

Nature & Society

The Journal of the Nature and Society Forum

Dec 2005 - Jan 2006

Editorial

As we approach Christmas headlines announce the expected record spending and people tend to ask "Have you done your Christmas shopping yet?" So have you done your shopping and what do you want for Christmas?

A small exhibition mounted by ChildFund Australia, that is currently at Questacon in Canberra, gives us a different perspective on this shopping spree. Called "Not sold in stores" it features toys made by children in some of the most dollar-poor countries in Africa and Asia. The inspiration for the exhibition came when Dr Schultz, the American director of ChildFund International, was travelling in Africa. He saw a boy playing with a boat made out of an old thong, a plastic bag and a stick. He complimented the boy, who promptly gave him the boat.

That toy is one of the least sophisticated in the exhibition. There are dolls and toy animals made from plant fibre and scrap material, musical instruments, cars, bicycles, a soccer ball made out of plastic bags and a petrol tanker made from pesticide spray cans. The makers own very little, but they are creative and happy to share what they have.

Humans in general need to be creative and to share, whatever their personal level of wealth. Although we have all been shocked by the enormity of natural and unnatural disasters of recent years, they have shown that many people everywhere are willing to share both goods and money to help alleviate the ensuing suffering.

The other trait displayed by the ChildFund children is creativity. That too is common to all humanity. Creativity combined with curiosity have given us science, a wonderful gift that has benefited humankind in many ways. But it is

not uniformly beneficial, for as we have learnt to exploit the world's resources with ever more technical skill we find that we do harm as well as good.

This reflection reminds me of the Greek legend of Pandora's box, the present Pandora was given by the gods, who instructed her not to open it (parallels there with the Tree of Knowledge in Eden). Pandora could not control her curiosity, so took a peek inside. As she lifted the lid, out flew all the ills humankind is

heir to: pestilence, famine, war, the whole works. Once they were out they could not be put back. But in the bottom of the box was a small, silvery thing – Hope. Hope remained.

Maybe that is why, when Barbara Ward, the British economist and environmental commentator, was asked whether we can reconcile conservation and development,

she replied that nobody knows but we have a duty to hope. Certainly we need hope. Without it we slump into misery and despair. People are paralysed by hopelessness, or they resent being told that the sky is falling and discount it completely.

Returning to Pandora (whose name means all-gifted), she was sent by the gods to punish all humankind for Prometheus' effrontery (sin) in stealing fire from the gods. Fire was obviously

If they can get you asking the wrong questions, they don't have to worry about answers.

*Thomas Pynchon
Gravity's Rainbow (1973)*

If nuclear power is the answer, it must have been a pretty stupid question.

*Prof Ian Lowe
November 2005*

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very important for the ancients, not only for comfort and cooking but for the emerging technology of smelting metals. When the legend originated no one could have realised how significant that was. Fire, along with the demand for building and shipbuilding, led to the deforestation of the Middle East and the Mediterranean. It enabled the advance of the bronze and iron ages. Europe was saved from disaster as wood ran out by the discovery that coal would do the job, ushering in the age of steam. Humans survived 'peak wood'; now they are facing 'peak oil', and we still have all Pandora's legacy to live with.

By now, however, our ever-growing wants, and demands on the natural world are so obvious that many thoughtful people are greatly concerned. For solutions we can turn partly to our wonderful technological prowess but we must also reduce our demands on the world. The understanding that we are part of the natural world, on a finite planet, and that we must live within the planet's regenerative capacity is growing, although too slowly. That understanding is what NSF's Futures Forums seek to address (see last issue).

So, though we must hope, we must not just hope that a technological fix will solve our problems and allow our profligacy to continue. We must hope and work to get governments to change their policies, businesses to lead the way in wise resource use. New technologies are available to reduce energy use, build better houses, cut back on waste, and technology will improve further. But we must be prepared to let go of the 'more is better, growth is good' mantra that has been espoused for so long.

For our Christmas gift to the world, we would wish for a brighter, sustainable and more peaceful world. For our New Year's Resolution we must resolve to keep working towards that end, and keep beaver-ing away furiously. Have a convivial Christmas with good company, but try not to overconsume anything!

Jenny Wanless

These days, even people who ought to know better are wishing ardently that a smooth, seamless transition from fossil fuels to their putative replacements – hydrogen, solar power, whatever – lies just a few years ahead. This is a dangerous fantasy. The true best-case scenario may be that it will take decades to develop some of these technologies – meaning that we can expect an extremely turbulent interval between the end of cheap oil and whatever comes next. A more likely scenario is that new fuels and technologies may never replace fossil fuels at the rate, scale and manner that the world currently consumes them.

*James Howard Kunstler
The Long Emergency*

The NSF library

There are two books to bring to your attention in this issue: both by Rene Dubos' books: *So Human an Animal* (1968) and *The Wooing of Earth* (1980). Both are classics. *So Human an Animal* is subtitled 'How we are shaped by surroundings and events'. Dubos writes that each human being is unique, unprecedented, unrepeatable yet today each of us faces the critical danger of losing our humanness to our mechanised surroundings. Most of us spend our days in a confusion of concrete and steel, trapped in the midst of noise, dirt, ugliness and absurdity. To this list we could add, 35 years on, the manifestations of the microelectronic revolution, computers and mobile phones. Dubos' wisdom, however, is timeless and this book - which won for him the Pulitzer Prize -

will be read for its insights for many years to come. In Dubos' *The Wooing of Earth* he offers important insights into man's nature and the environmental crisis. As the title suggests, humankind inevitably has an impact on the environment and our task is to see that we do not deplete the resiliency of the biosphere by the nature and magnitude of that impact.

The NSF Committee 2005-2006

The Management Committee comprises Rory Eames and Wendy Rainbird (co-ordinators), Jenny Wanless (secretary), Ian Anderson, Stephen Boyden, Andrew Chalklen, Catherine Gross and Brett Odgers. Please contact any committee member to discuss the work of NSF or to offer support for our activities and projects.

The Management Committee members met together on the afternoon of Sunday 30 October to look at the Forum's future directions. As a result, two working groups are currently looking at our strategic direction and at a membership drive.

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Where we are:

Our rooms are in the South West Wing of Weston Creek Primary School, Minns Place, Weston, ACT.

By car: from Civic, follow the signs to Weston from the Tuggeranong Parkway and continue to Weston by veering left from the traffic lights at the Cotter Road turnoff. This takes you along Streeton Drive for one kilometre, then turn left into Hilder Street (there is a small signpost pointing along Hilder Street). Drive around behind the school into Minns Place and then into the car park. Our rooms are down the slope to the left of the school building – about 40m from where you'll park your car. Follow the sign to 'Sustainability Groups'.

There is space for three or four cars for disabled access close to the entry. There are ramps over the kerb from this small parking space and entry to our building is without steps.

By bus: The 126 bus route from Central Canberra and walk 200m.

By bicycle: the office is adjacent to the western trunk cycle path between Civic and Tuggeranong.



Forthcoming NSF meetings

Time and venue: Our members' meetings are generally held at 7:45pm on the third Wednesday in the month at the NSF meeting room in Weston. Members in the ACT and region will be advised early in February of the topic of our next meeting to be held on 15 February 2006.

NSF contributes to 'No Waste' in Argentina

In the middle of this year three NSF members who are also members of Zero Waste Australia briefed Greenpeace and journalists from Argentina who were seeking ideas to support their campaign to get a zero-waste policy adopted in that country's capital, Buenos Aires. Then in November we heard from them:

"After a lot of really hard work, we finally got the approval from the Parliament of the City of Buenos Aires to implement a Zero Waste policy. Up to now, Buenos Aires produces between 4 to 5 thousands tons of waste daily, all of which goes to landfills situated inside the suburban perimeter.

Thanks to this new legislation, Buenos Aires will:

- adopt a mandatory calendar to reduce the use of landfills
- decrease waste by implementing recycling policies
- ban the use of incinerators
- give employment to informal workers who right now dig trash bags on streets looking for recyclable materials, under really sad insanitary conditions.

This is a big step for us and we can't hide our happiness for this achievement. In this way, Buenos Aires has become the most populated city to implement a zero waste policy and the first Latin American city to have such a legislation.

Last but not least, we couldn't have achieved this without the support from other NGOs ... so Thank You!

Hope you can share our happiness with us.

Paula Brufman, Campaña de Tóxicos Greenpeace Argentina."

Sustainability and Health project

The link between health and sustainability isn't necessarily obvious.

However, a project just undertaken by the Nature and Society Forum has explored that link and come up with innovative proposals which use this link to improve both human health and sustainability.

The Forum received a grant earlier this year through ACT's Healthpact to identify projects which would demonstrate the links between sustainable development and community health for the people of the ACT.

The issue of sustainability is not new. In fact we are in danger of finding that the term has been so overworked and co-opted that its very use is a switch-off. The challenge is how to keep the concept fresh and urgent and put the underpinning concepts into practice.

How can what may sometimes seem like the insurmountable challenge of bringing about practical sustainable activities be achieved, when so many forces appear to be working against this very aim? Firstly, perhaps there is a 'silent spring', but not as Rachel Carson meant in the sense of a poisoned environment. The silence I am referring to is that of the many healthy small shoots of ideas and activities which need recognition if they are to receive the cultivation they need to really take hold.

Secondly, just as in any ecology, ideas and activities are part of a wider social environment and through building the interconnections and associations, these original small, smart ideas begin to catalyse other developments.

Thirdly, thinking in the same way that has brought about the original problem of unsustainable (and unhealthy) practices is almost a guarantee that sustainable solutions will not be found to the problems facing our community.

The Nature and Society Forum (NSF) project team set about identifying key people in the ACT community interested in the interrelationship between sustainable practices and community health from a health perspective and who were willing to give different ideas a go. A number of people from a wide cross section of the community were identified and provided a sound foundation for the project. This group came together and set down criteria for measuring the suitability for funding of future ACT Healthpact projects demonstrating the links between sustainability and positive community health outcomes.

The criteria were slightly modified as the project proceeded, but included that objectives should be practically achievable, that projects should support sustainability aspirations,

should make an impact by stretching thinking and go beyond currently accepted norms, involve collaboration and engagement, build individual and social capacity, and support the principle of connectedness, including with other species.

This initial group then brought others into the discussions and the 'shoots' started to spring to life and lead to

innovative proposals. A short summary follows of the practical proposals which evolved from this project.

Creative sustainability – where the professional arts community will engage with schools and foster innovative perspectives on sustainable practices through festivals such as cinema, and in locations used by people as part of their day-to-day lives, including buses.

Community gardens – to be developed across the ACT involving zero waste strategies and connecting different social networks.

The West Kambah precinct - a very different approach to focussing on the wonderful natural resources of the West Kambah region of Canberra, from which the challenge is to build a wider sense of place incorporating the urban components of the lives of residents and to

We never thought we'd see the day when a remote control would make it onto a Christmas list, but the Logitech 880 has made it onto ours. It's a universal remote you program using the Logitech website. You can program a 'Watch Sports' button on the Logitech that turns on your TV and changes it to the right mode, turns on your Foxtel set-top box and switches the channel to Fox Sports, and turns on your surround-sound system, tunes it to the TV and sets the volume to 11, all with the touch of one button. That's got to be worth \$399.

*Australian Financial Review
2 December 2005*

develop it as an innovative sustainability and well-being precinct.

Indigenous health - developing radical ways for addressing indigenous health based on culturally appropriate wellness pathways to replace the currently dominant clinical model.

Healthy food for young people - the YMCA and others being encouraged to develop a holistic healthy food program for young people, to actively combat the pre-disposition towards youth obesity resulting from existing food intake available from many commercial outlets.

These projects are still evolving. There is time for those who might be interested to become involved simply by contacting the NSF office.

A number of issues stemming from the project are worth reflecting on. The first is the potential limitation of written communication and the need to use visual and oral communication, to pass on deeper understandings of community. Using communication methods which can engage all sectors of the community is an integral element in building local social capital, which is an underpinning aspect of this project. The community gardens project, for example, is on the surface not so new, as some already exist in parts of our community.

However the approach to these gardens can become more inclusive and more focussed on sustainability. It can include engaging businesses, older and younger people, through schools and aged care homes across the whole of the ACT. It can also include sustainably managing organic waste materials as an integral part of the activity. When all this is put together, the result can directly link sustainability and community health and can result in a much bigger shift from present thinking than appears at first sight.

As such projects start to evolve, the interconnectedness aspects will emerge. For example, the community gardens project has direct links to the West Kambah precinct and to the healthy food program, which in turn has connections to Indigenous wellness and, of

course, to creative representations of sustainability in schools.

In line with the challenges the Nature and Society Forum set out to address in this recent project, it must be asked whether the core elements of our community will be influenced by proposals such as these and whether they would indeed lead to changes resulting in truly sustainable practice in the ACT? Would the end result be that the existing power brokers would not be connected to the proposals we are putting forward, resulting in merely parallel pathways beside the existing unsustainable reality highway?

These questions cannot be answered categorically at present. We will need time before we can determine the final impact of our proposals. However, through the people

involved and ACT-wide links to new networks, the opportunities are there for sustainable change to germinate.

Finally, a key aspect of this project is its very existence. Healthpact offered an opportunity to which the NSF has responded. It is brave, even audacious of Healthpact to be so open to such new approaches. They are to be thanked for the opportunity and encouraged to continue to do so.

Geoff Pryor

These proposals are continuing to be worked on by the groups concerned, so that they can be put forward for the next round of Healthpact funding. If at least some of them receive funds for their implementation, then this whole project, already a significant community cooperative endeavour, can be considered a success that will have an effect in a wider sphere.

For further information contact the NSF office any weekday morning.

Going after every last hydrocarbon to fuel our wasteful vegetative ways is doing untold damage to our future prospects on the planet.

*Kelpie Wilson
Thanksgiving Day 2005*

The age of sloth is almost upon us. Labour-saving devices being developed today could leave the human race facing an epidemic of obesity. Scientists have forecast that in 50 years people will save an hour a day as a result of new technology, but that the resultant inactivity could take years off their lives.

Chronicle of the Future website

Plastic bags

Some visitors from Malta arrived with many plastic bags stuffed in their suitcases. They had heard there was a charge on plastic bags in Australia and they wanted to avoid the charge.

Book review

***People and Nature: The Big Picture* by Stephen Boyden**

The Big Picture is a small book with an ambitious scope and a clear purpose. Readers should prepare for their horizons to be broadened and to develop new perspectives as they absorb the information carefully laid out by Stephen Boyden. The beauty of *The Big Picture* is that it provides a readable and succinct account of the evolution of life on the planet Earth with particular emphasis on the development of human civilisation. Despite its small size the book is packed with facts and lives up to its title admirably. However, it also goes further than a presentation of the facts: several interrelated

perspectives are presented.

These include a time perspective of the history and evolution of life as well as an ecological perspective of human development in which Boyden identifies four main ecological phases (hunter-gatherer, early farming, early urban and high-

consumption). In developing these perspectives Boyden provides the reader with a general factual background while at the same time raising awareness of several areas of concern. Even though many of us may regard ourselves as generally well-informed about the ecological challenges which we now face, some would admit to a lack of knowledge or historical perspective about the development of human civilisation. This book provides such a perspective in a nutshell, and is essential reading for anyone who wishes to further their understanding about the nature of human culture, and how human behaviour in a non-natural habitat can impact the natural world.

An important perspective presented in *The Big Picture* is that of changing patterns of disease as civilisation has evolved from the natural hunter-gatherer phase through to the current high consumption phase. Boyden suggests that the "natural habitat" of the human species is still the hunter-gatherer habitat, because there has been too little time for the species to adapt to the current conditions of civilisation. An appreciation of this perspective from the

hunter-gatherer phase can be helpful when assessing aspects of the current human condition. For example, Boyden uses the conditions of hunter-gatherer society as a basis for identifying what he calls the universal health needs of the human species. He lists these in two areas: the biophysical, such as clean water and a natural diet, and the intangible, such as emotional support and social well-being. These health needs must be met if human activity is to achieve a state of ecological sustainability. Boyden suggests that deviations from natural conditions are the cause of many common diseases, such as heart disease and diabetes. This suggestion is supported by recent research into athletes' diets in the USA which has shown that athletic performance can be improved if athletes adopt

a diet low in carbohydrates typical of a hunter-gatherer diet.

The value of a historical perspective such as presented by Boyden is not to suggest that we romanticize hunter-gatherer conditions, but rather that we re-evaluate our current

human condition and cultural beliefs based on these universal needs. Some of our current societal beliefs, for example, that happiness increases as material well-being increases, need to be re-examined in the light of our impact on the natural world and associated energy and resource use. While Boyden does not propose any panacea for the future, he does suggest some essential characteristics of an "ecological phase" which could replace the current high consumption phase. As Boyden states in his introduction, one of the aims of his book is to stimulate thought and discussion about how society should go about recognising and dealing with some of the serious problems we face today. Although the book is written for a general readership, it will appeal to people from all walks of life who are prepared to consider different perspectives and to challenge ingrained belief systems. The value of the book lies in its factual presentation of a range of perspectives on human civilisation thereby laying a solid foundation for people to think about where we go from here.

Catherine Gross

There are more human babies born each day - about 350,000 - than there are individuals left in all the great ape species combined, including gorillas, chimpanzees, bonobo and orang-utans like this one.

*Richard Cincotta, ecologist
Population Action International*

Making Canberra Sustainable: Everyone can play a part!

Forum and workshops 17-18 October 2005

**Notes by Brett Odgers from a SERG
member viewpoint**

Background

The conference was organized by Manning Clark House, a scholarly and cultural organization with the purpose of encouraging debate and discussion on contemporary issues. Organisers attracted a wide range of age groups and sections of the Canberra community. The main aim of the conference was to capture some of the global imperatives from the Fenner Conference of June 2005 entitled *Science and Ethics: Can Homo Sapiens Survive?* and apply them in a practical local way to the city of Canberra.

As a community forum, this conference was closely associated with similar community forums being currently run by Nature and Society Forum. (our ACT Futures Forums) and the Healthpact Health Promotion Board (*Sustainability and Health Strategy for the ACT*) and coincides with the Canberra Business Council's *Beyond the Canberra Plan...Now it is time for action!* held in July this year.

Place

The Chief Minister had his sights on future generations and expected that a UN Biosphere declaration would help imbed the idea of sustainability among the people of Canberra. .

Geoff Pryor said his Business Council Task Force colleagues were not positive about sustainability and, in common with the Canberra community and ACT Administration, are risk averse. The Task Force works for greater collaboration between businesses and a close relationship with Environment Business Australia (based in Canberra). He advocated costing of environmental externalities and consequential pricing measures. He believed that a joint Government-Business declaration on sustainability was still needed.

Geoff agreed with Gerry Gillespie that there was considerable potential for partnership initiatives between business, the government and community groups.

Michael Costello, of ActewAGL, pointed out that Australia does not have a reliable national water market or trading system for water rights. In effect, he supported the public consultations and assessments regarding Canberra's water supply.

Peter Cullen raised a series of further questions: Could a 12% water usage reduction be achieved by 2013? What is the scope for recycling in the face of rising energy costs? When will Canberra's planners get serious about water-sensitive urban form design and exploitation of stormwater and urban lakes? Professor Cullen was particularly critical of the management of Cotter and Googong catchments.

Andrew MacKenzie joined the other two speakers in advocating a whole system approach to policy-making and identifying environmental externalities with a view to formulating more effective pricing policies and sustainability indicators.

Place workshop

The population debate has been characterised by a range of unsupported and often meaningless assertions. First it is often said that if the population doesn't grow the city will stagnate. Of course, if that is true then we must grow forever. The Canberra Business Council [and others ...] attempt to make an emotional connection between stable population and stagnation, decline and decay. And it reflects a failure of imagination; for these people, development in the city cannot be conceived in terms of enriching and improving what we already have, it can only mean tarring over more paddocks.

*Clive Hamilton
Canberra Times 30 May 2005*

In our community there is persistent use of the terms "trade-off – give up – exchange – balance" rather than the more synergistic sustainability concepts of "choice – risk – integration – opportunity."

Participants discussed the importance of public discourse, debate and engagement in matters of sustainability, about education and achieving a critical mass of community exchange and consensus.

People and population

Richard Denniss distinguished between population as demography and people as

consumers and citizens. He exposed the common assumptions about a nexus between economic growth and population growth, or between the standard of living, quality of life and economic growth.

In the workshop participants were particularly concerned about the influence of the media and advertising industry on people's consumption and civil behaviour.

People, health and wellbeing

Dr Charles Guest referred to new statutory duties to report on progress towards sustainability and the new Healthpact Research Centre for Wellbeing, which links the sustainability and health agendas. He is particularly concerned that conventional health performance indicators are not very useful for

Making Canberra Sustainable - continued

describing ecological sustainability and the public health implications.

"We need to measure differently: for example, how do individuals control "lifestyle" risk factors when personal choice is circumscribed?" There are relevant and serious workforce issues such as the maintenance of infrastructure and maintenance of services when budgets are contracting.

Jane Dixon was concerned that we need a stronger approach to cultural and social sustainability. In order to "take the community pulse" differently, we need new cultural templates that define common values and ethical standards. There are powerful forces eroding social and individual space and time, increasing wealth disparities, inducing a culture of fear and promoting unsustainable lifestyles. The new ACT Community Inclusion Board is examining these phenomena, particularly disadvantage and equity.

Jane described the underlying economic, commercial, environmental, social, cultural, health and lifestyle causes of obesity. She compared resistance to "social engineering" by government with our complaisance to powerful forces determining attitudes and behaviour through market forces.

The Sustainability and Health Action Committee has produced a cultural shift amongst 60 of the 160 student body of Australian National University medical students. Shared leadership, smart communications, demonstrations and an appeal to morality have altered peer group norms and responsibilities regarding environmental care.

People, health and wellbeing workshop

Discussion under Richard Denniss explored Jane Dixon's themes. The marketing strategy of "convenience, cleanliness and cheap" has been a powerful commercial force since the 1920s. In comparison the "slow movement" is only recent but it is already showing signs of re-shaping values and engendering behaviour change.

Kerrie Tucker (ACT Shelter) spoke powerfully about poverty and homelessness, their basic causes and health issues. One solution is helping people to acquire basic life skills, such as cooking, independence and finance management. Governments are unwilling to accept responsibility for altering these realities or to focus on needs and

invest in services or infrastructure. There is a need for an analytical framework that addresses the underlying causes.

There was lively discussion about too much reliance in our society on markets and the cash nexus and the availability of complementary systems or methods for producing, distributing, bartering and self-provisioning for basic goods and services.

The built environment

Andrew Blakers provided an excellent survey of energy systems, including greenhouse impacts, and an impressive set of practical proposals for solarisation.

Romilly Madew gave a candid talk about property owners, planned office building construction and sustainability standards. She conceded that Australia is well behind much of the world in energy and water conservation. The industry's Green

Building Council promotes integrated sustainability design, but in Canberra there is considerable resistance and a need for additional government incentives, such as fast track approvals and for more responsible plans.

Both she and Col Alexander impugned the ACT government for pursuing growth for the sake of growth (land revenue maximization) and for conservatism in planning design approvals. Canberra's aversion to high density has been another problem.

Col Alexander also questioned the Planning Authority's accreditation of developers and Development Deeds, which led to distorted sale prices and the poor designs of Gungahlin estates. The new Land Development Authority is bringing in welcome sustainability standards. Under its leasehold system, the ACT Government has total control and can do whatever it likes, not just see land development as a source of revenue.

Andrew Blakers and Tom Snow agreed on the need to promote expansion of renewable energy systems in order to achieve economic parities with the non-renewables.

Good ideas for future action

Tom Snow reiterated his criticism of short-termism among developers. Another criticism is preoccupation with "no net cost" for environmental measures through poor culture, risk aversion and developers who are not owners. The Brindabella

[The second unsupported assertion] is the claim that economic growth depends on population growth. This assertion has recently been debunked by Chris Richardson of Access Economics. Economic growth depends on improving productivity and the labour force participation rate rather than an ever-expanding population. ... The growth lobby always seems to argue that more growth is necessary without ever canvassing the endpoint of growth. Presumably the city could stretch from Goulburn to Cooma and they would still be arguing for more growth.

*Clive Hamilton
Canberra Times 30 May 2005*

Making Canberra Sustainable - continued

Business Park strategy exemplifies the business advantages in seeking the highest environmental and workplace design standards, life cycle costing, in building a team that is multidisciplinary and well trained in technological progress, oriented to problem-solving and innovation and maximizing early in the planning process the thorough assessment and cost-benefit analysis of alternative design solutions.

The Green Star instrument encourages total environmental (including greenhouse emissions) and systems design, comprehensive, big picture and integrative. Yet the ACT Government (or Commonwealth?) is walking away from Green Star in preference for simple energy rating. Government should be reinforcing not downgrading sustainability criteria.

John Schooneveldt argued for a long term regional planning outlook. Rapid growth in areas surrounding the ACT indicated the need to implement high energy and water standards. He proposed a fast, light rail service extending to the Snowy, the South Coast, west and north. John outlined ways to retrofit large numbers of Canberra homes with energy and water saving equipment. Technologies were available at local, metropolitan and regional scales for renewable energy systems and for "city to country" soil nutrients transfers. Significant potential exists for greater food self-reliance through regional wholesale markets. Canberra can become an "eco-innovative centre of excellence" with functioning, model, ecologically sustainable estates.

Discussion accepted that the ACT cannot be an enclave and that regional links were vital. A participant asked John Schooneveldt whether the national intergovernmental Natural Resources Management regional strategies and environmental planning provided assistance to his regional aspirations. He said that, sadly, they were not relevant at this stage to initiatives being taken by the private sector and local communities.

There was little time left for discussion. An ACTPLA officer informed the meeting that sites were being examined in Canberra to establish centres or estates of sustainable living.

In summing up, Roz Muston and Bryan Furnass referred to the consistently informative, interactive and constructive character of the conversations and debate over the two days.

Public Discussion Wednesday 19 October 2005

Panel: Dr Nathan Groenhout (Bassett Applied Research), Professor Ian Lowe, Kelvin Officer (Navin Officer Heritage Consultants), Adjunct Professor Paul Perkins, Dr Rosemary Purdie, Professor Brian Roberts.

This meeting was organized jointly by Manning Clark House and the Environment Institute of Australia and New Zealand for the general public. It was well attended with lively discussion and an array of stimulating contributions from the panelists, most of whom had participated in the workshop, and

members of the audience alike.

Sebastian Clark commenced the forum with a synopsis of the two-day workshop. From Walter Burley Griffin onward, the planners of Canberra have sought to render the national capital of Australia a model city of harmony between inhabitants and the natural environment. In considering whether Canberra was to be the Bush Capital or City Beautiful, participants at the workshop believed that biodiversity was paramount. A second major criterion agreed in discussions was the need for Canberra to achieve

greater self sufficiency in food supplies and use of resources.

Canberra's progress towards sustainability seemed to be retarded by certain social factors, in particular the decline in community initiatives, organisations and responsibilities. Growing inequity was a problem, whereas advances across the sustainability agenda will depend upon a higher level of engagement and participation by citizens and community organizations. Dr Bryan Furnass reflected the fears of many that "galloping consumption" was threatening the wellbeing of society and posed the question: how do we change our social institutions and values, as well as rebuilding the degraded natural environment?

Ian Lowe suggested approaching sustainability along appropriate time scales. Key future scenarios, such as supplies of scarce resources and demographic

The third and most interesting claim is that we need a bigger population in order to make Canberra more cosmopolitan. This is an opinion about how Canberrans should live usually expressed by those who live elsewhere. The belief that it is not sufficiently cosmopolitan is based on a crude stereotype of life in Canberra. For these commentators 'cosmopolitan' seems to mean more cafe strips and inner city grunge. In reality there is no community in Australia that is more worldly than that of Canberra, with a high proportion having lived abroad for extended periods. It also enjoys more poets, artists and intellectuals per hectare than any other place in Australia.

*Clive Hamilton
Canberra Times 30 May 2005*

Making Canberra Sustainable - continued

profiles, can be better managed within a framework of varying lead times. Accessibility to services was becoming more important now than personal mobility.

The equity imperative was, in Rosemary Purdie's view, bound to become more critical during the transition to sustainability. Given that the planning for the new Molonglo Valley suburbs, for example, should incorporate high standards of eco-efficiency, careful consideration will need to be given to meeting social needs, housing affordability, development incentives and accessibility. Public debate was needed about Canberra's urban density. Greater public and political understanding was needed about ecological sustainability and the relationship between people and the natural world.

Professor Roberts focused on Canberra's basic infrastructure challenge. Valued at about \$24 billion, this infrastructure requires capital and maintenance investment around 2.5 % per annum yet the current level is only one-third of this order, thus running down the ACT's physical as well as natural assets. In Singapore 40% of superfunds is allocated to renewal of public infrastructure.

Paul Perkins wanted Canberrans to be heavily involved in projects and decision making. Rather than command and control and least-cost planning, Canberra warranted a "learning for sustainability" and consensual, rather than adversarial, process whereby partnerships flourished between government, the community and business. The risks, opportunities and choices across Canberra's development portfolio warranted also a societal shift towards ethics of stewardship, living within our means, resource conservation, reduction, recycling and re-use. Greater investments in research and education were essential.

The first matter raised from the audience was the significance of Canberra's population growth. Discussion indicated that if the rate of population growth or decline was leading to a reduction in the quality of life or protection of the natural environment, then it was a problem. The next questioner advocated widespread and urgent retrofitting solarisation of residential housing. He

mentioned the paradox between energy conservation and the aspirational desires for bigger homes with more material goods.

In response to discussion about climate change, Ian Lowe advocated the introduction of taxes commensurate with the greenhouse gas costs of energy use by certain appliances and transport modes. He pointed out that numerous government inquiries have called for a change in the tax treatment of the family home, in order to release investment funds for expanding Australia's sustainable productive capacity.

The meeting gave considerable attention to the role of mothers in public debates and policymaking activities. Their participation was necessarily constrained yet their perspective on sustainability was vital in basic matters of intergenerational equity, household budgets, community sharing and equity.

In answer to a question about building a public rail network as the ACT regional population continued to grow, Professor Roberts was inclined to favour the idea but in a longer time frame with the authorities reserving potential rail corridors in the meantime.

Water restrictions, environmental flows and fish conservation were questioned. The costs of the various water supply and management choices facing the ACT were so significant that an extensive and well-informed public consultation and debate was taking place. It was a prime example of a sustainability subject that would test the people's capacity to respect one another's views and find

common ground with regard to their basic values and vision for the kind of city they want Canberra to become.

Brett Odgers

We thank Brett for his four-page report on this recent forum. Brett is also convenor of NSF's ACT Futures Forums (see last issue). If readers, especially those outside Canberra, have reports of events on NSF themes which could help others in their endeavours to live and create a more sustainable future, please send them to us for publication.

Jenny Wanless

We need to stop measuring the price of things in dollars; we need to start using more fundamental measures of What is the cost in energy and what does it cost in water? The mere fact that you can buy it for a certain price is no guide to its real cost at all. We need to get away from the traditional economists' measures of supply and demand and the price mechanism providing a system of resolving these issues and impose a more traditional, hard science, based on physics, and say, What is the cost of transforming this energy? Even the second law of thermodynamics says that some energy is lost every time that energy is transported and transformed. Those are the measurements that we've got to be taking, and changing the way that governments and people look at the costs of running society.

*Andrew McNamara MP (Qld Hervey Bay)
interviewed 24 August 2005*

Letter from Malawi

Stacia and Kristoff Nordin work as nutritionists and Permaculture advocates in Malawi, devoting their lives to the well-being of Malawians. Stacia participated from Malawi in NSF's internet conference *Healthy Food for Healthy People* in September 2001, the conference that was later published under the title *Good Grub*.

Stacia subsequently wrote an article for the April/May 2002 issue of *Nature and Society*. In that article, among other things she took issue with the common Western classification of many African countries as very poor. Malawians had no idea they were poor until Westerners told them they were. Indeed, they were not poor, as the country could provide them with all they needed; assessing the wealth or poverty of a country only in dollar terms is quite misleading. Now Stacia has sent us another contribution, one she wrote to the editor of *The Malawi Nation* in response to a report in that paper on the current food crisis there.

Letter to *The Malawi Nation* editor

Thank you for your story in the 12 November 2005 edition of *The Malawi Nation* by George Ntonya "Hunger takes toll in Salima".

I empathize with these communities and hope that the government, non-government organizations, and local community groups can come to the aid of those affected by food shortages. I also hope that these organizations and communities continue to investigate all their local food resources such as the bamboo seeds, mangoes and termites which they are now diversifying into. When eaten in the right quantities, these three foods alone can provide many of the nutrients that we need to have a healthy life, and in fact, are more diverse in nutrients than processed maize flour!

* Bamboo seeds are an important food source according to *Useful Plants of Malawi*, 1955-75

editions, by Jesse Williamson. She describes them as similar to rice in flavour. Edible bamboo shoots are high in protein and vitamin C and are eaten worldwide.

* Mangoes are an important source of carbohydrate and vitamins A and C. Mango leaves are also edible and are full of vitamins and minerals, as well as medicinal properties.

* Termites are a particularly nutrient dense food. High in protein, fat, B vitamins and minerals. A handful of termites supplies an adult with almost all the iron they need in a day!

As a nutritionist, I always want people to have access to a wide variety of foods from all the six food groups every day. The current diet and food supply that we are seeing in Malawi does not meet the nutrient needs of the population,

nor does it supply food every day of the year. The reason for this is that it is too focused on maize. According to the Malawi Food Guide, an average adult should have about 200 gm of cereal grain on average per day (this would include millets, sorghums, rice, wheat, oats, maize, etc.). Even if a person chose to eat all 200 gm from maize alone, this would mean a person should have no more

than about 73 kg of maize per year!

The rest of the diet should be from the other food groups: fruits (such as mangoes); vegetables (such as mango leaves); animal foods (such as termites); legumes/nuts ; staples (such as tubers from water lilies); and fats/oils (such as avocados or coconuts).

We should be applauding these communities for diversifying their diets and for reviving traditional knowledge, using it and sharing it. We should encourage the use of these foods as part of a diverse diet and help communities to access the other food groups to complement their current diet. We should investigate and promote other local sources of foods that are being under-utilised and forgotten. We should reduce our dependency on maize.

Hit by drought, this country of 12 million people is facing its worst maize harvest since 1992, producing just 1.25 million tonnes – or 37 per cent of the food staple needed for national consumption this year, the agriculture ministry says.

Malawi is the worst affected of six countries in the region and needs food relief to see it through to the April harvest after the widespread failure of the 2005 staple maize crop.

Reuters, 8 November 2005

Instead, the article treats these foods (bamboo seed, mangoes and termites) as inferior, stigmatised, and something to be ashamed of.

As an example, the article describes the two-hour task of preparing bamboo seed to eat, but this should be compared to the laborious, expensive task of raising maize and processing it. Just to focus on the processing part here, Malawians regularly spend three days processing maize into white flour which includes pounding, winnowing to remove bran and germ, soaking, rinsing, drying in the sun, cleaning to remove dirt and bran from drying, measuring it in a tin, taking it to the mill for grinding, drying in the sun, cleaning again to remove dirt, and finally cooking. The end product has all the protein, minerals, fats and vitamins removed, leaving only a white starch.

This is where we need to change our mindset about what is food and what we are doing in Malawi with the resources that we have.

I applaud Action Aid for submitting a sample of the bamboo seed to the Malawi Bureau of Standards for analysis, I hope that this action is used for Malawi's other under-utilized resources and that these important foods become a regular part of our diets. Many people may be surprised to know that there are over 500 foods that we could all be choosing to grow and eat rather than the one or two that have promoted this current crisis. This would be true diversification and go very far towards ending Malawi's chronic "hungry season".

If you have any questions or would like more information concerning the wide variety of food plants that Malawi is blessed with, please feel free to contact us or visit our demonstration plot in Chitedze.

Sincerely,

Stacia Nordin, RD, Specialist in Sustainable Food and Nutrition Security and HIV/AIDS

Kristof Nordin, Permaculturist

Chitedze Trading Centre, Lilongwe, Malawi (Africa)

There is a clear mismatch between forecasting natural disasters at some indeterminate time in the future and the short lifetime of local and national governments in modern democracies. And there are few, if any, votes to be had in raising levees or creating new building codes for earthquake-prone cities.

New Scientist, 10 September 2005 reflecting on whether our political framework is equal to our environmental predicament.

Brief note

Climate Change Science – Questions Answered

This curate's egg of a booklet has been produced by the Australian Government's Department of the Environment and Heritage. The good parts are the scientific answers to 22 questions on climate change. These are thorough, in plain English and should be an authoritative basis for community understanding of what climate change is, the degree to which it is human-induced and what the remainder of this century is likely to look and feel like. The remainder of the booklet appears, in contrast, to be out of place. The introduction by the Minister invites us to

"Please enjoy the practical and informative guide to climate change ...". I am not so sure that enjoyment was the feeling I had when I read the following:

- over the next century, a global warming of 1.4° to 5.8° could occur (p. 5).
- During the last ice age surface temperatures were on average about 5°C lower than today (p. 9).
- Even the 0.6° warming in the past 100 years has been associated with increasing heatwaves and floods, fewer frosts, more intense droughts, retreat of glaciers and ice sheets, coral bleaching and shifts in ecosystems (p. 5).
- To limit global warming to under 2.5°C by 2100, carbon dioxide concentrations would need to be stabilised at 550 ppm or less. This would require about a 50 per cent reduction of carbon dioxide emissions across the globe by 2100 and further reductions after that (p. 17).
- Scientists are confident that most of the global warming of the past 50 years is due to human activities that have increased greenhouse gases. Once carbon dioxide is released into the atmosphere it stays there for between 50 and 200 years. Hence further warming is in the pipeline (p. 17).

These are five dot points and I invite you to “join the dots”. If the last ice age, when a third of the land was covered in ice, needed an average temperature of only 5° degrees less than today, what will it be like if we reach 5° hotter than today?

The booklet helps us here with glimpses into the future which include:

- Coping with climate change and a warmer world will mean changing the way we live.
- Buildings will need to be designed to cope with more intense tropical cyclones.
- Adapting to climate change will incur costs and will not prevent all damage.

The 23rd question in the booklet is “What is Australia doing about climate change?” Here

the booklet is good so far as it goes, saying that the government has a program designed to help prepare Australian governments and vulnerable industries and communities for the unavoidable consequences of climate change. What the booklet does not describe is the state and federal governments’ Janus-faced approach with their boosting of coal use, their refusal to set targets for reducing greenhouse gas emissions and their hands-off approach to energy conservation. Australia could achieve a reduction in greenhouse gas emissions and thus provide a model other nations could emulate to reduce global emissions. It is the only way we can hold global warming down to the lower end of the predicted temperature rises.

The booklet is highly recommended for the contribution it makes to informed public debate.

The book is available as a free .pdf download from www.deh.gov.au. The NSF office can supply a black and white copy of the booklet (28 A4 pages) for \$5.00 including postage to NSF members.



Keith Thomas

I will give you some idea of the energy density of crude oil: one barrel of crude oil, 42 gallons, represents the energy from 25,000 man-hours of labour. That is about 12 man years of labour. That is the equivalent of having 12 people that work all year for you. And what will it cost you for that? \$100 today, about \$50 for the barrel of oil and maybe \$50 to refine it and distribute it. So that is the kind of energy density that we get from fossil fuel.

*Roscoe Bartlett
US House of Representatives, 11 May 2005*

Actions speak louder than words?

In the last issue of *Nature and Society*, Murray May wrote about the difficulty in getting people to change their own behaviour on environmental matters, even when they have considerable understanding of what is needed to be done. That is why it is essential that more people have that understanding, especially so they can pressure governments. We need government regulations for business, government initiatives in public transport, building regulations, to get the motivation for things to happen.

All that is a tall order, but what about those governments that actively discount climate change and oppose any reductions in energy consumption? I was brought up short, very short indeed, when reading some feature articles on fundamentalism in the *New Scientist* of 8

October. The article which really hit me was entitled *Enemy at the Gates*, by Mike Holderness. This claimed that the Intelligent Design campaign in the USA is intended as a wedge to destroy science. Its proponents have seen science undermine the faith of some of their flock, and in return they seek to overthrow “materialism and its cultural legacies, the chimeras of popular

science”, such as global warming, pollution problems and ozone depletion. In the political field that means climate change denial and the pursuit of ruthless free-market economics.

These claims by Holderness certainly would explain the USA’s refusal to do anything federally to reduce emissions, cut back on oil consumption, or to even maintain existing environmental laws. If Holderness is right, we all have reason to fear. It is hard to get effective action when people at least acknowledge the need for action but just don’t get around to it. If they are actively antagonistic we have a much bigger problem.

Of course this group is a minority one, but as it holds the White House, a very powerful one. We are fools if we ignore the dangers of the Intelligent Design push, and we must not think its proponents are stupid. They are not, they are intelligent, articulate, well-funded and well-organised.

Jenny Wanless

Encourage efficiency

Does your bank or credit union charge lower interest on a bank loan for a fuel efficient car or a hybrid one than it would for a conventional car or a large four-wheel drive? Why don't you find out? Lending institutions could make a significant contribution to energy efficiency if they differentiated for loans with respect to their energy efficiency, whether for vehicles, houses, renovations or business machines.

If customers ask these questions then their institutions might start to think it was a good idea.

Encourage sustainability

Does your superannuation fund invest your contributions in sustainable industries? Will

your contributions be used to build a safer, less polluting, more sustainable world for your old age - one that can continue to provide you with a pension? Or is your fund investing where the returns are greatest (this year), but the planet is being damaged in the process?

You can find out by writing to your fund. One of our members did just this, inspired by a talk last year by Mike Smith at an NSF members' meeting. His letter was addressed to the chairman of the board who took it so seriously that it was discussed at a board meeting and the chairman himself signed the reply.

Salinity

NSF Occasional Paper No 9 by John Schooneveldt

Readers will recall the report of a members' meeting on salinity published in this journal 12 months ago. In this paper John Schooneveldt argues that salinity is a symptom of the way we mismanage water. He takes us through a descriptive critique of the conventional approaches to salinity and then proposes 'the water balance approach', the idea that salinity can best be managed by working with, rather than against, the natural movement of salt through Australia's diverse ecosystems.

Copies of the paper are available free and post free to members, and \$5.00 for non-members.

Farrago

Punish polluters

Myles Allen, a climate modeller at Oxford University, considers the Kyoto Protocol too little, too late. He is convinced that the only way to get the major reductions in greenhouse gases that are needed is to take the big oil companies to court.

If the climate modellers can compare what the weather was like in 2003 with what it would have been without the human greenhouse emissions, then the way would be open to sue for 30,000 deaths caused by the European heatwave. Even the threat of action will change behaviour more than government policy would.

Allen thinks that modellers can say with ninety per cent certainty that the risk of such a heatwave in Europe had at least doubled as a result of climate change.

*New Scientist,
1 October 2005*

*Sometime within the next two years, human beings will pass a demographic milestone as significant as any in our history. By the beginning of 2007 – at least according to the calculations of Joel Kotkin in his book *The City – the world's burgeoning ranks of urban dwellers will for the first time constitute a majority of the planet's human population.**

*Gary Krist
Washington Post, July 2005*

Pet scan

People are often more prepared to take their pets to the vet than to take themselves to the doctor. Even many healthy pets have an annual check-up and vaccination.

Furthermore, dogs and cats act as free tick and flea collectors and deliver these pests directly to the vet. If these were sent to a pathologist this would enable monitoring of possible outbreaks of vector-borne diseases such as Lyme Disease.

Banfield, a chain of US pet hospitals, has one of the largest animal health databases in the world. As about two-thirds of human diseases are zoonotic, a pet database such as this has the potential to prevent many epidemics before they spread among the human population.

Zoo animals provide another very good early warning system for human diseases. Zoo keepers and vets keep their animals under constant surveillance. A zoo vet helped to identify the West Nile Virus outbreak in New York in 1999.

New Scientist, 15 October 2005

Phytomining

Around the world about 450 plants have been found that hyperaccumulate metals that would be toxic to other plants; each species has evolved in soil containing specific metals. A small Australian plant, *Stackhousia tryonii*, that grows near Rockhampton, specialises in nickel. It absorbs so much nickel that stock are likely to die if they eat it.

Scientists are experimenting with these metal-munching species to find cheap, environmentally-friendly ways to clean contaminated sites. Some species are already being used to clean up mine dumps and around smelters. Others can remove heavy metals left by fertilisers on pasture and cropland. In Asia, one plant's ability to remove cadmium from rice fields is being investigated.

Most metal-absorbing plants grow very slowly, but in the future genes from hyperaccumulators may be inserted into faster growing species. Such plants could clean the soil then be harvested, incinerated and the ash be cemented in waste-disposal sites.

A different use for such hyper-accumulating genes could be to improve human nutrition. Genes to absorb iron could be inserted into cereal crops to prevent anaemia.

Australasian Science, July 2005

Local government acts

Queanbeyan City council are offering their householders a two hundred dollar rebate for the purchase of a new front-loading washing machine, rated 4 or 5A by the Water Services Association of Australia. The council will inspect such machines after installation to check that they qualify for the rebate.



Eat the pests

We have a talent for eating species to extinction, so why not put it to good use for a change?

The McDonaldisation of the biosphere is proceeding apace, with introduced species causing havoc for local species. In some places local people have decided to try eating their pests as a method of control.

Japanese knotweed has spread across the USA, Europe and Australasia. In Pennsylvania an annual Japanese knotweed festival is held, and the weed is served in knot soup and apple knotweed pie

A South American rodent, the nutria or coypu, is a pest in Louisiana. Cajun chefs are now including it in their menus.

The Hadley Bowling Green Inn in Worcestershire, UK, put North American grey squirrel on their menu. Predictably this move sparked protests as well as approval.

New Scientist,
10 September 2005

Bottled water

Do you realise that a litre of water from the supermarket is nearly a thousand times as expensive as a litre of tap water? Furthermore, in taste tests, most people either cannot tell the difference or even vote the tap water better. Recycled water also tastes just as good, although some people are revolted by the idea of drinking recycled water. If only they realised that all water has been recycled endlessly by nature!

There is, however, one form of bottled water that is really beneficial. In some less affluent parts of the world water-borne diseases kill many people, especially children. Some ten years ago someone realised that exposing this water to sunlight in plastic bottles for a few hours would kill common pathogens.

Sunlight works in two ways: ultraviolet rays sterilise the water, infrared (heat) pasteurises it. Bottled water of this type is now saving many lives.

The Science Show, ABC RN
19 November 2005



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