



STEP Matters

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In this Issue

Talk on Exotic Plant Invasion and Bush Regeneration.....	1
Environmental Education.....	1
Weedkillers Responsible for Amphibian Decline?.....	1
Reduction of Funding to NCC.....	2
Book Review.....	3

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Talk on Exotic Plant Invasion and Bush Regeneration

Date: Tuesday 24 May
Time: 7:45 pm
Place: St Andrews Church Hall
(Vernon Street, South Turramurra)
Contact: Michelle Leishman
(9489 8972)

Join us to hear Dr Michelle Leishman, STEP's president, tell us about recent experimental findings on the factors that contribute to the success of exotic plants in urban bushland on Sydney's Hawkesbury Sandstone. Michelle will also discuss the implications for bush regeneration.

Environmental Education

Each year STEP provides grants relating to managing and conserving urban bushland. We have two sources of funds for this purpose:

- tax-deductible donations which go into an Environment Fund
- interest from a bequest made to us (the Pam Morse Fund)

To date we have awarded research grants to students, education grants to schools and each year we donate a prize for the best environmental project in the Intel Young Scientist competition.

Currently we are investigating the possibility of funding two environmental projects, one from a primary school and one from a secondary, to help them implement their *School Environmental Management Plan* (www.curriculumsupport.nsw.edu.au/enviroed/index.cfm).

We are also looking for a coordinator to develop and run our education program. The coordinator need not need to be a committee member but would be welcome to join the committee. Contact secretary@step.org.au to discuss this exciting project in more detail.

Weedkillers Responsible for Amphibian Decline?

Could agriculture be contributing to the catastrophic worldwide decline in amphibians? This question was asked in an article in the *New Scientist* (9 April, page 5).

The finding that a widely used, and supposedly benign, weedkiller is toxic to amphibians, suggests it might. The article cites ecologist Rick Relyea of the University of Pittsburgh who was 'completely surprised at the extreme lethality of Roundup under relatively natural conditions'.

Glyphosate-containing herbicides are commonly used on genetically modified crops as well as on conventional crops. In an experiment the ecologist found that spraying outdoor tanks containing 25 different species, including algae and snails, led to a 70% decline in amphibian biodiversity and an 86% decline in the total mass of tadpoles (*Ecological Applications*, vol 15, p 618). The chemical had no effect on zooplankton, insect predators or snails.

Relyea claims that the chemical was sprayed at the recommended concentration. However the manufacturer disputes the tests, saying that the concentration was over seven times as high as the recommended dose, and that in the field the concentration would be even more dilute.

Previous research has shown that it is not glyphosate that might cause problems, but the surfactant mixed with it. Surfactants are needed to allow the herbicide to penetrate the waxy surfaces of plants. But while active ingredients like glyphosate are closely regulated, surfactants are not.

Whatever the case may be, there is strong indication that herbicides must be used with due care.

STEP Inc

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

Reduction of Funding to NCC

For the last three decades, Grants to Voluntary Environment and Heritage Organisations have provided funding to state-based conservation councils, environment centres and many smaller environment groups. However on 8 April (without any notice) the Australian Government cut critical funding to environment groups across Australia.

As a result the Nature Conservation Council of NSW (NCC) has suffered an \$85 000 funding cut out of this year's budget which makes it extremely difficult for it to maintain its immediate commitments.

The NCC has therefore asked its member associations, of which STEP is one, to assist by making tax-deductible donations to help alleviate the immediate crisis and to support appeals to the Australian Government to reverse its decision.

The funding previously provided the means for NCC's activities, including:

- challenging the State Government's water-sharing plans in court
- campaigning to save the Grey Nurse Shark and other threatened fauna and flora
- campaigning to halt broad-scale land clearing
- fighting to protect old growth forests and western woodlands

Some of these campaigns can be uncomfortable for incumbent governments, and no doubt this is one of the reasons behind the funding cuts. This is further illustrated by the change in the criteria for eligibility to receive funding. Henceforth groups must demonstrate that they engage in 'on the ground' activities such as tree planting, weed control and creek restoration.

These are worthwhile activities deserving support. On the other hand environmental education and advocacy are more effective on the broad scale and very necessary since it is frequently government policy supported by public ignorance which allows environmental degradation to progress.

As the NCC points out, planting trees and restoring creeks cannot stop the building of new coal-fired power stations, halt land clearing, create new national parks, or strengthen environment protection laws.

There is a strong perception that this is a political attack on the ability of environment groups to monitor and criticise government performance and policy. The NCC has 130 member groups in NSW and represents the community's voice for the environment in NSW and should not be allowed to be silenced to suit short-term interests of a political incumbency.

At its last meeting, the STEP committee decided to make a donation to NCC and to encourage STEP members to do likewise.

NCC has also requested that individuals and groups should lobby the Australian Government to reverse the decision, restore its funding and to remove the criteria which act as a gag on public campaigns.

Lobbying by individuals could take the form of letters to relevant politicians, local federal MPs and letters to local, state and national newspapers.

NCC offers a standard letter on its website, but would prefer letters in your own words (see <http://www.nccnsw.org.au>).

To this end it sets out some key points, some of which are:

- By making this funding cut ten months into the current financial year without consultation, or prior notification, the impact is immediate and dramatic.
- The funding performs an irreplaceable role in supporting the administrative capacity of environment and heritage non-government organisations.
- NCC uses this funding to educate and build community awareness of environmental issues and to contribute to policy development advice to government.
- NCC uses the funding to provide services to the community such as access to an environmental library, meeting spaces, internet access, networking of groups, policy expertise and the opportunity to volunteer and be trained in a range of activities.
- This funding is only about 0.5% of the Federal funding for on-the-ground work and it is essential to allow advocacy and facilitation complementing on-the-ground initiatives, ensuring that environmental improvement is not being offset by continuing destructive activities.

The relevant minister is:

Senator Ian Campbell
Minister for Environment and Heritage
Parliament House
Canberra, ACT 2600
senator.iancampbell@aph.gov.au
Tel: (08) 9325 4227, 9421 1755
Tel: 1300 301 728 (toll free)
Fax: (08) 9325 6857, 9325 7906

The shadow minister is:

The Hon Anthony Albanese
Shadow Minister for Environment and Heritage
Parliament House
Canberra, ACT 2600
anthony.albanese@aph.gov.au

MYOB for Sale

STEP no longer needs MYOB software acquired in August 2004. Contact secretary@step.org.au with any reasonable offers.

Book Review

Living in the Hothouse: How Global Warming affects Australia
 Ian Lowe
 Scribe Publications, \$26.95
 240 pp, ISBN 1 920 76941 2

Are you confused by the arguments and counter-arguments in the global warming debate? If you are, you could not do any better than to read *Living in the Hothouse: How Global Warming affects Australia* by Ian Lowe. The sub-title indicates its immediate relevance to our national debate.

Ian Lowe is Emeritus Professor of Science, Technology and Society at Griffith University, has contributed to the UN-sponsored Inter-governmental Panel on Climate Change, is a member of the Australian Climate Group and has been actively engaged in the climate debate since its inception in the mid-1980s. See also his book *Living in the Greenhouse* published in 1989.

Scientific Understanding of the Greenhouse Effect

All aspects of the greenhouse effect are set out clearly and there are explanations of the nitrogen cycle and the ozone layer, both of which also have serious effects.

At the end of the first chapter, one could have few doubts that global warming is due to human influence rather than just a natural cyclical event, as the nay-sayers maintain.

Climate Change in Australia

In the second chapter Lowe outlines the progress in climate modelling from the earliest energy balance model which considered the Earth's surface temperature simply in terms of the variation of radiation of energy. The radiative-convective model introduced energy transfer through convection into the calculations.

A further step in sophistication of modelling was taken in the global circulation model which represents the atmosphere in its three dimensions, taking into account the processes within the atmosphere as well as its interaction with land and sea.

Global circulation modelling has advanced dramatically, but even using a number of different models leaves uncertainties relating to the patterns of greenhouse gas emissions (from unconstrained use to rapid phasing-out of fossil fuels), relating to the scale and speed of climate response to changing atmospheric conditions, and finally about the way this would translate into temperature and rainfall patterns at the regional level.

However it is possible to define a range of temperatures, rainfalls, sea levels, snow lines, tropical cyclones and other extreme events, and the best current information is set out.

The most important unknown factor is the El Nino effect, predictions of which cannot at this stage be derived from the global circulation models.

Impacts of Climate Change

The impact of climate change on agriculture is determined by the way various plants react to change and will require a rethink about plant varieties used in broad-scale production.

Forestry impact is more difficult since forests are biologically more complex than agricultural systems, which are effectively monocultures.

Studies of rainfall patterns predict that regions which will benefit from summer rainfall will also be subject to greater likelihood of flood events and regions which receive their rainfall in winter are likely to suffer drought conditions.

Rainfall, temperature and sea level changes will all have effects on the natural environment and Lowe touches on the subject of the complex interaction between species including with the human species.

	Unit cost	Number	Cost (\$)
Membership (only complete if 04 shown on address label overleaf)			
Single (per financial year)	\$16		
Family (per financial year)	\$20		
Life	\$200		
Field Guide to the Bushland of the Upper Lane Cove Valley	\$30		
Maps of Walking Tracks			
Lane Cove Valley			
STEP member	\$15		
Non-member	\$20		
Middle Harbour Valley. Sheets 1 and 2 Bungaroo and Roseville Bridge			
STEP member	\$15		
Non-member	\$20		
Middle Harbour Valley. Sheets 3 and 4 Northbridge and North Harbour			
STEP member	\$15		
Non-member	\$20		
Donation (donations of \$2 or more tax deductible)			
E-mail address.....	Total cost		

Current Energy Use

Chapter four sets out the current energy use and discusses the historic and geographic background, which has determined Australia's high per capita energy use. It deals with renewable energy potential and the reasons for avoiding nuclear energy.

Strategies for Responding to Climate Change

The broad strategies for responding to climate change fall into two categories: adaptation and prevention.

Lowe discusses adaptation to:

- less water availability in southern Australia
- more severe bushfires
- longer and more intense droughts
- rising sea levels and storm surges
- higher risk of insect-borne diseases
- more intense heat during summer
- more extreme weather

and discusses the necessary responses.

Lowe argues that although there are serious obstacles to either reducing energy use or replacing fossil fuels, the information available should be sufficient incentive to take the easy steps in to prevent climate change.

He does not advocate draconian measures, but he details all the means at our disposal to achieve significant preventative action.

The Politics of Greenhouse

The final two chapters deal with the politics in Australia at all levels of government. Everybody will be familiar with the Australian government's stance on greenhouse but it is worth reading Lowe's dissertation. The efforts of other levels of government are outlined.

Program of Action

The program for action lists a series of straightforward actions for both individuals and government policy, clearly set out and explained. It touches on population, energy use, efficiency of conversion from energy to the services which people require, transport etc.

He also points out that achieving a sustainable future does require a mind shift to recognise that we share the planet with all other species and that we hold it in trust for all future generations; a mind shift to seeing the economy as a means to service human needs rather than as an end in itself.

Lowe invokes the concept of *Globo Sapiens* as a new way of planning and conscious decision making rather than just trusting the market to solve our problems. He says '... if you see this as a bit utopian remember that all our significant social reforms were seen at the time as utopian'.

Summary

Ian Lowe is a good communicator who makes the complexities of the climate change debate accessible to the average reader.

Living in the Hothouse is a powerful call to action.



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