco-economy represents the greatest investment opportunity in history. The companies that have a vision of the new economy and incorporate it into their planning will be the winners. Those that cling to the past risk becoming part of it.

The eco-economy is beginning to take shape. Glimpses of it can be seen in the wind farms of Denmark, the solar rooftops of Japan, the paper recycling mills of Germany, the steel recycling mills of the United States, the irrigation systems of Israel, the reforested mountains of South Korea, and the bicycle networks of the Netherlands.

"Building an eco-economy is a goal that cannot be compromised," said Brown. "If we are going to restructure the economy in the time available, all of us will need to be involved. One way or another, the choice will be made by our generation. But it will affect life on earth for all generations to come."

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## News, Views and Updates

### Adventist Hospital site proposal:

As reported in the last STEP newsletter, the NSW Department of Planning has advised that in November 2008 this matter was referred for assessment and approval to the Commonwealth Minister for the Environment, Heritage and the Arts. No additional status updates or Community Reference Group meetings have been held since that announcement.

### Commercialisation of National Parks:

The 2008 O'Neill Report suggested that tourism development be made a National Parks and Wildlife priority. This is despite the fact that National Park visitor numbers are already growing more quickly than other tourist sectors. The NSW Government is attempting to introduce legislation to weaken national park protection laws to permit the development of private accommodation, including cabins and lodges.

The primary purpose of having National Parks is to protect the native fauna and flora, not to promote the interests of commercial tourism operators. We have seen only too graphically what impacts commercial tourist developments have had up and down our coastline. Let's not open up National Parks to the same fate. *Lobby Environment Minister Carmel Tebbutt with your views on the subject at [dp.office@tebbutt.mnister.nsw.gov.au](mailto:dp.office@tebbutt.mnister.nsw.gov.au).*

### Lane Cove National Park:

STEP is aware that there is some controversy brewing about the new office and parking developments at the entrance to the Park. Despite scarce resources, over \$4million has been spent on the site. There is a fine new 100 seat restaurant, but with very limited kitchen and storage facilities it is still standing empty after twelve months. There is also a spanking new conference facility which is apparently seldom used. With the original kiosk now removed, and perhaps due to the extensive use of concrete where there used to be trees and grasses, this previously busy area of the Park is apparently now no longer well patronised. (See Boxing Day 2008 photograph below, taken on one of the Park's busiest days of the year.)



**Introducing Di Campbell:** Hornsby Council has recently appointed Di Campbell as the new Manager of its Bushland and Biodiversity team. Previously Biodiversity Manager at Hornsby, Di has a lengthy history of working and planning in the natural resources and bushland areas, including stints with National Parks and Wildlife Service and Policy Advisor to the Minister of the Environment. Di believes that “the future of our bushland is critically dependent on people combining their strengths and passions to conserve our natural heritage”.

**Phytophthora found in Becroft Reserve:** This is a microscopic organism that lives in soil and plant roots, and attacks the roots and stems of plants. This reduces the plants ability to absorb water and nutrients, so causing wilting, yellowing and retention of dried foliage. Death may result, particularly in eucalypts, native peas and banksias. Phytophthora cannot be eradicated from infected areas, so bush care workers need to be careful to observe good hygiene. This includes preventing the movement of soil and the cleaning of all shoes and tools when moving across bushland sites.

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## St Ives Showground Precinct Options – Ideas Forum

There has for some time been community discussion around the future use of the St Ives Showground and surrounding lands, including the Council Nursery, Wildflower Garden, the former green waste tip and the Honda Driver Training Centre. Rumours have it that certain sporting groups wish to use the sites to establish a regional network of sporting facilities, including six sports ovals plus netball courts etc.

In June last year STEP wrote to the Minister for Lands, Rural Affairs and Regional Development voicing its concerns that the project was in danger of being rushed and was lacking in community inputs. STEP has now been invited to present its views to both Council and the Department of Lands at an “Ideas Forum” on the future of the Showgrounds. The Forum will provide organisations such as STEP with an opportunity to take part in a discussion on the options and issues relating to the sites.

STEP understands the need in the community for additional sporting fields. This need is further fuelled by the demands of a growing local population, now mandated to grow 25% over the next decade by the latest State Government planning laws for the area. However the amount of land available is finite and it needs to service a wide range of community needs. Exponential increases in population growth need to be catered for by better use of the already existing and extensive Showground area, without any further alienation of bushland. The planning horizon used needs to encompass the long term nature of these issues, rather than the typical short term outlook preferred by politicians seeking re-election. Independent expert reports on the impacts of the options that are eventually explored in more detail will be mandatory.

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## “Overloading Australia” (or the ostrich approach to rising population)

*Forget the financial crisis! Last week Bob Carr launched a new book on what is threatening to become the single biggest threat to both Australia and the World, yet it gets little attention from our leadership group. Here from the Sydney Morning Herald (19 December 2008) is a brief synopsis from Mark O'Connor, who is co-author of Overloading Australia: How Governments and Media Dither and Deny on Population”, published by Envirobook.*

The United Nation's Population Fund is concerned population growth in Asia averages 1.1 per cent a year. Australia, as a First World country, should have a much lower growth rate. It does not. By the end of the Howard era, our annual population growth had risen to a stunning 1.5 per cent: almost off the First World scale and high even for Third World countries. (Indonesia's, by contrast, was then 1.3 per cent, but has recently come down, with much effort, to 1.2 per cent.)

Under the Prime Minister, Kevin Rudd, our rate has increased. According to Bureau of Statistics figures, it is now 1.7 per cent. Both natural increase and net migration continue to rise. At this rate, one which many are determined to maintain or increase, our population will reach 42 million by 2051. By the end of the century, it will pass 100 million. This is far above any credible estimate of the population Australia could hope to feed.

Troubles will come sooner. This week's government white paper proposes a 5 per cent cut in emissions, but

this, like Ross Garnaut's report, assumes large per capita cuts can outpace population growth, like a swimmer prevailing against the tide. But this planning is based on the dubious assumption we are heading for 28 million people living in Australia by 2051, rather than 42 million. If the Rudd Government does not change course, even painful per capita cuts will deliver no overall cuts, but an increase.

Much the same goes for water consumption. El Nino droughts come two or three times a decade, yet state and federal governments are, in effect, gambling it won't happen on their watch. Several of Rudd's ministers, most notably Penny Wong and Peter Garrett, are “population deniers”. Even Rudd has been heard

repeating the nonsensical claim that "numbers are not the issue". They are.

Some claim Australia is a big country, "boundless plains to share", etc. Yet the geographer George Seddon has remarked Australia is more truly "a small country with big distances". Even our agricultural areas are not so large, or fertile, as population boosters pretend. Wheat is our main crop, yet France, for instance, grows twice as much wheat (and far more of most other crops).

The human as well as the natural environment deteriorates as population grows. Two years ago, the NSW Government instructed Sydney's councils to accommodate an extra 1.1 million people within 25 years. Bankstown, for instance, was told to build 26,000 extra homes. Most councils protested it was impossible to reconcile this with conserving the amenity of the suburbs. Even these draconian plans will be overwhelmed by additional people.

In the Hawke-Keating days, the knee-jerk reaction to any suggestion that population growth, and therefore perhaps immigration, should be reduced was to accuse the critic of "racism". Yet polls show most immigrants think immigration is too high. Others continue to claim that births are not keeping up with deaths. Bureau of Statistics figures show that births each year in Australia are twice the number of deaths, have been so for decades and look like being so for several years more. Baby Bonuses are the last thing we need.

Tim Flannery has suggested that, granted the rate at which we are losing soil, Australia's safe carrying capacity in the long term may be as low as 8 to 12

million people. As he points out, humans are extremely long-lived mammals. Population growth, like herpes, is easily acquired but very hard to lose.

In 1994, the Australian Academy of Science held a conference to publicise its findings on population: 23 million people should be our limit. Today, with peak oil and climate change now realities rather than theories, that might have to come down. Over the years, Australians have been promised a series of points at which population growth would supposedly be capped: Bob Hawke spoke of 25 million, which the Fitzgerald report had suggested might be the limit set by water resources. Within the last decade, Philip Ruddock, as minister for immigration, spoke soothingly of our population naturally peaking at some 23 million (later he said 25 million). Peter Costello's Intergenerational Report claimed that population would be only 28 million in 2051. Our current trajectory is to break 100 million by 2100.

Population increase suits governments wanting to please the business community now, by doing something the full cost of which will only emerge over the next 20, 30, 40 or 50 years - far beyond the attention span of three-year governments. There is still a way out and it is not economically naive to think population growth can be slowed.

Much of politics is repetitive and unproductive, but sometimes a logjam breaks. In the past two years, most politicians have ceased being in denial about climate change, greenhouse emissions, limits to water, and peak oil. All these crises reflect the deeper underlying problem: our population growth is out of control. Waiting for the population debate to begin is like waiting for the other shoe to drop.

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See our web site <http://www.step.org.au/>

