

CHAIN REACTION

The national magazine of Friends of the Earth Australia :: www.foe.org.au

100TH ISSUE

- The base-load electricity fallacy
- Obscurity of carbon trading
- Defence greenwash on war games
- Indigenous owners reject NT waste dump
- Earth Sanctuaries



Food Sovereignty



Nano-Food vs Real Food



Kokatha Mula



World Water Day



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100th ISSUE

NEWS & VIEWS

CHAIN REACTION

Issue #100 - August 2007

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Front cover photo by Rodney Dekker. Rodney is embarking on a project to document global warming and its effects on local communities. To support this project or for more information contact: 0412 998 173, <rodney.dekker@gmail.com> and visit the websites: <www.flickr.com/photos/rodneydekker/sets> <www.rodneydekker.com.au>.

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The board provides big picture thematic and political advice to the CR editors, advice on themes for future editions, as well as helping to ensure that a broader range of sectors/ constituencies are represented in the articles. The CR editorial team are still responsible for content, editing and design and so any problems, omissions or other failures are ours!



Photo by Sam Cossar-Gilbert
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Chain Reaction

32 years on and still going strong

BY CAM WALKER

In the world of community publishing, a 100th edition is something to be proud of. This magazine started its life as the Greenpeace Pacific Bulletin in 1974 and was transformed into Chain Reaction in 1975. In its time it has been run by an incredible number of people and collectives and has moved between Canberra, Sydney, Melbourne and Adelaide. It is currently a joint venture run by people based in Adelaide, Katoomba and Melbourne.

Chain Reaction editors have always been given a large degree of freedom and Friends of the Earth, Australia has seen the magazine as being something that 'belongs' to the broader social movement rather than just acting as the mouthpiece of the organisation. Several years ago, it was decided to make it more overtly a FoE magazine: that is, as a forum for FoE opinions and a campaign tool for our activities. Since 2004 we have run special editions covering most of our national campaigns and made a number of other changes to reflect the renewed focus on FoE's campaigns.

However, we still do seek to produce a magazine that any progressive individual or group can write for, and created an advisory board of mostly 'external' people to ensure diversity of interests and opinions. With the last edition we included our first major photo essay for some time and, with the positive feedback to this, intend to keep doing so. The magazine continues to evolve. We make Chain Reaction freely available via the FoEA website and visits and downloads continue to grow.

The core editorial team is small and composed of people who are busy with their own campaigns

and local groups and we have limited ability to further develop the financial side of the magazine.

We are now at the point where we need extra support for the magazine. Prior to the election of the Howard government, Chain Reaction received an annual allocation of funds from FoE Australia's admin grant from the federal government. This is now long gone, meaning a short fall of \$7,000 a year we have not been able to make up through advertising or other sources. We have perhaps the most understanding printers on the planet but continue to clock up a non-viable debt to them. Something needs to change.

Ideas canvassed have included making the magazine smaller, printing on cheaper paper, reducing the print run or frequency, increasing the cover cost, etc. We don't want to do any of these: feedback on the journal is resoundingly positive. But we do need your help. Here are some ideas:

- * we need a volunteer to take on marketing and possibly building up advertisements;
- * we have launched a new 'Chain Reaction supporter' category for people who give \$100 or more when they subscribe;
- * organising with your local bookstore to stock the magazine; and
- * giving a gift subscription to a friend, your workplace or local library.

You can phone us on (03) 9419 8700 or email <chainreaction@foe.org.au>

Cam Walker is on the Chain Reaction editorial team and is a national liaison officer with Friends of the Earth, Australia.

Anti-nuclear Activists Awarded



ABOVE: Sophie Green and Joel Catchlove receiving the Jill Hudson Award for Environmental Protection from SA Minister for Environment and Conservation, Gail Gago (centre). Photo: Friends of the Earth Adelaide. INSET: Arabunna elder Kevin Buzzacott. Photo: Jessie Boylan.

Friends of the Earth Adelaide activists Sophie Green and Joel Catchlove, together with Arabunna elder Kevin Buzzacott, have been awarded the SA Conservation Council's 2007 Jill Hudson Award for Environmental Protection.

The award recognises the work of South Australians who have made "an outstanding contribution to protecting the environment".

Sophie Green and Joel Catchlove received the award for their outstanding voluntary commitment to educate and engage the general public about environmental issues and for energising the campaign against the expansion of the nuclear industry.

Kevin Buzzacott received the award in recognition of his long-term campaign to protect his traditional country, near Lake Eyre, from the impacts of BHP Billiton's Roxby Downs copper-uranium mine.

The awards were presented by the SA Minister for Environment and Conservation, Gail Gago, in a ceremony on May 19. Past winners include members of the Kupa Piti Kungka Tjuta, a senior Aboriginal women's council, who successfully campaigned against the federal government's attempt to dump nuclear waste near Woomera.

The annual award is in memory of Jill Hudson (1948–1997), a passionate educator who believed 'Life is an opportunity and its purpose is to stand for something and to make a difference.'

Kevin Buzzacott was also awarded the Australian Conservation Foundation's 2007 Peter Rawlinson Award on World Environment Day, June 5, recognising two decades of work highlighting the impacts of uranium mining at Roxby Downs and promoting a nuclear-free Australia.

EARTH NEWS

EARTH NEWS COMPILED BY MONICA HAYNES

Denmark builds world's largest offshore wind farm

Denmark has built the world's largest offshore wind farm, generating 160 megawatts of power. It is the newest of Denmark's 11 offshore wind farms, which produce 12% of the 3,100 megawatts of wind energy generated in Denmark in 2006.

Wind power currently accounts for 20% of Danish electricity and the government has announced plans to significantly increase the renewable energy sector.

Source: Yahoo News/AFP, May 10, 2007..

New Zealand, Costa Rica and Norway go carbon neutral

New Zealand aims to become the first country to achieve net zero greenhouse emissions across all sectors. The government is in the process of developing a series of targets, the first being that six of 34 government departments and agencies will be carbon neutral by 2012.

Costa Rica aims to cut its net greenhouse gas emissions to zero before 2030, and aims to be the first nation to offset all its emissions. Environment minister Roberto Dobles said Costa Rica would clean up its fossil fuel-fired power plants, promote hybrid vehicles and increase tree planting to offset emissions.

However, the carbon offset plans have generated some controversy. "It's a deception to allow polluters to continue to pollute with makeup to mask it," said Juan Figuerola, forestry coordinator for the Costa Rican Conservation Federation.

Norway, the world's number five oil exporter, has also joined the carbon neutral race, and wants to cut its net greenhouse gas emissions to zero by 2050. Under the plan, domestic emissions would be offset by cuts abroad or by buying emissions quotas on international markets. Greenpeace said that Norway should do more at home rather than use its vast oil wealth to buy its way out of the problem through offset schemes.

Sources and more information: <greenlefts.blogspot.com>, <www.enn.com/today.html?id=12836>, <www.planetark.org/dailynewsstory.cfm/newsid/41482/story.htm>.



A wind farm of the southwest coast of Denmark
Source: <www.sandia.gov>

European Commission renewables target

In March, the 27-member European Commission committed itself to making renewable energies the source of 20%

of the total energy consumption across the bloc by 2020. The current level is 6-7%. The Commission also committed to a target of cutting European Union greenhouse gas emissions by at least 20% by 2020 from 1990 levels, rising to 30% if other developed nations join in under an international agreement.

A bright future

Greenpeace, the Australian Conservation Foundation and the Climate Action Network Australia released a report in April advocating a legislated 25% renewable energy target by 2020. When coupled with cost-saving energy efficiency measures, the program would add around \$1.25 per week to the average household electricity bill.

The report, 'A Bright Future: 25% Renewable Energy for Australia by 2020', is available at: <www.greenpeace.org/australia/resources/reports/climate-change/a-bright-future-25-renewable>.

Audit slams slow Environment Department

In March, a performance review by the Australian National Audit Office of the Department of Environment and Water Resources was tabled in Parliament. It found the federal government was failing to meet its obligations to protect Australia's rapidly declining biodiversity. The government has made "slow progress" with its biodiversity program. Although approved in August 2004, the program's guidelines were not finalised until June 2006.

The Audit Office report is posted at: <www.anao.gov.au/search.cfm?cat_id=7&arg=>.

Environmental racism

Twenty years after a landmark study proved that racial minorities were more likely to have hazardous waste sites foisted upon them, a new report finds that the phenomenon has only got worse.

“When we think of the U.S. in the 21st century, we think we’ve made a great deal of progress in environmental protection and civil rights,” said David Pellow, a sociologist and professor of ethnic studies at the University of California, San Diego. “This suggests the opposite, and it’s quite disheartening.”

The new report lays out several solutions from grassroots action to sweeping federal laws.

New research from the University of Michigan also finds that hazardous waste facilities are disproportionately placed in poor, minority neighbourhoods.

“What we discovered is that there are demographic changes after the siting but they started before the siting,” said Paul Mohai from the University’s School of Natural Resources and Environment.

More information:

* <www.upi.com/ConsumerHealthDaily/view.php?StoryID=20070320-050832-6558>

* <www.sciencedaily.com/releases/2007/02/070218135344.htm>

Blueprint for tackling climate change

Half of the world’s energy needs in 2050 could be met by renewables and improved efficiency, claims a study by the German Aerospace Centre, commissioned by Greenpeace and Europe’s Renewable Energy Council.

The report, ‘Energy [R]evolution: A Sustainable World Energy Outlook’, provides a practical blueprint to cut global greenhouse emissions by almost 50% by 2050, whilst providing a secure and affordable energy supply and maintaining steady worldwide economic development.

The report is posted at: <www.energyblueprint.info>.

MIT-led panel backs geothermal

A comprehensive MIT-led study of the potential for geothermal ‘hot rocks’ energy in the US found that it could supply a substantial portion of country’s electricity demand in the future, probably at competitive prices and with minimal environmental impact.

The study considers the feasibility, economic viability and potential environmental impacts, and the expert panel offers a number of

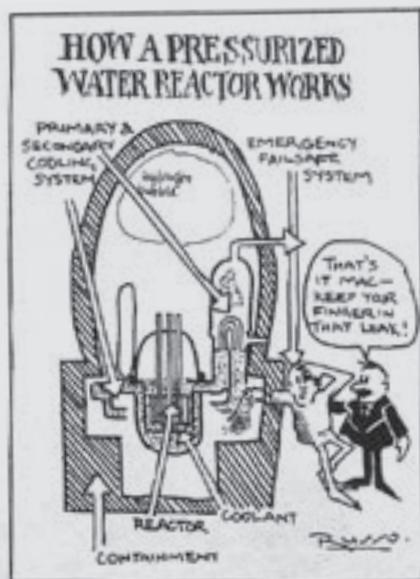
recommendations to develop geothermal energy.

More information: <web.mit.edu/newsoffice/2007/geothermal.html>, <geothermal.inel.gov>.

Solar power set to shine brightly

The solar industry is poised for a rapid decline in costs that will make it a mainstream power option in the next few years, according to a new assessment by the Worldwatch Institute and the Prometheus Institute. Although grid-connected solar capacity still provides less than 1% of the world’s electricity, it increased nearly 50% in 2006, to 5,000 megawatts, propelled by booming markets in Germany and Japan.

“We are now seeing two major trends that will accelerate the growth of PV: the development of advanced technologies, and the emergence of China as a low-cost producer,” says Janet Sawin of Worldwatch. Combined with technology advances, the increase in polysilicon supply will bring costs down rapidly – by more than 40% in the next three years, according to Prometheus estimates.



Chain Reaction has always led the pack, informing and teaching us about the threat to people and planet. As we face the possibly the biggest threat to life in the earth’s history, Chain Reaction is helping us to take action again.

Damien Lawson
Carbon Equity Project

Best wishes to Chain Reaction’s collective: you produce the Australian green movement’s most thoughtful and gutsy periodical. Thanks and may you keep on keeping on. We need you.

Frank Fisher
Convenor of Graduate Sustainability programs,
Swinburne University

Friends of the Earth Australia is a federation of independent local groups. You can join FoE by contacting your local group (see page 47). For further details on FoEA, see: <www.foe.org.au>

There is a monthly email newsletter, which you can subscribe to via the FoEA website.

Nuclear Freeways project hits the road

The Nuclear Freeways project is part of the broader campaign to prevent the federal government imposing a nuclear waste dump on unwilling communities in the Northern Territory. It is focussed on supporting communities along potential transport routes between the main waste producer – the Lucas Heights nuclear plant in Sydney – and the NT.

In April we conducted the first leg of the tour through NSW. We visited Canberra, Sydney, Blue Mountains and Lithgow and held public meetings, stalls and met with local council, emergency services and other interest groups.

This project will continue through 2007. For details, or to get involved, please see: <www.foe.org.au/campaigns/anti-nuclear/freeways>

Palm oil campaign launched

On World Environment Day, FoE Australia joined with the Rainforest Information Centre, Borneo Orangutan Society, and the Australian Orangutan Project to launch the Palm Oil Action Group.

The focus is a consumer campaign, calling on Australian consumers, retailers and manufacturers to play a key role in curbing massive deforestation in South-East Asia for palm oil plantations.

The group says that consumers need to be aware of the devastating consequences of the palm oil industry in countries like Indonesia, Malaysia and Papua New Guinea, and demand proof from companies involved in the industry who may claim they are not responsible. In Indonesia alone, an area of forest equal to 300 soccer fields is being destroyed every hour for the creation of palm oil plantations. There are also widespread human rights abuses in these countries as traditionally-owned land is acquired to make way for more plantations.

While the Palm Oil Action Group is not opposed to palm oil and is not calling for a boycott, the group is asking Australians to write to supermarkets, food manufacturers including KFC, politicians and ambassadors urging fast action, such as a verification system for 'orangutan friendly' oil and an improved labelling system.

More information: <www.palmoilaction.org.au>

Environmental water being stolen from the Macquarie Marshes

The Inland Rivers Network has released an investigative report about the theft of environmental water from the Macquarie Marshes. IRN investigations show certain landholders have siphoned off water that was released from the Burrendong Dam specifically for the thirsty Macquarie Marshes. Winter rain has meant small

flows are reaching the Marshes, but IRN has been advised by people in the area that water thieves have again been active in the area.

IRN is a grouping of environmental organisations, including the Australian Conservation Foundation, Nature Conservation Council of NSW, National Parks Association and FoE.

The full report is posted at: <www.irnns.org.au>

2007 federal election - is climate the new black?

FoE is working with a range of environmental groups to ensure climate change and its impact on land and people is firmly on the agenda. The 2007 federal election provides a pivotal opportunity for all political parties to demonstrate how seriously they take global warming.

Rich nations with large carbon debts must lead the way with the deepest emissions reductions, whilst allowing other countries to continue to develop economically with lesser reductions and by providing renewable technology and adaptation aid.

FoE Australia is campaigning for:

- **Legally binding national targets to cut greenhouse pollution by 40% by 2020 and 90-95% by 2050 (from 1990 levels).**
- **An additional climate refugee program at home and lobbying**



for international recognition of climate refugees.

- Ratification of the Kyoto Protocol and international leadership by Australia in the post-2012 Kyoto negotiations for rich nations accepting their "differentiated responsibility" for the global carbon debt.

- Putting energy efficiency first (the cheapest, quickest and most job-rich option for achieving emissions reductions) in national energy policy.

- A national renewable energy target of 30% by 2020 to drive investment in renewable energy.

- An overseas aid budget (ODA) of at least 0.7% of GNI by 2015 to help increase the resilience of social and natural systems to climate change.

- Shifting research support and industry subsidies from dirty and dangerous energy to renewable energy.

- An annual contribution of \$1,800 million annually to the United Nations Framework Convention on Climate Change adaptation funds, prioritising the most vulnerable Southern countries in recognition of the impact of our historical greenhouse gas emissions. This contribution should be over and above any increases in ODA.

- Investigation into whether we need to introduce carbon quotas for people and industry (an annual allocation of carbon consistent with a 'fair share' of the atmosphere).

We oppose:

- nuclear power as a 'solution' to climate change (it's the only energy source with a repeatedly-demonstrated connection to WMD proliferation, it impacts negatively on Indigenous peoples, it's too expensive, too slow and leaves dangerous waste).

- carbon trading – unless it stops business-as-usual through 100% auctioning of permits, achieves a 40% emission

reductions by 2020 through year-on-year reductions, and excludes all offsets.

- 'clean' coal – where emissions are captured and put underground (this is commercially untested, expensive, potentially dangerous and too slow to be a core element of a sustainable energy mix).

Our collaboration with other groups includes:

- an 11-point plan created by a range of key state and national groups;

- Turning Down the Heat, a climate change action agenda for Australia, prepared by Climate Action Network Australia; and

- the Big Switch, an online campaign: www.thebigswitch.com.au

Details on our activity are posted at: www.foe.org.au/campaigns/climate-justice/policy-position/federal-election-2007

Thanks!

- * To Donkey Wheel Fund for its support for our climate change and future energy project.

- * Lonely Planet for supporting our work camps to Nepabunna community in SA.

- * Rainforest Information Centre, Lismore, for their support for Chain Reaction.

- * To the people who have supported our nuclear fighting fund in recent months.

- * To everyone who responded to the FoE Australia annual appeal.

Please support FoE!

Friends of the Earth Australia is a national environmental justice network. We work on a range of local, national and global projects and campaigns.

Individuals can support us and get involved by joining their local group (see inside back cover). We are also

I remember the very first Chain Reactions and the succession of great editors who have worked for minimal wages to pull it together. A massive effort and CR is still the leading place for radical democratic social change-focused environment movement thinking and discussion in Australia. Go well for the next 100!

Geoff Evans, Board member Mineral Policy Institute, and former national liaison officer for FoE in the 70s.

Thanks to Friends of the Earth Australia for 100 challenging and inspiring editions of Chain Reaction. Full of cutting-edge analysis and creative campaigns, it consistently challenges readers to question the kind of world we want to live in. Hope to see 100 more!

Kate Walsh
Mittagong Forum

national activity (see page 47 & 48 for a full list).

For further details, please see: www.foe.org.au/mainfiles/contribute.htm

Friends of the Earth International (FoEI) is a federation of autonomous organisations from all over the world. Our members, in 73 countries, campaign on the most urgent environmental and social issues, while working towards sustainable societies. For further information, see: <www.foei.org>

First global warming lawsuit launched against Canada

On May 29, 2007, FoE Canada launched a landmark lawsuit against the Canadian government. Filed in the Federal Court in Ottawa by the Canadian environmental law organisation Sierra Legal, the lawsuit alleges that the federal government is violating Canadian law by failing to meet its binding international commitments to reduce greenhouse gas emissions.

On April 26, 2007, the federal government announced its 'Turning the Corner' climate change strategy which set greenhouse gas reduction targets from industry and other sources to 20% below 2006 levels by 2020. This would leave Canada approximately 39% off target with Kyoto in 2012, and the Kyoto target would not be met until 2025, if at all.

More information:
<www.foecanada.org>

Stop water privatisation: protest at the PPIAF

The Public Private Infrastructure Advisory Facility (PPIAF) is a little known World Bank agency that funds consultants to advise governments in poor countries how to privatise key sectors such as water, energy and telecommunications. It is funded by 15 donors, including the UK government, the World Bank, the Asian Development Bank, and the Dutch government.

On May 23, protesters gathered

for an action in front of the hotel in the Hague where the PPIAF's annual meeting took place. They handed over a letter signed by 138 groups from 48 countries asking the donors to withdraw from PPIAF.

The campaign against the PPIAF in Italy has resulted in the government deciding to pull out. A few months ago, the Norwegian government stopped funding the PPIAF. However the Australian government is tipped to soon become a donor.

More information:

<www.corporateeurope.org/ppiaf.html>. *A short video clip of the action at the PPIAF meeting is posted at: <www.foei.org/en/campaigns/finance/privatization/ppiaf>*

Bujagali dam project suspended

In late May, it was announced that Uganda's Cabinet had suspended a proposal to give away part of a rainforest to a sugarcane grower, weeks after three people were killed in a protest against the plan. Friends of the Earth worked with many allies to draw attention to this project.

Biofuel gold rush continues in Brazil

President Luiz Inacio Lula da Silva's call for Brazil to become a "green Saudi Arabia" over the next few years has investors giddy and environmental and workers' organisations panicked.

Environmental groups such as ActionAid Brazil warn that the ethanol industry could repeat the mistakes of the soy industry, which turned seven million acres of Amazon jungle into monoculture soy in five years.

Many also question the sustainability of biofuels. research published in the July 25 edition of the Proceedings of the National Academy of Sciences concluded that the production of biofuels creates a net energy loss, and that forested land absorbs more carbon dioxide from the atmosphere than the use of biofuels saves.

The Brazilian Landless Workers Movement warns that the expansion

of sugar cane plantations is both concentrating land ownership and creating slave labour working conditions.

Full article by April Howard at: <www.mstbrazil.org/?q=aprilhowardonbiofuelsmst>

Block G8!

The G8 meeting was again disrupted at Heiligendamm, Germany from June 6-8. Over 10,000 protesters blocked most of the routes into Heiligendamm, interrupting the arrival of hundreds of delegates. Another mass demonstration at Rostock attracted 50,000 protestors.



G8, Germany source: www.indymedia.uk.org

Several other decentralised actions called for equal rights, freedom of movement (migration), and an end to corporate capitalism and neo-colonialism. Police were very provocative and repressive, beating up even the most peaceful protestors and arresting hundreds.

The G8 Summit again failed to commit to serious targets to cut greenhouse gas emissions. The Summit made a non-binding commitment to consider

a non-binding, aspirational target of halving emissions by 2050. Collectively the G8 nations are responsible for around 43% of the world's greenhouse gas emissions with only 13% of the population.

Reports, pictures, videos, and audio at de.indymedia.org/en; Real World Radio live broadcasting: www.realworldradio.fm

Oil refineries emit smoke not flowers!

FoE International is filing simultaneous complaints to three European national advertising standards authorities regarding a shameless advertisement by oil giant Shell. The advertisement depicts the outline of an oil refinery emitting flowers rather than greenhouse gas emissions and other pollutants.

More information and a link to the ad at the International Herald Tribune blog: blogs.ihf.com/tribtalk/business/green/?p=57

New reports and publications

Barrick's Dirty Secrets: Communities Respond to Gold Mining's Impacts Worldwide.

A new CorpWatch report details the operations of Barrick Gold in nine different countries, focussing on the efforts on communities to seek justice

from this powerful multinational. www.protestbarrick.net

Goodbye Houston: conflict, climate change and catastrophe: An Alternative Annual Report on Halliburton.

This new report by CorpWatch was prepared in association with Halliburton Watch and the Oil & Gas Accountability Project. www.corpwatch.org

Where Energy is Women's Business: National and Regional Reports from Africa, Asia, Latin America and the Pacific

A book released by ENERGIA, the International Network on Gender and Sustainable Energy. The book deals with the role that women play in these developing regions, and focuses on the benefits of sustainable energy programs not only for the environment but also for gender equality. *To download the book:*

www.energia.org/csd_book.html

Swaziland: The Myth of Sustainable Timber Plantations

Released by the World Rainforest Movement and South African Timber Watch. Although Swaziland has been repeatedly presented by some as a successful example of sustainable plantation forestry, this report presents clear evidence to demonstrate that monoculture tree plantations are just as destructive in Swaziland as elsewhere. Contact: WRM International Secretariat: bookswrm@wrm.org.uy

Trip to Repsoland: from Well to Well through Patagonia and Bolivia

A new joint publication from author Marc Gavalda and FoE Argentina. This is a diary filled not only with tales of the expansion of Repsol's corporate territories around the world, but also with stories of hope inspired by resistance. You can read about impunity, plundering, ecocide, ethnocide, and resistance in this explorer's diary. A printable Spanish version of the book can be downloaded at: <ftp://ftp.ourproject.org/pub/tierra/repsolandia.pdf>.

Translators And Interpreters Wanted

Friends of the Earth Australia is looking for volunteer translators and interpreters who speak any of the following languages: French, Spanish, Portuguese, Indonesian, Korean and Japanese.

We are trying to improve our collaboration with FoE groups around the world who speak languages other than English. Volunteer translators are always able to work at the level at which they feel comfortable, and are under no obligation to take on any particular project.

If you are interested in being a volunteer translator, please contact FoE volunteer coordinator Arius:

arius.tolstoshev@foe.org.au
ph. (03) 9419 8700.

Chain Reaction is an amazing publication. It's very existence challenges the media mould in so many ways.

As the ABC folds to a conservative bias, CR remains proudly progressive. While politicians diminish serious survival issues as being beat-ups from a bunch of beatniks, CR continues to present the well-measured, well-researched, well-written articles that none of us can afford to ignore. From all your friends at the New Internationalist magazine collective, hearty congratulations on your first 100 editions ... and keep those presses rolling for a century more!

Chris Richards, New Internationalist

Olatunde Johnson

Friends of the Earth
Sierra Leone



Photos: FoE Sierra Leone <www.onesky.ca/foesl>

Sierra Leone is not often a country that conjures images of environmental activism. Conflict has devastated the country and its economy and the vast majority of its population lives in poverty. Amidst this reality, Friends of the Earth (FoE) Sierra Leone does some remarkable work.

Its founder, Olatunde Johnson, was motivated by seeing a story on FoE in a copy of the *New Internationalist* magazine. He had established an organisation called *Future in Our Hands* in 1984 and decided to apply for membership in the FoE International (FoEI) network.

FoE Sierra Leone runs a range of programs, focusing on education both in schools and the broader community. It works to create the change in people they will need to change their lives. "If we can change our attitude, things will get better," says Olatunde. "We need to share, we need to learn how to live together."

The organisation has grown substantially in recent years and now campaigns as well as running awareness-raising projects. It works on forests, climate change and risk assessment, while continuing to expand its work in schools, local institutions and the community. It addresses environmental issues by holding seminars, workshops, meetings and rallies.

It runs an ecological centre (ecocentre) outside Freetown which includes a tree nursery which also produces agricultural and medicinal plants to support local afforestation as well as a range of environmental studies programs. Olatunde believes that access to information is vital for people to be able to better their lives: the Michael Simpson library at the centre provides a valuable

learning resource on issues like renewable energy, sustainable agriculture and skill sharing. In recent years the group has been supported by the One Sky Foundation in Canada, allowing it to expand its work into vocational skills training. It is establishing a radio program which will expand its reach, encouraging 'resistance for change'. The centre is expanding its training opportunities and is expanding using locally-made bricks and other sustainable building materials.

A newer area of activity includes a stronger focus on gender issues and awareness, with an emphasis on adult education and community health. Plans for the future include a micro credit program and increased health support for locals.

One of FoE Sierra Leone's earlier successes was its waste management program which was based on the creation of an environmental sanitation program. Funding was obtained to establish rubbish and recycling bins in communities around Freetown. Given the breakdown in governance in the country, these types of practical initiatives are both useful and significant in demonstrating that people can begin to take control over their lives in spite of the turmoil and hardship imposed by years of conflict. The bins are collected twice a week and taken to landfill, reducing the amount of waste on the streets. Recyclables are separated from the waste. The group is working on plans to use waste to generate biogas, and to use compost as fertiliser. Olatunde is modest about his successes, and attempts to focus on him are invariably steered back to discussion on what the group has achieved. But clearly he has remarkable dedication and a desire to see a better world develop through self improvement and collective effort.

He had the opportunity to be involved in a South-South exchange through FoEI and travelled to El Salvador to experience their work with the Eco Centre managed by CESTA (FoE El Salvador), which helped inspire the idea of a similar centre in Sierra Leone. El Salvador had the similar experience of suffering through a long civil war, made worse by the intervention of the United States. Massive levels of trauma continues to affect many in society – the same as in Sierra Leone.

Olatunde sees the need to work with youth affected by the conflict, displacement and violence through arts and crafts, the development of music and kids bands and the creation of sustainable work opportunities. A bike program, which addresses the issues of sustainable transport and safety on roads is part of this vision. (CESTA has developed bikes that can carry considerable loads, allowing self-employed workers to reach jobs carrying the tools of their trade).

Opportunity is vital if young people are to avoid despair. Access to information is part of this. Olatunde estimates that around 20% of young people in Nigeria have an email address and at least occasional access to the internet, while in Sierra Leone this is somewhere between 1-5%. FoE Sierra Leone's school program aims to build access to this source of information.

In a world of continued ecological devastation and social fragmentation, any positive form of activism and community building is to be celebrated. But in a country that is so poor and so ravaged by war, the example of FoE Sierra Leone stands out as a real example of what is possible when people band together for a greater and deeper good.

For details on FoE Sierra Leone, see:

<www.onesky.ca/foesi>

To find ways to support the group, please also feel free to contact Cam Walker in the FoE office in Melbourne, <cam.walker@foe.org.au>, (03) 9419 8700.

This column seeks to acknowledge some of the inspirational people in our movements. Please feel free to send stories for future editions of Chain Reaction – ideally of 600 words and with a high-resolution image.

<chainreaction@foe.org.au>

To all the crew at Chain Reaction. Fantastic on achieving the 100th edition. I remember when I first moved to Adelaide, that having Chain Reaction produced there was actually one of the reasons moved there! I'm really proud to have been involved in a number of editions over the years. It still remains one of the few alternative voices in the Australian media, constantly challenging the neo-liberal orthodoxies of Corporation Earth. Well Done!

Professor Tim Doyle

School of Politics, International Relations and Philosophy, Keele University, UK.

More and more Australians are at last catching up with the insights and wisdom that Chain Reaction has imparted now for 100 issues. If only its early warning systems had been heeded by those in power from the outset. We would not be so badly behind in the urgent ecological tasks now confronting us. Friends of the Earth has not only raised the environmental conscience of the nation. It has also raised the social consciousness of the environmental movement by its persistent emphasis on equality, democracy, social justice, grass-roots participation, alternative forms of living, and direct action.

Verity Burgmann

Professor of Political Science

It's Time for Food Sovereignty!

A vegetable farmer in Mali describes his crops as neighbouring rice farmers plough their paddy. Photo: Joel Catchlove

BY JOEL CATCHLOVE

On the dusty shores of Lake Sélingué, Mali, West Africa, amid mud brick huts and donkey carts, peasants, family farmers, fisherfolk, nomads, pastoralists, indigenous and forest peoples, rural and migrant workers, consumers and environmentalists from across the world laid down a challenge. From their many languages and regions emerged a global call for food sovereignty.

The World Forum for Food Sovereignty (named 'Nyéléni' after a legendary Malian woman farmer) is held here in rural Mali, because this is the reality of rural life for much of the world. As the sun slowly sinks, a shimmering disc suspended in the dusty sky, silhouetted fisherfolk punt their pirogues across Lake Sélingué, checking their nets.

If you follow the road towards the lake, you'll come to rice paddies, banana groves and vegetable gardens, stretching away down the river valley. While irrigated by a hulking dam that contains the lake, the fields and paddies are gravity-fed, the levels constantly readjusted with mattocks and shovels to regulate the flow. The plots are leased by families, ploughed by oxen and cultivated by hand. Water is scooped onto rows of pumpkins, lemongrass, amaranth and onions from gourd bowls.

Beyond, you cross the river, a tributary of the Niger, to where pirogues are moored and the fisherfolk unload their catch. There's a village here of mud huts. No photos are permitted; the villagers have beliefs about

the power of cameras and a fierce sense of privacy. After receiving permission to enter the village from the village elder you walk among the huts, thatched granaries raised on wooden legs, donkeys and cattle chewing contentedly in the shade of an open straw barn and groves of mango and papaya trees.

Even back in Mali's capital, Bamako, vacant lots, roadsides and the banks of the Niger and its tributaries are given over to food production through meticulous grids of vegetables and herbs. Like rural Sélingué, it is dominated by human scale technologies: hand tools, donkey carts, bicycles; the urban gardens are irrigated by water hoisted from wells. Mango trees grow along the streets and papayas flourish behind compound walls.

The Significance of an African World Forum

For Nnimmo Bassey, from Environmental Rights Action (Friends of the Earth Nigeria) there was great significance in talking about food sovereignty in Africa,

“Because in today’s world,” he said, “when you talk about food, when you talk about hunger, the pictures that flash across people’s television screens across the world is of people starving in Africa.

“In fact, governments and the national agencies that work on food issues would not readily give a thought to food sovereignty. All they talk about is food security. People don’t want us to care about what we eat; they only want us to worry about having something on the table. This directly affects our dignity as human beings because you are forced to eat whatever you are given. You are not given the space to meet your own needs: to decide what you want to eat, to decide what you want to grow and to cultivate.

“People can see that Africans may be hungry, but not because there is no food. Rather because the food is not in the right place at the right time, and because of issues like a lack of rural infrastructure, because of denied access to credit and because of twisted policies that want people to follow a failed pattern. For example, rather than pursuing organic agriculture, rather than using principles developed over centuries, our farmers are being encouraged to use genetically engineered seed, to rely on

artificial fertilisers and to follow the failed patterns of the ‘green revolution’.

“It’s very important that we’re here in Mali, because Mali is emblematic of the continent of Africa. It is a place of rich diversity, it’s a huge landmass and it has been a prominent trade centre over the centuries ... a country where you have a rich agricultural heritage, and although a vast part of the country is covered by the Sahara desert, the people are still able to meet their food needs. It shows a spirit of resilience and what Africa can achieve. It is a land of potentials, and of course, a land of very beautiful music and people,” Bassey said.

A movement under construction

International peasants’ network La Via Campesina, together with Malian peasant network Coordination Nationale des Organisations Paysannes du Mali (CNOP) and the other groups involved in the development of Nyéléni chose to build an entire village to host the forum. It lies on the outskirts of Sélingué town, the lone paved road to Bamako stretching past, buzzing with motor-scooters, bicycles and donkey carts.

With two days to go, the site is crowded with workers, some are digging trenches for plumbing, their picks and mattocks tethered with old inner-tubes to the backs of bicycles. The site is almost treeless but for a few persistent stumps and a jacaranda. The

hot winds pick up clouds of fine pale dust, sprinkling it over the thatched rooves, the gleaming white walls of newly built mud huts and the faces of the workers. There are clusters of women, luminous in swathes of wax-printed cloth sweeping out the huts, others are nonchalantly painting designs in black and ochre on hut walls, others are pouring concrete, and others sit chatting under the shade of new thatch.

The forum site embodies the emphasis on the local that permeates food sovereignty. Over the three months it has taken to build, it has been constructed entirely by hand using local materials and local, traditional methods. The straw, the bricks, the bamboo are all from Sélingué. When the food is prepared in the following days, it is prepared exclusively from locally grown produce by a local women’s cooperative (GMO-free, we are enthusiastically reminded). The meat is slaughtered daily on a bed of leaves only a few metres from where we eat. No companies are contracted in the construction or running of the site; rather, local people are employed. “As we build this place, we also build the future,” announces one of the coordinators. And like the site, food sovereignty is a movement under construction.

Beyond food security

As he rushes around the site advising on the progress of the work, I ask Paul Nicholson, from La Via Campesina and the Basque

Farmers Union to define 'food sovereignty':

"Food sovereignty is the right of peoples to determine what they eat, who produces it, and how it's produced," he tells me.

"And it is a very important right now, because we are losing that right. We don't know what we are eating. We don't know who produces our food and how it's produced.

"Food is the major problem in the world: there are 800 million people who go hungry every day, and the tendency is to increase this number, not decrease it. Today, for the first time in history, it is also basically the rural people, peasants, who go hungry."

The main threat to food sovereignty, says Nicholson, is "the whole free trade logic". This, he says, destroys local economies, cultures and knowledge of sustainable land use to expand industrialise, multinational agribusiness. He offers Mali as an example:

"Mali is basically an agricultural country. Historically it is self-sufficient. Today they've had to open up the markets ... When the milk industry was privatised, suddenly the import of European milk was far cheaper than milk production in Mali. Now, the Malian industry only buys milk from Europe. It has destroyed the whole fabric of milk production.

"Rice is a staple food here. Mali is self-sufficient in food production, yet rice coming from Asia or from the United States has invaded the local market, making it impossible for local rice

production [to compete]."

As concepts like 'food security' have been co-opted by institutions like the World Trade Organisation into forms that support free trade and corporate globalism and ignore the social and environmental impacts of such a system, it has become necessary to develop alternative principles. In response, in 1996 La Via Campesina articulated the concept of 'food sovereignty'. This concept not only ensures communities have access to adequate food, but also emphasises self-determination, environmentally sustainable food cultivation and trade that guarantees community well-being over corporate profit.

Packed agendas

The forum's days are full, beginning when the sun begins to warm the inside of the huts. There are queues of people lining up beside the taps outside, washing their faces and cleaning their teeth. After a breakfast of millet fritters, mangoes and goat stew, the day's activities begin. There are layers of complexity: regional discussions deal with logistics; sectorial discussions representing peasants and farmers, fisherfolk, pastoralists, indigenous peoples, workers, migrants, urban movements and consumers ensure each sector's interests are represented; interest groups ensure that the voices of women, youth and the environment are heard; and combined thematic working groups draw together these perspectives to discuss

food sovereignty in the context of everything from trade policy to conflict and disaster to forced migration to the preservation of traditional knowledge.

There's a lull in the heat of the afternoon and delegates drift from dusty shadow to dusty shadow, returning to their huts for sweaty siestas. By 4.00pm, the silence is broken again by conversation and the trademark chants of different regions.

"Down! Down! WTO!" explodes from a regional meeting of East and Southeast Asians. La Via Campesina's chant, "Globalise struggle!" "Globalise hope!" is called and answered, first in Spanish, then English, then French.

Night is filled with music. Drums are beaten in trenches dug for mud bricks and here and there, transistor radios wheeze out Malian classics through the kazoo of their tiny speakers.

Throughout the five days of the forum, amid celebrations, plates of millet and peanut sauce and performances from the stars of West African music, discussions further defined the concept of food sovereignty and how it can be strengthened locally, regionally and globally. The final day was dedicated to working with politicians from across the world to integrate food sovereignty into government policy.

A starting point for broader change

A journalist tells me how the World Forum for Food Sovereignty has very consciously

tried to build on the lessons of the World Social Forum, while establishing itself as a major movement in its own right. This is evident in the careful selection of participants, ensuring the involvement of those whose daily lives are part of the struggle for food sovereignty. Farmers, peasants, fisherfolk, indigenous peoples and rural workers make up the overwhelming majority of delegates. Latin America, Africa, South Asia and Southeast and East Asia were the regions best represented. There were a handful of Europeans and North Americans, more from Central Asia and the Middle East and as the only person from Oceania, I was temporarily adopted by Southeast Asia.

I quickly realise that food sovereignty is not just about food. Rather it acknowledges food as the common ground for all peoples and identifies it as a starting point and guiding theme for broader change. Food sovereignty suggests that it is impossible to explore how food is produced, traded and consumed without questioning the whole fabric of global economics and society. This includes everything from resource-intensive industrial production of crops and livestock, to the emergence of technologies like genetic modification and nanotechnology, to the patenting of traditional knowledge, and the increasing corporate control of food production and trade.

The contexts of the struggle for food sovereignty vary across the world. In many cases, like for Paul Nicholson's Basque



The tight grid structure of urban food gardens in Bamako, Mali. Photo: Joel Catchlove

companions, or the peasants and indigenous peoples of Southeast Asia, Korea and Japan, or traditional farmers throughout Latin America and Africa, it is a struggle to protect and maintain resilient local economies in the face of corporate incursions, Free Trade Agreements and food aid programs that do not support local markets. In North America and Europe, the focus is not only on protecting the remaining small, traditional food producers but also on rebuilding links between consumers and producers.

For countries like Australia, where corporate food production and retail already has a strong foothold, part of the challenge is to cultivate and rebuild local economies and to support environmentally sound agricultural production.

Australia has already established free trade agreements with the US, Thailand, Singapore and New Zealand and is determined to develop further agreements throughout the region with China, Japan and Korea and others. It is urgent for Australians to also understand the impacts of these agreements and to work to support farmers, peasants and food producers throughout the region to defend their local

economies and cultures.

Beneath all of this, I realise, food sovereignty is intrinsically about connection to land and connection to place. Food sovereignty places those from food production traditions that have been maintained within the boundaries of specific environments over time at the centre of its discussions and action.

By acknowledging the wisdom of those who have been feeding their communities for centuries, the peasants, indigenous peoples, fisherfolk and others, it recognises that those who still maintain living traditions of closeness to the earth are best placed to make decisions and advise on how land should be used and how food can continue to be cultivated, traded and consumed in their communities and beyond.

More information:

* Nyéléni 2007 – World Forum for Food Sovereignty: <www.nyeleni2007.org>

* Real World Radio: <www.realworldradio.fm>

* Friends of the Earth, Real Food Campaign, <www.foe.org.au/campaigns/sustainable-food>

Joel Catchlove is a member of Friends of the Earth, Adelaide and a member of the Chain Reaction editorial team.

Declaration of Nyéléni

World Forum for Food Sovereignty
Sélingué, Mali, 2007



The entrance to the Nyéléni village showing the circles of huts. Photo: Joel Catchlove

We, more than 500 representatives from more than 80 countries, of organisations of peasants and family farmers, artisanal fisherfolk, indigenous peoples, landless peoples, rural workers, migrants, pastoralists, forest communities, women, youth, consumers and environmental and urban movements have gathered together in the village of Nyéléni in Sélingué, Mali to strengthen a global movement for food sovereignty.

We are doing this, brick by brick as we live here in huts constructed by hand in the local tradition and eat food that is produced and prepared by the Sélingué community. We give our collective endeavour the name "Nyéléni" as a tribute to and inspiration from a legendary Malian peasant woman who farmed and fed her peoples well.

Most of us are food producers and are ready, able and willing to feed the world's peoples. Our heritage as food producers is critical to the future of humanity. This is especially so in the case of women and indigenous peoples who are historical creators of knowledge about food and agriculture. But this heritage and our capacities to produce healthy, good and abundant food are being threatened and undermined by neo-liberalism and global capitalism. Food sovereignty gives us the hope and power to preserve, recover and build on our food producing knowledge and capacity.

Food sovereignty is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It puts the aspirations and needs of those who produce, distribute and consume food at the heart of food systems and policies rather than the demands

of markets and corporations. It defends the interests and inclusion of the next generation. It offers a strategy to resist and dismantle the current corporate trade and food regime, and offers directions for food, farming, pastoral and fisheries systems determined by local producers and users.

Food sovereignty prioritises local and national economies and markets and empowers peasant and family farmer-driven agriculture, artisanal fishing, pastoralist-led grazing, and food production, distribution and consumption based on environmental, social and economic sustainability.

Food sovereignty promotes transparent trade that guarantees just incomes to all peoples as well as the rights of consumers to control their food and nutrition. It ensures that the rights to use and manage lands, territories, waters, seeds, livestock and biodiversity are in the hands of those of us who produce food.

Food sovereignty implies new social relations free of oppression and inequality between men and women, peoples, racial groups, social and economic classes and generations.

In Nyéléni, through numerous debates and interactions, we are deepening our collective understanding of food sovereignty and learning about the realities of the struggles of our respective movements to retain autonomy and regain our powers. We now understand better the tools we need to build our movement and advance our collective vision.

The full text of the Declaration is posted at:
<www.nyeleni2007.org/spip.php?article290>

Nanotechnology in agriculture and food production – which food future?

BY GEORGIA MILLER

Nanotechnology has entered the global food chain. From atomic-level seed manipulation to using nano-processing to reduce the fat content of mayonnaise or to make milk taste like cola, nanotechnology has a broad range of applications in agriculture, food processing, food packaging and even farm and food surveillance.

Nanotechnology, the 'science of the small', represents the latest and in many ways the most far-reaching high-technology assault on real food and agriculture. Nanotechnology is the atomically processed antithesis to locally controlled, ecologically sustainable, food systems. It extends genetic engineering, enabling scientists to manipulate the DNA of living things. It further transforms the farm into an automated extension of the high technology factory production line, using patented products that will inevitably concentrate corporate control. It also introduces serious new risks for human health and the environment.

There has been extremely little public debate about nanotechnology's use in food and agriculture. There are no new laws to protect human health and the environment from its risks. There are also no requirements for product manufacturers to label nano-ingredients to enable us to make an informed choice about eating nano-foods.

Yet food products and agricultural inputs that contain manufactured nanomaterials have been released commercially and nanotechnology is being used widely in food

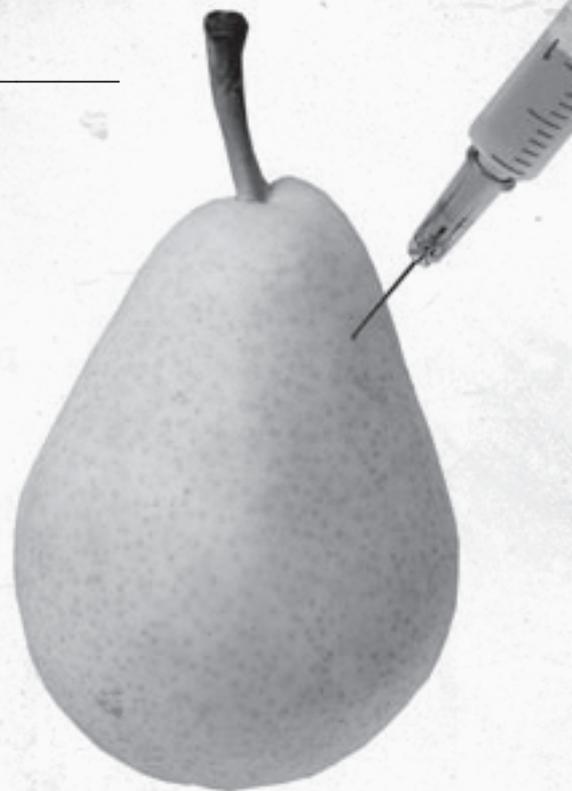
packaging applications. The Helmut Kaiser Consultancy Group, a pro-nanotechnology analyst, suggests that there are now over 300 unlabelled nano food products available on the market worldwide. It predicts that nanotechnology will be used in 40% of the food industries by 2015.

Introduction to nanotechnology in food production and processing

Nanotechnology does not describe a singular technology, but rather an extremely small scale at which a range of technologies operate – the "nanoscale". This is the level of atoms and molecules – the building blocks of the natural and manufactured worlds. The nanoscale is understood to be under 100 nanometres (nm) in size. To put 100nm in context: a strand of DNA is 2.5nm wide, a protein molecule is 5nm, a red blood cell 7,000 nm and a human hair is 80,000 nm wide. Nanotechnology involves the manipulation of structures, devices, systems and biological materials at this nanoscale.

Nanotechnology embodies the dream that scientists can remake the world from the atom up, using atomic level manipulation to transform and construct a wide range of materials, devices, living organisms and technological systems.

There are four key focus areas for nanotechnology food research: nano-modification of seeds, fertilisers and pesticides; food 'fortification' and



nano-reconstitution; food packaging and tracking; and interactive 'smart' food.

Nano-modification of seeds, fertilisers and pesticides

Proponents say that nanotechnology will be used to further automate the modern agribusiness unit. All farm inputs – seeds, fertilisers, pesticides and labour – will become increasingly technologically modified.

As new nanoproducts will inevitably be controlled by patents, many of which are held in the Global North, this will present a new assault on the ability of Southern farmers to control local food production.

Nanotechnology will take the genetic engineering of agriculture

to the next level down – atomic engineering. Nanobiotechnology will enable scientists to rearrange plants' DNA to obtain different properties including colour, growth season, yield etc.

Nano-reformulation will produce highly potent atomically engineered fertilisers and pesticides. Several are already on the market, including products manufactured by Bayer and Syngenta.

Nano-sensors will ultimately enable plant growth, pH levels, the presence of nutrients, moisture, pests or disease to be monitored from far away, significantly reducing the need for on-farm labour inputs. The ETC Group warns in its seminal report 'Down on the Farm' (<www.etcgroup.org>) that in a nanotechnology shaped future, "the farm will be a wide area biofactory that can be monitored and managed from a laptop and food will be crafted from designer substances delivering nutrients efficiently to the body".

Food 'fortification' and nano-reconstitution

Nanotech companies are working to fortify processed food with nano-encapsulated nutrients, its appearance and taste boosted by nano-developed colours, its fat and sugar content removed by nano-reconstitution, and its 'mouth feel' improved.

Food 'fortification' using nanoscale 'nutraceuticals' will be used to increase the nutritional claims that can be made about a given processed food – for example the inclusion of 'medically beneficial' nano-capsules will soon enable chocolate chip cookies or hot chips to be marketed as health promoting or artery cleansing.

Nanotechnology will also enable junk foods like ice cream and chocolate to be reconstituted at the

atomic scale to reduce the amount of fats and sugar. In this way, the nano industry could market vitamin, protein and fibre-fortified, fat and sugar-removed junk food as health promoting and weight reducing. We could theoretically meet our nutritional needs without changing our reliance on highly processed fast foods, or needing to eat fruit and vegetables.

Manufacturers of only three food products have so far acknowledged nano-content – canola oil, a chocolate meal-replacement diet milkshake and a tea.

Food packaging and tracking

Nanotechnology will dramatically extend food shelf life. Mars Inc. already has a patent on an invisible, edible, nano wrapper which envelopes chocolate bars, biscuits or lollies to prevent gas and moisture exchange.

Nano-composites and nano-coating are already used in packaging to extend the shelf life of crisps, chocolate, beer, soft drinks, meat and more. 'Smart' packaging (containing nano-sensors and anti-microbial activators) is being developed that will be capable of detecting food spoilage and releasing nano-anti-microbes to even further extend food shelf life, enabling manufacturers to transport food longer distances, and supermarkets to keep food for even greater periods before its sale.

Nano-sensors, embedded into food products as tiny chips invisible to the human eye, will also act as electronic barcodes. They will emit a signal that will allow food, including fresh food, to be tracked from paddock to factory to supermarket and beyond.

Interactive 'smart' food

Companies such as Kraft and Nestlé are designing 'smart' foods that will interact with consumers to 'personalise' food, changing colour,

flavour or nutrients on demand. Kraft is developing a clear tasteless drink that contains hundreds of flavours in latent nano-capsules.

A domestic microwave could be used to trigger release of the colour, flavour, concentration and texture of the individual's choice.

'Smart' foods could also sense when an individual was allergic to a food's ingredients, and block the offending ingredient. Or alternatively, 'smart' packaging could release a dose of additional nutrients to those which it identifies as having special dietary needs, for example calcium molecules to people suffering from osteoporosis.

Key concerns about nanotechnology in food and agriculture

Nanotechnology takes us further away from 'real food'. Its use in agriculture is based on the premise that we can improve efficiency and productivity by rearranging atoms in seeds, by developing even more potent chemical inputs, by using high technology surveillance to allow electronic, rather than person-based surveillance of on-farm conditions, and by further automating inputs to plant growth.

Applications of nanotechnology to food processing assume that humans can 'improve' the taste, texture, appearance, nutritional content and longevity of food by manipulating it at the atomic level. It has even been argued that this will result in food that is 'safer'.

These assumptions are based on a flawed belief that humans can remake the natural world from the atom up – and get a better result. Unfortunately, history tells us that we are often unable to predict the consequences of our actions, especially when we are dealing with complex systems.

There are serious concerns about

the consequences of releasing organisms modified using nanobiotechnology into natural systems. There is also a growing body of toxicological literature demonstrating that nanoparticles are more reactive, more mobile, and more likely than larger particles to be toxic to humans and the environment.

Test tube studies have shown that some nanomaterials are toxic to human tissues, cells and DNA. Other studies have shown that some nanomaterials can kill beneficial soil bacteria and aquatic invertebrates, stunt plant root growth and cause brain damage in fish. Although not all nanomaterials will prove toxic to humans or the environment, there is a clear need for caution.

In its 2004 report, the United Kingdom's Royal Society recognised the serious risks of nanotoxicity and recommended that "ingredients in the form of nanoparticles should undergo a full safety assessment by the relevant scientific advisory body before they are permitted for use in products".

Despite this warning, three years after the Royal Society's report, there are still no national laws governing the use of nanomaterials in products anywhere in the world, to ensure that they do not cause harm to the public using them, the workers producing them, or the environmental systems in which waste nanoproducts are released.

The potential for nanotechnology to further erode food sovereignty is also of serious concern. There are some nanotechnology proponents who argue that nanotechnology will be a boon for farmers in the Global South, boosting productivity and eliminating hunger. However those familiar with the genetic engineering debacle see parallels in the claims made by that industry and those now made by the emerging nano-food lobby.

Dr Donald Bruce, a chemist who heads a group examining technology and ethics for the Church of Scotland, is doubtful about industry claims that nano-agriculture will help the Global South. Bruce told the United Kingdom's *Guardian* newspaper that he sat on a committee 10 years ago which examined the moral implications of the introduction of genetic engineering: "The public were told that genetic modification was going to feed the world. And so we looked for evidence of any application of that science that had addressed the needs of a poor subsistence farmer. We couldn't find any. The industry went for agronomic benefits, not for people benefits."

This scepticism is shared by others. The ETC Group observes: "Despite rosy predictions that nanotech will provide a technical fix for hunger, disease and environmental security in the South, the extraordinary pace of nanotech patenting suggests that developing nations will participate via royalty payments. ... In a world dominated by proprietary science, it is the patent owners and those who can pay license fees who will determine access and price."

Vandana Shiva has argued that synthesising nanotechnology alternatives to food will "accelerate existing trends of patent monopolies over life – making a few corporations 'life-lords'."

Fearing that the expansion of nanotechnology into agriculture will further erode the ability of peasant, fishing and farming communities to retain local control and ownership of food production, the 2007 Nyéléni World Forum for Food Sovereignty resolved to work towards an immediate moratorium on nanotechnology.

The unwillingness of food companies to talk about their use of

nanotechnology in food production and their plans for its future use is a huge blow to transparency. Without any requirement for manufacturers to label nano-foods, or any willingness on the part of companies to do so voluntarily, there is no way for people to choose whether or not to eat nano-foods. This breach of public trust is compounded by government's failure to regulate nano-food products to ensure that workers, the public and the environment do not face unsafe exposure to nanomaterials.

Real food vs nano food

The use of nanotechnology in agriculture, food production and food processing present people everywhere with a stark choice between a future where food and food production in all its forms is atomically manipulated, industrialized and controlled by patents, and a future where we maintain and renew an integrated, healthy and respectful relationship with locally controlled farming and food production practices.

If you are interested in receiving more information about how nanotechnology is changing our food, or in getting involved with the Nanotechnology Project's work, check our website <nano.foe.org.au> or please get in touch.

Georgia Miller is a campaigner with FoE Australia's Nanotechnology Project. <georgia.miller@foe.org.au>

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Famous Moments in FoE History:

FoE Exposes Uranium Cartel in 1976

BY WIESLAW LICHACZ

Uranium has shot up in price from around US\$14 per pound in the mid-1990s to the current, meteoric price of US\$120 per pound, purportedly on the coat-tails of global concerns about global warming. This inflation of the price of uranium is not a new phenomenon. A huge jump occurred in the mid-1970s, thanks to a cartel known as the Uranium Club. The cartel was exposed by super sleuths from Friends of the Earth (FoE). It was disbanded and out of court settlements resulted in the payment of about \$800 million in penalties.

FoE had grappled with the Ranger Uranium Environmental Inquiry since September 1975 in a David and Goliath battle against highly-paid lawyers, company officials, senior government department representatives and corporate public relations consultants.

At the time, Chain Reaction carried generic appeals from FoE's 'Leak Bureau' asking corporate or governmental whistle-blowers to provide information. In the dying days of the Ranger Inquiry we received a phone call from someone who had just flown from Melbourne to Sydney. We were asked to come to a secret location in a terrace house near the Oxford Street Police Station to see some important 'luggage' that he bought from Melbourne. We were told not to tell anyone where we were going.



When we got there, we were confronted with a large box full of original files and documents leaked to FoE from the offices of Mary Kathleen Uranium Mining Pty Ltd.

The leaked company files had evidence of:

- * shoddy environmental practices;
- * close surveillance of environmental organisations;
- * the close relationship between the most senior ranking Australian trade union official, ACTU President Bob Hawke, and the chairman of Conzinc Riotinto Australia (CRA), Sir Roderick Carnegie; and
- * the complicity of Australian government officials in providing advice to mining companies on how to avoid important nuclear non-proliferation safeguards treaties to sell uranium to places like Taiwan (which was not a signatory to the Nuclear Non-Proliferation Treaty) via "Toll Processing" in the US.

The Uranium Club

Another issue the files revealed concerned a uranium producers' group called the "Uranium Club". It consisted of the key Australian and other non-US uranium producers. The Club appeared to have been established with the primary aim of artificially increasing the price of uranium from about US\$7 per pound to a lofty US\$45-\$50 per

pound from 1972 to 1974 in order to squeeze nuclear power producers and US uranium suppliers.

John Proud of Peko-Wallsend (one of the original Joint Venturers of the Ranger Uranium Mining Company Pty Ltd with the federal government before the government sold its share) was coordinator of the Club at the March 1976 meeting of companies and government bureaucrats. The notes of that meeting finish with the instruction: "Mr Proud stressed the need for extreme secrecy".

FoE planned to simultaneously release these documents around the world. We knew that we would need multiple copies. The NSW Environment Centre in Broadway, Sydney, had three photocopiers and we were going like gangbusters. We burnt out one older copier with a puff of smoke! But we kept going with the remaining machines as the bright orange sunrise burnt through the narrow windows over the top of our lone desk in the far corner of the Environment Centre.

The original documents now had to be re-stapled back into their original state to submit to the Ranger Inquiry as primary evidentiary material.

The first set of copies, wrapped up in brown paper as personal luggage, were immediately taken to the

airport, to be hand-delivered to the Californian Energy Commission in San Francisco. The Commission was primed to pass on the documents to the US Justice Department and the US media.

Back-up copies were placed in a locker at Central Railway Station across the road from the Ranger Inquiry, with the key given to one of our office workers with whistle-blowing instructions if something went wrong with our plans. The other set was on the back of a pushbike peddled by an intrepid FoE activist, always on the move – a veritable moving target for the authorities!

We took a big box of the original documents to the Ranger Inquiry. But we had to get through the filter of the Inquiry Counsel Assisting, John Cummins QC. During the gruelling two years or so of the Inquiry from September 1975 to 1977, Counsel Assisting the Inquiry went out of its way to preclude evidence as ‘inadmissible’ by environmentalists around Australia.

We were in the corridor of the Old Gaslight Building waiting for Counsel Assisting to consider the documents behind closed doors. The wall clock in the Old Gaslight building was permanently stuck on 3:33 for the duration of the Inquiry – for a moment our time had stopped too! Our lawyers became very worried with the time Counsel Assisting was taking and had visions of NSW Special Branch and ASIO marching down the corridors with handcuffs jingling and no escape for us. We would be thrown into Katingal maximum security prison, the keys thrown away and we would never see the sun ever again!

I hammered on the Counsel Assisting’s door, pushing it open with my shoulder to see what he was doing. Inside some of the documents were spread over his

desk. He was on the phone and looked very embarrassed and hung up quickly. He told us in no uncertain terms that to admit these documents now would mean re-opening the Inquiry for another nine months and re-calling witnesses. He would not allow that as the government had given the order for the Inquiry to wind up. No more extensions of time, he insisted.

Counsel Assisting the Inquiry rejected our case to admit the documents as exhibits during the final submission hearings. It is quite likely that the Commissioners and their advisers may have never seen this critical primary evidentiary material.

This is only the beginning of a much bigger story that ran on for many years right into the mid-1980s and beyond. Many of the details are covered in books (listed below) written by former Australian Trade Practices Commissioner George Venturini.

Cartel shut down by FoE

The cartel story was published in *The National Times* in its August 16-21, 1976 edition, causing serious embarrassment to the government and the uranium cartel members that included RTZ, RioAlgom, Conzinc Riotinto Australia, Mary Kathleen Uranium Mining (the only company producing uranium in Australia at the time), Electrolytic Zinc, Peko-Wallsend, Pancontinental, Noranda Uranium Mining and Queensland Mines.

On August 30, once the Californian Energy Commission released the documents in San Francisco, the story broke internationally, and it was splashed across the front pages of major financial papers and dailies around the world over the next few days.

The scheduled Uranium Club meetings in New York were

immediately cancelled. The US Justice Department had issued subpoenas for the company executives who were named in the documents and other members of the cartel to appear before a Grand Jury any time they set foot in US. Future meetings scheduled for Paris were also cancelled and the Uranium Club was disbanded shortly after.

A person purporting to represent Westinghouse tried unsuccessfully to bribe FoE to get their hands on the documents, stating that “price was no object” and that through Westinghouse’s contacts in the Marcos regime, a Philippino environmentalist on death row would be recommended for a pardon by President Marcos.

Through our carefully laid out plan, many of the documents were ultimately placed on the US Congressional record for all to see despite the Australian Inquiry Counsel refusing to admit them.

Litigation by Westinghouse and General Electric against the members of the cartel picked up momentum in the US courts and eventually flowed into Australian courts. The conservative Fraser government passed legislation in November 1976 – the Foreign Proceedings (Prohibition of Certain Evidence) Act 1976 – to prevent FoE or anyone else from providing any further documentary evidence against the uranium mining companies from Australia. The Act was described in a Chain Reaction editorial as “one of the most corrupt pieces of legislation to go on to the Australian statutes”.

Westinghouse finally settled out of court with the uranium cartel participants for damages in excess of US\$800 million to make up for its losses due to the artificially inflated price of uranium supplied over four years and some punitive damages for breaching the US Sherman Anti Trust Act.

The Australian Democrats congratulate Friends of the Earth and their insightful magazine Chain Reaction on making it to 100 editions. For over 30 years Chain Reaction has provided a depth of analysis second to none on issues important to all of us. We appreciate their diligence and hope to continue to work with Friends of the Earth into the future.

Senator Lyn Allison
Federal Leader, Australian Democrats

Happy 100th, Chain Reaction. And a huge thanks to the dedicated team who've worked tirelessly to educate, activate and organise Australian civil society over the years. Chain Reaction plays such an important role in shaping the agenda on emerging social and environmental justice issues - an independent and strident voice on issues that may otherwise receive inadequate attention.

James Whelan
Amnesty International

The more things change ...

The Ranger Inquiry concluded that the nuclear power industry is unintentionally leading to an increased risk of nuclear war. The Inquiry recommended caution and consultation, but its findings were misrepresented by the government as a green light for uranium mining. John Howard was promoted to Minister for Special Trade Negotiations and was responsible for using uranium trades as a lever to gain better access to the European markets.

Things have not changed now that Howard is Prime Minister with his push to promote uranium mining and to expand Australia's involvement in the nuclear fuel cycle – increasing the risk of nuclear proliferation in the process.

We may well be seeing the beginning of a re-run of cartel activity with the current price of uranium running up to US\$120 per pound. The current price spike may one day be the subject of a similar leak by a disgruntled or astute worker as happened in the mid-1970s.

Wieslaw Lichacz was a foundation member of FoE in NSW and continued with activist work that included Ambassador of the Atom Free Embassy for 18 months outside Lucas Heights. He represented FoE at the Ranger Inquiry for two years. He is now working on international climate change issues.

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100 EDITIONS OF CHAIN REACTION



The Friends of the Earth magazine Chain Reaction (CR) began as the 'Greenpeace Pacific Bulletin' in 1974 as a combined effort of the developing FoE groups and Greenpeace who were collectively opposing nuclear tests in the Pacific. It changed its name to Chain Reaction in 1975.

Peter Hayes, Barbara Hutton and Neil Barrett were among the founding editors. In its early editions, CR often had an emphasis on practical issues such as how to build a wind generator. This was seen as one part of a politics of democratising technology and society – "technology for the people by the people".

From the start there was also a strong culture of activism and protest. The September 1975 edition of CR reported on FoE Melbourne's much-publicised "lavatory sit-in" to protest against Concorde aircraft, complaining about "super-expenditure for a super-luxury". The British Aircraft Corporation maintained a "bemused upper lip" but the

Australian transport minister threatened to sue FoE for \$1 million over the pamphlet, 'British Airways is Taking Australia for a Ride'.

The same year, hundreds of people took part in a bicycle ride against uranium from Melbourne, Sydney and Adelaide to Canberra, where Bill Liechacz from FoE NSW burnt the coffin of the 'ALP Science' with a flame kindled by his solar cooker.

After a few editions of CR, it was decided to expand its anti-nuclear focus in order to become a national 'activist-orientated' environmental journal. But nuclear issues were hugely contentious at the time. Peter Hayes reported in 1977 that almost all FoE groups in Australia were working on nuclear and whaling issues, among others, and that FoE was dealing with a "vast influx of active and angry people".

A 1977 edition of CR apologises for its lateness which was a result of partially-successful efforts to stop loading uranium at wharves in Melbourne and Sydney. Meanwhile FoE had initiated the Atom Free Embassy at Lucas Heights because the Australian Atomic Energy Commission was storing uranium there.

In 1979, mining magnate Lang Hancock promoted the use of nuclear weapons to blast artificial harbours. Joh Bjelke-Peterson said he could not oppose uranium mining, "firstly because it would not be right and secondly because it would be wrong". He had previously promoted the use of nuclear weapons to halt the progress of the Crown of Thorns Starfish on the Great Barrier Reef. CR reported: "Fortunately, the starfish seemed to have slackened off of their own accord – possibly tipped off by somebody!"

In the early 1980s, Mark Carter, co-founder of the Food Justice Centre, and Leigh Holloway oversaw production of CR, which carried a lot of big picture strategic debate, with sharp layout and often striking covers. Some of the most inspirational inserts and editions date from that time.

Under the editorship of Mark and Leigh and, slightly later, Linnell Secomb, CR continued its evolution towards an emphasis on social issues. Cover stories included food politics, workers' health, women's employment in the service sector and jobs in Wollongong. Aboriginal land rights and debates over mining on Aboriginal land were recurring themes from the early editions of CR.

In the early 1980s, there were considerable differences of opinion about CR. In 1981, a faction of the editorial collective moved office in the middle of the night to 'save' the magazine from those they regarded as not having the "responsibilities we had to the wider national FoE and environmentalist constituency". The conflict was partly due to the sheer size of the editorial collective: the winter 1981 edition of the magazine credited 45 people as being involved with editorial decisions. Those credited included people who went on to become Senators, local councillors, authors, an adviser to Paul Keating and the first energy minister in the Bracks Government in Victoria.

After Mark Carter and Leigh Holloway left, the CR editorial team continued to grow, and contributing to it at this time were some long-term members, including Eileen Goodfield who dedicated more than six years of service and insight to the magazine.

CR's commitment to ensuring equal involvement by women and men in the collective included providing free child care to people working on the magazine. In 1986, Johnathan Goodfield resigned as one of the main editors after four years in the job, and a new collective, which included people who had already been involved in the group for some time, was established. This team included people who then contributed several years of effort to the magazine, including Ian Foletta, Eileen Goodfield, Fran Callaghan, Clare Henderson and Larry O'Loughlin.

Throughout its history, CR has had a reputation for addressing issues before they become the subject of common debate in the environment movement or broader society. One example of this is the debate over the use of the 'wilderness' concept in environmental campaigning; that is, whether wilderness actually exists in Australia given Indigenous management of Australian landscapes for thousands of human generations. Likewise, FoE and CR took up the issue of the impacts of herbicide use in timber plantations at a time when most other green groups were uncritically promoting plantations.

CR also helped raise awareness within the environment movement about counter tactics used by industry, including front organisations, PR, and 'dirty trick' campaigns. Bob Burton contributed much of this ground-breaking work. In earlier years, CR advertisements for FoE's 'Leak Bureau' had some success, the most spectacular being a leak which allowed FoE to expose an international uranium cartel in 1976.

A notable feature of Chain Reaction has the publication of debates on 'internal' matters concerning the environmental movement. In the early 1980s, this included debates over feminism and socialism, and in the late 1980s, there was a brief but intense exchange over NVA or non-violent action. In recent years this has included issues of political positioning within the movement and corporate engagement. This encouragement of debate has not been without controversy: discussion about the role of direct action and tactics by some groups created heated responses in the early '80s, and in 1991 an issue of the magazine on 'corruption in the environment movement' generated a huge amount of angst and anger amongst a number of individuals and environmental groups.

Clare Henderson and Larry O'Loughlin were the longest serving editors and were involved in

producing the magazine from 1986 to 1996. When they moved from Melbourne to Adelaide in early 1989, the existing Melbourne-based collective disbanded. In the following years, Clare and Larry produced CR almost entirely through their own efforts although a number of people did work with them from time to time. Guest editors produced a number of editions, while Clare and Larry did the layout and production, administration and distribution of the magazine.

Their final edition, in the year that the Howard Government was elected, was a scathing analysis of the Coalition's failure on environment policy and the 'clean and green' image it was trying to cultivate. Its strong position on the partial sale of Telstra and images by left wing cartoonist, Heinrich Hinze, were a breath of fresh air compared to the timid green movement response to the new government.

The magazine had a brief period of non-production from 1996 until 1998, but apart from this period, it has been produced consistently for 33 years, almost entirely through volunteer labour. It was resurrected by Anna Burlow, Kulja Coulston, Tristy Fairfield and Barbara Kerr in 1998 with the first edition, appropriately titled 'Back from the Wilderness', taking an anti-nuclear and international focus.

This is an edited version of a section of the 2004 FoE Australia book, '30 years of creative resistance'.



I first began reading Chain Reaction in 1976. It was the cutting edge of the environmental movement, presenting radical analyses and constantly making the link to action. A magazine like this is precious. To survive for so long is an amazing achievement. My congratulations especially to the editors over the years, whose efforts are vital to the magazine and the movement.

Professor Brian Martin
School of Social Sciences, Media and Communication
University of Wollongong





The Base-load Electricity Fallacy

BY MARK DIESENDORF

Opponents of renewable energy, from the coal and nuclear industries and their political supporters, are disseminating the fallacy that renewable energy cannot provide base-load power to substitute for coal-fired electricity.

If this fallacy comes to be widely believed, renewable energy would always remain a niche market rather than achieving its true potential of becoming a set of mainstream energy supply technologies.

Electricity grids are already designed to handle variability in both demand and supply. To do this, they have different types of power station – base-load, intermediate-load and peak-load – and reserve power stations.

A base-load power station is in theory available 24 hours a day, seven days a week, and operates

most of the time at full power. In mainland Australia, base-load power stations are mostly coal-fired while a few are gas-fired. Coal-fired power stations are by far the most polluting of all power stations, both in terms of greenhouse gas emissions and local air pollution. Overseas, some base-load power stations are nuclear powered.

An electricity supply system cannot be built out of base-load power stations alone. These stations take all day to start up from cold and in general their output cannot be changed up or down quickly enough to handle the peaks and other variations in demand. They also break down from time to time.

A faster, cheaper, more flexible type of power station is used to complement base-load, handle the peaks and handle unpredictable

fluctuations in supply and demand on timescales ranging from a few minutes to an hour or so. These peak-load stations are designed to be run for short periods of time each day. They can be started rapidly from cold and their output can be changed rapidly. Some peak-load stations are gas turbines (like jet engines) fuelled by natural gas. Hydro-electricity with dams is also used to provide peak-load power.

Some renewable electricity sources have identical variability to coal-fired power stations and so they are base-load. They can be integrated into the electricity supply system without any additional back-up. Examples include the following:

* bioenergy, based on the combustion of crops and crop residues, or their gasification followed by combustion of the gas;

* hot rock geothermal power, which is being developed in South Australia and Queensland;

* solar thermal electricity, with overnight heat storage in water or rocks or a thermochemical store; and

* large-scale, distributed wind power, with a small amount of occasional back-up from peak-load plant.

Moreover, energy efficiency and conservation measures can reliably reduce demand for both base-load and peak-load electricity.

The inclusion of large-scale wind power in the above list may be a surprise to some people, because wind power is often described as an 'intermittent' source, that is, one that switches on and off frequently. While a single wind turbine is certainly intermittent, a system of several geographically separated wind farms is not. Total wind power output of the system generally varies smoothly and rarely falls to zero. Nevertheless, it may require some additional back-up, for example, from gas turbines.

When wind power supplies up to 20% of electricity generation, the additional costs of reserve plant are relatively small. For widely dispersed wind farms, the back-up capacity only has to be one-fifth to one-third of the wind capacity. Since it has low capital cost and is operated infrequently, it plays the role of reliability insurance with a low premium.

Of course, if a national electricity grid is connected by transmission line to another country (for example,

as Western Denmark is connected to Norway), it does not need to install any back-up for wind, because it purchases supplementary power from its neighbours when required.

By 2040, renewable energy could supply over half of Australia's electricity, reducing greenhouse emissions from electricity generation by nearly 80 per cent. In the longer term, when solar electricity is less expensive, there is no technical reason to stop renewable energy from supplying 100 per cent of grid electricity. The system could be just as reliable as the dirty, fossil-fuelled system that it replaces.

The barriers to a sustainable energy future are neither technological nor economic, but rather are the immense political power of the big greenhouse gas polluting industries – coal, aluminium, iron and steel, cement, motor vehicles and part of the oil industry.

A longer, referenced version of this paper is posted at <www.energyscience.org.au>. Dr. Mark Diesendorf is a Senior Lecturer in Environmental Studies at University of New South Wales. His latest book, 'Greenhouse Solutions with Sustainable Energy', is published by UNSW Press.

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Earth Sanctuaries and the Failure of Market-based Conservation

BY JASMIN SYDEE & SHARON BEDER

Earth Sanctuaries Limited (ESL), a business publicly listed on the Australian Stock Exchange from 2000-2005, was the darling of economic rationalists and their conservative think tanks. It was frequently cited by free-market champions in their arguments for private conservation and market-based solutions to environmental problems.

ESL attempted to prove the superiority of private conservation efforts over government efforts, and the compatibility of the profit motive with environmental protection. It advocated the use of private property as a way to achieve conservation objectives. Its program involved acquiring land, feral proofing it, and then reintroducing native and especially endangered species. The vision of the company was to establish privately-owned sanctuaries representing examples of each of Australia's key ecosystem types and in doing so protect and rehabilitate all 100 endangered mammal species of Australia.

ESL's first sanctuary, Warrawong, was opened to the public in 1985. Several other sanctuaries followed in the 1990s across New South Wales, South Australia and Victoria.

Friends of the Earth has been a powerful movement for an environmentally sustainable and socially just world for over 30 years. Sincere congratulations on reaching 100 editions of Chain Reaction.

Dr Mark Diesendorf
Senior Lecturer, University of NSW.
Author of Greenhouse Solutions
with Sustainable Energy

It made money from a variety of sources including ecotourism (admission fees, guided tours etc); food and beverage sales; overnight accommodation; gift shop sales; native plant nursery sales; weddings and functions; conferences; education programs; as well as filming and photography.

Other activities included consulting services (such as fence building, feral eradication, native animal treatment, woodlot development, as well as conceptual planning and feasibility studies for other organisations); contract services in building; contract management, e.g. to government National Parks; captive animal sales (not endangered species); wildlife sales (reintroduction back to the wild); as well as donations.

ESL was recognised with many awards and honours. It was awarded runner-up for Ecotourism in the 1997 Condes Nast Travelers Choice Awards (USA), and was in the top 50 (the only Australian destination) for the Travel Holiday Insider Award for 'Best Kept International Secret' in the same year. In 1998 it was labelled Australia's most ethical investment by *Choice Magazine*. In 2001 its company structure was presented

to an OECD/World Bank workshop 'as the international model for biodiversity conservation in the private sector'.

Corporate managerialism

The private market strategies engaged by ESL clearly fit within an ecological modernist discourse where environmentalism is viewed as a form of managerialism that privileges experts and business interests in environmental decision making. In this view the environment has to be managed rather than conserved or saved. Management is best undertaken by corporate managers who supposedly have the knowledge and resources to provide a stewardship role on behalf of corporate stakeholders.

Such an approach assumes that all that is required to protect the environment is good management by private owners. The strategies of ESL explicitly and implicitly deflected attention away from the deeper structural issues about the relationships between social systems, economics, culture and ecology that other conservationists, academics, and activists have been attempting to bring to conservation politics. ESL maintained instead that not only is capitalism an environmentally sustainable system, but that it in fact offers the key to preserving biodiversity.

ESL claimed to have facilitated the

removal of six species of mammal from the endangered species list by enabling these species to thrive in the feral-free environments of its sanctuaries. But is a piece of 'feral free Australia' all that wildlife need for their protection and conservation? And what about biodiversity in general?

By focusing entirely on their successes with mammal rehabilitation through feral eradication, ESL sidelined structural and political factors that also contribute to the destruction of wildlife and ecosystems. Feral animals certainly pose an immediate threat to native animals but ferals cannot and should not be seen as the only broad danger facing native animals and ecosystems.

For example, in Australia there are constant conflicts over the conservation value of forests. These include the East Gippsland forests of Victoria and the Tasmanian old growth forests. Marsupials such as quolls, koalas and possums are arguably placed under threat by so-called 'sustainable' forestry, as are the unique forest ecosystems themselves. Forestry, mining, farming, fisheries and coastal development are all examples of economic activities that are destroying wildlife and damaging ecosystems, particularly where vegetation is removed or toxins are introduced.

By privileging 'cute and cuddly' mammal species as the object of

Photo: Natalie Lowrey



conservation, ESL avoided the problems associated with determining the conservation status of less media-friendly species, such as plants, amphibians or insects, for example. The conservation status of these species is often determined in the context of the development imperatives that are weighted against them, and public apathy.

Although the private ownership of native flora and fauna may or may not be ethically problematic in and of itself, there are important equity questions that arise from private ownership of endangered species or remnant ecosystems. If endangered species or remnant ecosystems are held in private hands, there is the possibility of effective private control over some species once considered to be a nation's common heritage. A program of private conservation, as opposed to government conservation, could see open communal access to wilderness areas dwindle with entry prices to private conservation sanctuaries subject to market forces.

By bringing conservation into the private sphere of property rights and purchasing power, conservation is removed by degrees from the public realm of political debate. By placing endangered species on the stock exchange, ESL is rendering the value of nature as comparable with other commodities with dollar values, and inadvertently curtailing the way people express their ethical and political concerns into an expression of the amount of money they are willing to spend on shares or a holiday outing.

Commercial imperatives

A major problem with market-based solutions is that commercial imperatives take precedence over environmental ones leading to compromises that impact on the areas being protected. When the company was publicly listed on the Australian Stock Exchange in 2000 it was a momentous occasion for ESL as it represented a test of the organisation's philosophy: that the free-market held a place for conservation as business.

However ESL's need to maintain share value and commercial viability subsequently forced it to sell off many of its protected areas, clearly demonstrating

the way environmental priorities can be compromised by the vagaries of the market and the needs of private concerns to earn an income.

Ten parks were sold and ESL underwent a dramatic corporate restructuring to cut overhead costs and become more financially viable. Fortunately for the wildlife living within the sanctuaries, at least some of ESL's assets were sold to fellow conservationists. The Australian Wildlife Conservancy bought four of the ESL sanctuaries. ESL stated that it placed a great deal of importance and responsibility on finding appropriate buyers for their sanctuaries. But there is no guarantee within the model of market-based conservation to ensure that this will always be the case.

Environmental protection is supposed to be protection in perpetuity and the need to sell off sanctuaries at the first sign of financial crisis is clear evidence of the failure of ESL to combine business with conservation. If sanctuaries can be sold, their future is tenuous and the market cannot guarantee protection. Endangered animals and ecosystem remnants are too precious to be left to the prerogatives of the market.

In the market, a decline in company financial value appears to indicate a decline in the importance of conserving species such as bilbies, numbats, and woylies. For example, although the company continued to be rich in assets (i.e. its mammal populations were increasing) it was relatively cash poor, providing little to return to shareholders. That is, whilst the overall value of the company kept increasing, the actual cash inflow to the Sanctuaries from tourists didn't match the huge daily upkeep expenses of running the Sanctuaries, and consequently the sanctuaries were running at a loss. As a result the company became a financial risk to its shareholders and its share value plummeted. Without the ability to pay their shareholders dividends on the asset value of the properties the company was forced to liquidate its assets (that is, sell off its sanctuaries).

In an admission of failure in their 2003 Annual Report, Kevin Lynch, Chairman of the Board for ESL stated that: "If the Australian public is not prepared to visit

our properties in sufficient numbers to make the sanctuaries commercially viable, the whole future of the company as a listed sanctuary developer, in its present form, will need to be reviewed and changed."

In the end, ESL's market-based conservation model failed the test of long-term sustainability. In 2006, ESL's remaining assets were taken over by Prudentia Investments, a Melbourne-based property development group.

A longer, referenced version of this article appeared in *Capitalism Nature Socialism* in March 2006. It can be downloaded at <<http://homepage.mac.com/herinst/sbeder/home.html>>. A fuller analysis of market-based environmental instruments can be found in Sharon Beder's book 'Environmental Principles and Policies' (UNSW Press, 2006).

Like to comment on this article? Write a letter to Chain Reaction <chainreaction@foe.org.au>

Congratulations to Friends of the Earth on its 100th issue of Chain Reaction, the best magazine for thoughtful environmental activists in Australia.

**Sharon Beder
Academic and author
of *Global Spin: The
Corporate Assault on
Environmentalism*.**

Climate Change Policy Agenda

Twenty of Australia's environment groups have produced a climate change policy agenda. Here is a shortened version of the statement

This briefing outlines a suite of policies developed by Australia's environment groups to avoid dangerous climate change. The key to achieving this will be for Australia to legislate a national greenhouse gas reduction target of at least 30% below 1990 levels by 2020, and to set a long term reduction target of at least 80% by 2050.



1. Reduce greenhouse gas emissions

Legislate a national greenhouse gas reduction target of at least 30% below 1990 levels by 2020. Set a long term reduction target of at least 80% by 2050.

2. Show international leadership and join the Kyoto Protocol

Until Australia ratifies Kyoto, we cannot expect less-developed countries to join the global effort. The Kyoto Protocol is the primary international response to climate change and was designed to bring all countries on board with specific obligations to reduce greenhouse gases.

3. Make polluters pay

The Stern Review found the social cost of greenhouse gas emissions was in the order of AU\$110 per tonne. Introducing a price on greenhouse pollution will drive investment and employment in low carbon industries. A price on greenhouse pollution could be implemented through a carbon tax and/or an emissions trading scheme. Either way, the price must be accompanied by a legislated cap on emissions of at least 30% by 2020.

4. Become energy smart

Stabilise total energy consumption by 2010 and achieve 1.5% annual reductions to 2020 through world's best energy efficiency standards for appliances, buildings, vehicles and industrial equipment.

5. Invest in a clean, renewable energy future

Legislate a renewable energy target of 25% by 2020. Currently only 8% of Australia's electricity is generated from renewable sources.

Failure to increase the national Mandatory Renewable Energy Target (MRET) will halt new investment in clean, renewable energy because in 2007 it will be fully subscribed.

There are a number of simple mechanisms available to achieve a clean, renewable energy target of 25% by 2020: raise the current MRET program target; use market mechanisms such as a solar feed-in tariff; implement a million solar roofs program to kickstart national rollout.

6. Switch from dirty, greenhouse polluting technologies

No more coal fired power stations, move away from greenhouse polluting subsidies and technologies, ensure greater scrutiny

and regulation of coal exports and commit to legislate a stringent greenhouse gas trigger in the Environmental Protection and Biodiversity Conservation Act.

7. Reject dangerous, costly nuclear power

Rule out dirty nuclear power, phase out uranium mining and exports, prohibit any expansion of the dangerous nuclear industry in Australia, shelve the proposed NT waste dump.

8. Tackle emissions from logging and landclearing

End broad-scale land clearing and rapidly transition from most native forest logging to combat greenhouse emissions.

9. Reduce greenhouse emissions in the transport sector and promote cleaner cars.

Remove subsidies that encourage private car use and significantly increase investment in public transport infrastructure.

10. Help native vegetation and wildlife survive and thrive

Rapidly develop and support national measures to create connected and protected ecosystem networks to maximise the survival of native wildlife and vegetation threatened by climate change.

The full statement is posted at:

[<www.foe.org.au/campaigns/climate-justice>](http://www.foe.org.au/campaigns/climate-justice)

The groups which produced the policy agenda are: Aidwatch, ACF, Australian Marine Conservation Society, Cairns and Far North Environment Centre, Climate Action Network Australia, Conservation Council of SA, Conservation Council of WA, Conservation Council of the South East Region and Canberra, Environment Centre of the NT, Environment Tasmania, Environs Kimberley, Mineral Policy Institute, Victorian National Parks Association, Greenpeace, FoE, National Toxics Network, Queensland Conservation Council, Nature Conservation Council of NSW, Wilderness Society, Total Environment Centre.

Obscenity of carbon trading

BY KEVIN SMITH

In 1992, an infamous leaked memo from Lawrence Summers, who was at the time Chief Economist of the World Bank, stated that "the economic logic behind dumping a load of toxic waste in the lowest wage country is impeccable, and we should face up to that".

The recently released Stern Review on climate change, written by a man who occupied the same position at the World Bank from 2000 to 2003, applies a similar sort of free market environmentalism to climate change.

Sir Nicholas Stern argues that the cost-effectiveness of making emissions reductions is the most important factor, advocating mechanisms such as carbon pricing and carbon trading.

While dumping toxic waste in the global South might look like a great idea from the perspective of the market, it ignores the glaringly obvious fact of it being hugely unfair on those getting dumped upon.

In a similar way, Stern's cost-benefit analysis reduces important debates about the complex issue of climate

change down to a discussion about numbers and graphs that ignores unquantifiable variables such as human lives lost, species extinction and widespread social upheaval.

Junk economics

Cost-benefit analysis can be a useful tool for making choices in relatively simple situations when there are a limited number of straight-forward options to choose from.

But as Tom Burke, visiting professor at Imperial College London, has observed: "The reality is that applying cost-benefit analysis to questions such as [climate change] is junk economics. ... It is a vanity of economists to believe that all choices can be boiled down to calculations of monetary value."

Some commentators have applauded the Stern Review for speaking in the economics language that politicians and the business community can understand. But by

framing the issue purely in terms of pricing, trade and economic growth, we are reducing the scope of the response to climate change to market-based solutions.

These “solutions” take two common forms. Under emissions trading, governments allocate permits to big industrial polluters so they can trade “rights to pollute” amongst themselves as the need arises. Another approach involves the generation of surplus carbon credits from projects that claim to reduce or avoid emissions in other locations, usually in Southern countries; these credits may be purchased to top up any shortfall in emissions reduction.

Such schemes allow us to sidestep the most fundamentally effective response to climate change that we can take, which is to leave fossil fuels in the ground. This is by no means an easy proposition for our heavily fossil fuel dependent society; however, we all know it is precisely what is needed.

What incentive is there to start making these costly, long-term changes when you can simply purchase cheaper, short-term carbon credits?

Forcing the market

In the current neo-liberal economic environment, trading rules inevitably succumb to the pressures of corporate lobbying and deregulation in order to ensure that governments do not “interfere” with the smooth running of the market.

We have already seen this corrosive influence in the European Union’s Emissions Trading Scheme (ETS), when under corporate pressure, governments massively over-allocated emissions permits to the heaviest polluting industries in the initial round.

This caused the price of carbon to drop by more than 60%, creating even more disincentive for industries to lower their emissions at source.

There are all manner of loopholes and incentives for industry to exaggerate their emissions in order to receive more permits and thereby take even less action.

Market analyst Franck Schuttellar estimated that in the scheme’s first year, the UK’s most polluting industries earned collectively 940 million pounds in windfall profits from generous ETS allocations.

Given all we know about the link between pollution and climate change, such a massive public concession to dirty industries borders on the obscene.

We are being asked to believe that the flexibility and efficiency of the market will ensure that carbon is reduced as quickly and as effectively as possible, when experience has shown that lack of firm regulation tends to create environmental problems rather than solve them.

Community interest

There is a groundswell of opinion that the “invisible hand” of the market is not the most effective way of facing the climate challenge.

The Durban Declaration of Climate Justice, signed by civil society organisations from all over the world, asserts that making carbon a commodity represents a large-scale privatisation of the Earth’s carbon cycling capacity, with the atmospheric pie having been carved-up and handed over to the biggest polluters.

Effective action on climate change involves demanding, adopting and supporting policies that reduce emissions at source as opposed to offsetting or trading.

Carbon trading is not an effective response; emissions have to be reduced across the board without elaborate get-out clauses for the biggest polluters.

There is an urgent need for stricter regulation, oversight, and penalties for polluters on community, local, national and international levels, as well as support for communities adversely impacted by climate change. But currently such policies are nigh-on invisible, as they contradict the sacred cows of economic growth and the free market.

There is, unfortunately, no “win-win solution” when it comes to tackling climate change and maintaining an economic growth based on the ever increasing extraction and consumption of fossil fuels.

Market-based mechanisms such as carbon trading are an elaborate shell-game of global creative accountancy that distracts us from the fact that there is no viable “business as usual” scenario.

Climate policy needs to be made of sterner stuff.

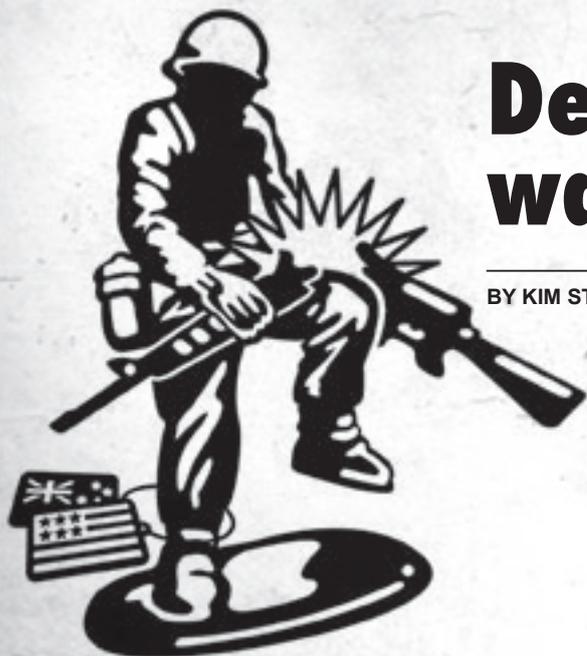
This article originally appeared on the BBC Science and Nature website. Kevin Smith is a researcher with Carbon Trade Watch, a project of the Transnational Institute.

More information:

* Kevin Smith, “The Carbon Neutral Myth - Offset Indulgences for your Climate Sins”, <www.carbontradewatch.org> or direct download: <www.carbontradewatch.org/pubs/carbon_neutral_myth.pdf>.

* Larry Lohmann (ed.), “Carbon Trading - A Critical Conversation on Climate Change, Privatisation and Power”, <www.thecornerhouse.org.uk/summary.shtml?x=544225>.

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Defence greenwash on war games a toxic lie

BY KIM STEWART



Brisbane Peace Parade 2007. Photo by Ted Reithmuller

In 2005 the Australian Defence Force (ADF) commissioned an environmental report into the effects of the Talisman Saber 2007 military training exercises on the Shoalwater Bay Training Area just north of Yeppoon in Queensland.

While the Maunsell Public Environment Report gave the military the greenwash it was looking for, it overlooked issues of the known toxicity of military chemicals and important social justice issues.

The military would have us believe that practicing for war can be environmentally friendly, that thousands of troops, hundreds of tanks and vehicles, nuclear-powered warships, weapons testing, land and sea bombing and live firing can leave nothing but footprints and tank tracks.

However, military training exercises use the same toxic tools as real war. Toxic chemical pollution, unexploded shells, active sonar, heavy vehicles and ships, the everyday maintenance of equipment - added to the 30,000 United States and Australian troops participating in Talisman Saber - all have effects on the environment and the communities they interact with.

What's at risk?

The Shoalwater Bay Training Area is a 454,500 hectare area with 300 kilometres of coastline. The Training Area is used by various military groups for about 300 days of the year as well as for major events such as Talisman Saber.

The Training Area is listed under the Ramsar, Jamba and Camba treaties to protect birds and wetlands. It is part of the Great Barrier Reef Marine Park and adjacent to the Byfield National Park.

The Training Area is important to many endangered

species and habitats. The Public Environment Report lists 38 endangered and vulnerable species in Shoalwater Bay alone, and over 100 endangered and vulnerable species in the combined training areas proposed for use in Talisman Saber.

Although the Public Environment Report says that no nuclear, chemical, biological or radiological munitions will be used during Talisman Saber, in reality all military vehicles and munitions use toxic chemicals and heavy metals with the potential to harm the environment. The toxicity of chemicals used in munitions was never considered in any part of the Public Environment Report.

The commitment of the US and Australian forces to "protect the environment, conserve biodiversity, and protect and preserve heritage ... for future generations", as stated in Final Public Environment Report, is hollow given their environmental track records.

Environmental track record of the armed forces

The United States Department of Defence has been described as the world's biggest industrial polluter. Project Censored estimates that the US military generates 750,000 tons of toxic waste material annually, more than the five largest chemical companies in the US combined.

The US Department of Defence (US DoD) has exemptions from many environmental laws in the US including the Migratory Bird Treaties Act, the Wildlife Act, the Endangered Species Act, the Clean Air Act and the National Environmental Policy Act. Hardly the actions of a good environmental steward. The US Navy is currently being sued by environmental groups for its



Shoe installation at the main gates



Brisbane Peace Parade 2007. Photo by Ted Reithmuller

use of active sonar, know to cause whale beachings and condemned by the International Whaling Commission.

The US DoD still uses weapons that are widely banned including depleted uranium and cluster bombs, and has the second biggest nuclear arsenal in the world. While the ADF no longer uses depleted uranium, it plans to buy cluster bombs in the near future.

The ADF often boasts of its environmental record, but it has a long history of polluting the environment, including its role in the testing of nuclear weapons in the 1950s and '60s, and sea dumping of chemical warfare agents (such as mustard gas) as well as decommissioned boats, other chemicals and ammunition.

Social justice and war games

Social risks posed by military presence include increased crimes, rapes and violence.

Some off-duty US servicemen engage in drug dealing,

prostitution, sexual assault, rape and murder. They often get off without prosecution. During the 2005 Talisman Saber games, US personnel were arrested for drug offences. In 2005 there were 2,374 reported sexual assaults in the US involving military personnel.

Sexual assault is a problem wherever troops are posted. There have been over 500 reports of sexual assault amongst troops in Iraq since 2002, the true figure probably much higher. Drink spiking and sexual harassment are also a problem within the ADF.

Anecdotal evidence indicates that the rates of sexual harassment and assault of civilian women increases in Rockhampton during war games, although there are no statistics and it is recognised that many women do not report sexual assault to police. As far as we know, no action to combat sexual harassment of the locals has been considered by the ADF or the US DoD.

The land on which the Shoalwater Bay Training Area is sited in the traditional land of the Durrumbal people. Traditional landowners are beholden to the military for access to their own land and are therefore not at liberty to speak their minds on this issue.

In April 2007, Maunsell released their revised Public Environment Report. It did not consider many of the social justice issues mentioned here.

After receiving hundreds of submissions from concerned citizens, Maunsell concluded that the general public had to "take the time to understand the commitments Defence is making to ensure environmental sustainability".

We understand them very well as an elaborate and superficial greenwashing exercise that fails to take into consideration the serious environmental and social effects of war games.

The ADF sees Shoalwater as "Australia's single most important area for the conduct of amphibious and combined arms exercises" and has no interest in addressing the impacts of military operations there.

Kim Stewart is a member of Friends of the Earth, Brisbane and helped organise the Peace Convergence which took place in June at Shoalwater Bay. <kim.stewart@brisbane.foe.org.au>

More information:

* Peace Convergence <www.peaceconvergence.com>

* ADF-commissioned Public Environment Report <www.defence.gov.au/exercises/ts07>.

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Indigenous owners reject nuclear waste dump

BY NATALIE WASLEY

The federal government is determined to build a Commonwealth nuclear waste dump in the Northern Territory despite promising not to do so and despite opposition from Indigenous custodians.

From the “absolute categorical assurance” that the NT would not be saddled with a nuclear dump, the federal government announced in July 2005 that three Department of Defence sites in the NT – Mt Everard, Harts Range and Fisher’s Ridge – would be assessed for suitability.

Julie Bishop, federal science minister, rationalised the decision by claiming that all three sites are “some distance from any form of civilisation”. There are in fact people living and running successful pastoral and tourist enterprises three, five and 18 kilometres from these sites, who believe it is very uncivilised to dump nuclear waste on their land without their consent.

Traditional owners from Muckaty gathered to sign a letter opposing threats to dump nuclear waste on their land without appropriate consultation Source: www.no-waste.org

‘We don’t want this poison here’

The first defence site is Athenge Lhere (Mt Everard), 40 kilometres north-west of Alice Springs. The Werre Therre community lives three kilometres away. According to traditional owner Steven McCormack: “This land is not empty – people live right nearby. We hunt and collect bush tucker here and I am the custodian of a sacred site within the boundaries of the defence land. We don’t want this poison here.”

The second site, Alcoota (Harts Range), is 160 kilometres north-east of Alice Springs on the Plenty Highway. The Engawala community and Aboriginal-owned Alcoota cattle station are 18 kilometres north of the Harts Range defence site.

Mitch from the Engawala community says: “We stand strong in our own culture as Indigenous people, and want the land and water to be protected for all children, black and white. If this nuclear waste is so safe, why



On a speaking tour to protest against plans for a nuclear waste dump in the Northern Territory are Donna Jackson, Stephen Atkinson, Priscilla Williams, Mitch, Dianne Stokes and Audrey McCormack.
Photo: Penny Stephens

can't they keep it at the Lucas Heights nuclear plant in Sydney where it is produced and where the nuclear experts work?"

The third site is at Fisher's Ridge, 40 kilometres south of Katherine. Valerie and Barry Utley run a 230-square kilometre pastoral station, Yeltu Park, which surrounds the proposed site. Their home is around four kilometres from the site.

According to Valerie: "We know the area, and we see what happens after the wet season. All of a sudden there will be a sink hole where the limestone caves in. When somebody goes in there to examine the area, they'll realise that the place has limestone, not too far under the top soil, and regularly caves in to sink holes. There are springs in the area, and also flooding, and [putting the dump there] would be one of the biggest mistakes they could make."

Muckaty

The Commonwealth Radioactive Waste Management Act 2005, which overrides NT laws opposing nuclear waste transport and storage, also allows the NT government or Land Councils to nominate sites other than Commonwealth defence land for assessment.

The NT government remains opposed to the national dump plan, but after a year of meetings between federal government officials, the Northern Land Council (NLC) and some traditional owners, the full council of the NLC agreed in May to nominate Muckaty, Warlmanpa land, 120 kilometres north of Tennant Creek, as an additional site for assessment.

If Bishop accepts the Muckaty nomination, a short scientific study will be carried out, and the preferred site of the four will undergo an Environmental Impact Assessment.

The traditional owners of Muckaty Land Trust, 120 kilometres north of Tennant Creek, have been offered \$12 million to nominate and surrender their land.

This offer has been accepted by a small number of the traditional owners, but many others have been speaking out against the plan over the past year, including travelling to the Alliance Against Uranium meeting near Alice Springs last year, to Darwin, and, on the Indigenous Speaking Tour in June, to Adelaide, Melbourne, Canberra and Sydney.

Despite letters to Bishop and the NLC requesting that negotiations about the dump at Muckaty cease, the NLC has continued to provide what the government calls "positive and constructive assistance" to convince a community to nominate their land for the nuclear waste dump.

Muckaty traditional owner Dianne Stokes is strongly opposed: "Top to bottom, we got bush tucker right through the country. Whoever is taking this waste dump into our country needs to talk to the traditional owners. We're not happy to have all of this stuff. We don't want it, it's not our spirit. Our spirit is our country, our country is where our ancestors been born. Before towns, before hospitals, before cities. We want our country to be safe."

The NLC supported Bishop's amendments to the Commonwealth Radioactive Waste Management Act, which restricts public input into the dump site selection. The changes to the law mean that a land council can nominate a site even if it has not demonstrated that: it has consulted with the traditional owners; the nomination was understood by the traditional owners; the traditional owners have consented as a group; and any community that may be affected has been consulted and had adequate opportunity to express its views.

The undemocratic changes also removed the right of any group – traditional owners, pastoralists or community members – to appeal site nomination on the grounds of "procedural fairness".

The amendments were designed to induce communities to offer their land by indemnifying land trusts from any damage arising from a dump. It remains unclear as to who would be liable for damage.

Lucas Heights reactor waste

The waste generated at the Lucas Heights nuclear reactor in NSW must be properly stored and managed. It is far better to keep it where it can be easily accessed and monitored by people trained in handling radioactive materials.

ANSTO, which runs the reactor, the nuclear regulatory body ARPANSA, the Australian Nuclear Association



When Federal Science Minister Julie Bishop announced plans to dump nuclear waste on Aboriginal Land at Muckaty Station, her electorate office received a visit from FANG (The Freemantle Anti-Nuclear Group).
Source: www.no-waste.org

and the federal Department of Education, Science and Training have all conceded that there is adequate room, and capability, to continue storing waste at Lucas Heights for at least the next 40 years.

However, it seems the federal government is keen to move the radioactive waste to an area with fewer voters. Dumping current stockpiles "in the middle of nowhere" helps the government justify the controversial commissioning of the new nuclear research reactor at Lucas Heights.

Radioactive waste is the final stage of the deadly nuclear fuel chain: it is a product of all the dodgy deals and damage that has been done along the way. Dumping this waste on Indigenous and remote communities is not responsible management: it is radioactive racism.

Radioactive waste management is a huge problem for Australia. The Howard government's short-term, irresponsible and stop-gap plans will unnecessarily damage communities, country and culture.

A strong alliance and support network has developed between the targeted communities and throughout the NT. But your help is needed to take this story to your families, friends and networks. You can support the targeted communities by informing and activating your local, state and federal representatives, and getting active in anti-nuclear campaign groups.

Community opposition prevented a waste dump from being built in South Australia and, with your help, we can stop the government's shameless promotion of an expanded nuclear industry, and its attempt to poison the heartland.

To support the campaign, contact Natalie Wasley at the Arid Lands Environment Centre in Alice Springs: <natwasley@alec.org.au>, ph (08) 8952 2011.

More information: <www.no-waste.org>.

Like to comment on this article? Write a letter to Chain Reaction <chainreaction@foe.org.au>

Chain Reaction has aged well, it gets better looking, and what's on the inside still really matters.

Felicity Hill
Nuclear disarmament campaigner

Congratulations Chain Reaction on 100 issues and remaining a truly independent and grass roots voice for environmental justice. It is an inspiration and testament to the hard work, dedication and tenacity of FoE Australia.

Binnie O'Dwyer
Indigenous Justice Advocacy Network, NSW

One hundred times telling the stories as they really are, without the gloss and spin. A reality check such as provided by Chain Reaction over the years has been an invaluable source of news the mainstream media don't want citizens to know. Thanks to Chain Reaction crew over the years for steadfast diligence. Congratulations, and may there be 100 more illuminating editions.

Jo Vallentine
People for Nuclear Disarmament, Perth.



Marcina Coleman Richards, Simon Prideaux and Sue Coleman Haseldine. Credit: Cat Beaton

Munda Yumadoo Iliga – Leave the Land As It Is



BY BREONY CARBINES & SIMON PRIDEAUX

South Australia is about to face a massive expansion of the mining industry. Financially and politically supported by the SA Labor government, mining companies are searching the state for copper, gold, uranium and mineral sands.

In the far west region of SA in the land of the Kokatha Mula Nation Far West Division, 16 companies have exploration leases over the culturally and ecologically significant areas of Yellabinna Regional Reserve and the Yumberra and Pureba Conservation Parks.

It is an area of four million hectares containing rolling sand dunes, clay pans, granite outcrops and water rock holes, and it is the largest stretch of intact stunted mallee forest in the world. The area holds law and culture for Kokatha Mula people and they do not want it disturbed.

Companies involved in exploration include Red Metal, Adelaide Resources and Iluka Resources. Iluka, the most active of all the companies, mines, markets and exports titanium and zircon. Uses of titanium include makeup, sunscreen, paint and electronic components, while zircon is used in porcelain and to line nuclear power plants.

In 2002, Labor's election policy included a promise to ban mining in the Yumberra Conservation Park "if the current exploration lease proves fruitless and expires". The lease over Yumberra did expire in February 2003 but the SA Labor government broke its promise by granting further licenses.

In October 2005, Premier Mike Rann announced 500,000 hectares of Yellabinna, as a wilderness area protected from mining and exploration. Although this was a welcome development, the government consistently fails to understand that the entire area deserves protection.

The Kokatha Mula continue to live their culture, express their grave concerns about mining, take measures to protect their heritage and share with those willing to learn the significance of this unique stretch of country.

"This is the last inland area where I can teach our children - this is our school ... the land houses our bush medicine - our pharmacy. Hunting for our meat, gathering our food - our grocery stores, our garden. Our spiritual beliefs are within and throughout the land

– this is our church,” says Sue Coleman Haseldine from the Kokatha Mula Nation.

To raise awareness and share culture, Kokatha Mula host rockhole cleaning trips every six months. The last three trips consisting of 20-30 people have made progress in returning significant water rockholes back to good health. The trips are an opportunity to visit a pristine ecosystem and make a practical contribution to land conservation with the direction of committed traditional owners.

Acting as an ecological link between the northern Mulga woodlands and the southern Mallee dune system, the area holds significant biodiversity. It is valuable habitat for endangered, rare and threatened flora and fauna including the Mallee Fowl, the Kularr, the Hairy Footed Dunnart, the Scarlet Chested Parrot, the Pimpin Mallee, Sandalwood Tree, and the Long-scaped Isotome. It is probably home to a community of the highly endangered Miniature Marsupial Mole.

As the area becomes riddled with exploration, the status of these species becomes increasingly precarious. Hunting grounds are also at risk. Areas once rich in wombats and bush turkey have been rapidly altered by roadwork, sample drilling and other exploration activities resulting in a noticeable reduction of bush foods.

Mining companies argue that exploration and mining will only have a minimal impact and restoration is possible. However, Kokatha Mula have already witnessed impacts at this early stage. The worry is that further impacts may not only restrict their access to foods, medicine and places of cultural importance but also limit their ability to share their culture and most importantly to educate their children.

Marcina Coleman Richards, a senior Kokatha Mula woman, says: “We want to keep the land and rockholes, the way it is. For the importance of our family and our culture.”

Blockade

In late March, Kokatha Mula and participants in the latest rockhole cleaning trip came across Iluka Resources workers clearing roads for exploration. Work was stopped on this day and a peaceful road block that included the vigil of an 80 year old Kokatha Mula elder was established. Work was stopped for a further 14 days before protestors were evicted by National Parks and Wildlife. The blockade attracted extensive media and garnered awareness and support around the country.

Marcina Coleman Richards and Sue Coleman Haseldine state: “We have been campaigning for protection of this region for many years. Short term profits from mining will never outweigh the natural and

cultural values of this land, and what it means to our people. Our message to the state government and any mining companies ... is ‘Munda Yumadoo Iliga’ which means ‘leave the land as it is’.”

Despite the successes of the campaign so far, the urgency of the situation remains. Exploration activities are still underway. Due to the number of sites and companies involved and the remote nature of the country, political intervention and proper protection is paramount.

The SA government needs to be held accountable for its broken election promises. Yumberarra needs to be reinstated to true conservation status and Yellabinna and Pureba should be granted the same level of protection to disallow all mining exploration.

The rights of the Kokatha Mula need to be recognised.

As Bronwyn Coleman Sleep says:

“We don’t want broken promises, we need action.”

If you would like to support the Kokatha Mula, here are some things you can do:

- * Fill out the form letter on the Kokatha Mula website <kokathamula.auspics.org> or write your own and send it to SA politicians (Premier Mike Rann, Minister for Aboriginal Affairs Jay Weatherill, and Environment Minister Gail Gago).
- * Organise an information-sharing meeting and/or fundraiser event.
- * Order a copy of the slide show and/or documentary.
- * Help with research into the companies and their mining proposals.
- * Purchase Kokatha Mula products or campaign merchandise.
- * Come on a rockhole cleaning trip.
- * Donate phone credit, fuel vouchers, a satellite phone, food supplies, camping gear and office materials.

To donate money:

Bank SA/St Georges Bank
Account Name: Kokatha Mula Nation Far West Division
Aboriginal Corporation
BSB: 105100
Account number: 03249 1240

Post: Far West Division Aboriginal Corporation
PO Box 484, Ceduna, SA, 5690.
kokathamulacamp@gmail.com
Aunty Sue Coleman Haseldine 0428 872 375.

ican – can you?

BY FELICITY HILL

“Governments say its premature to talk about a nuclear weapons convention – don’t believe it – they said the same thing about a landmine treaty.”

-- Jody Williams, Nobel Laureate

The International Campaign to Abolish Nuclear weapons was launched around the world in April 2007 by the International Physician for the Prevention of Nuclear War. The goal? A Nuclear Weapons Convention.

The good news: Unlike the landmines campaign, we already have 125 countries in the UN General Assembly voting explicitly to start getting on with such a convention. The vast majority of governments don't have and don't want nuclear weapons. A Model Nuclear Weapons Convention drafted by a group of legal and technical experts was submitted as an official document by governments at the recent nuclear Non-Proliferation Treaty meeting, and for the first time an NPT meeting outcome document mentioned that "support was voiced for a nuclear weapons convention."

The bad news: On nuclear issues, things have rarely looked bleaker and more discouraging. There is a lot of evidence that nuclear weapons in the hands of some create the desire and justification for proliferation. Now there are nine nuclear weapons possessing states, states possessed by nuclear weapons. The war in Iraq, that started on the pretext of non-existent WMD, rages; there are plans to militarise space; military spending is beyond the absurdity of Cold War levels; treaties are being ignored, evaded and belittled; instead of decisions and action we are getting procedural Olympics or unkept promises and there is resentment and anger brewing at this bad faith and at the normalisation of nuclear weapons in the hands of some.

ICAN is a wake up call from medical professionals around the world. Nuclear abolition – doctors orders!

Recently an important turning point was marked - the 200th anniversary of the end of the trans-Atlantic slave trade. The reason slavery was outlawed is because an abolitionist movement grew, and continued to believe and work even when it appeared there would be no end to the cruel profiteering. This movement was made up of a small number of persistent and increasingly effective people, who were able to arouse the imaginations of larger numbers of people, including influential people, who said No to slavery and Yes to human rights. This anniversary was celebrated because outlawing a

shameful social behaviour and violent political practice is worth celebrating. The people who stood up to the cruel profiteers of slavery had a courage that is inspiring and instructive to us today. We remember their names and stories with gratitude and respect. That abolitionist movement would not accept a little bit of regulated slavery under safeguarded conditions. Those abolitionists kept their "eyes on the prize" and they used the word abolition quite deliberately; no slavery whatsoever would be tolerated, because slavery itself is unacceptable.

The immoral threat of annihilating whole cities, populations, countries or even civilisation with nuclear weapons belongs in the past. In the future, anniversaries that mark the abolition of nuclear weapons will be celebrated, because nuclear weapons are unacceptable to the vast majority of nations and people who recognise that they are the result of shameful social behaviour and violent political practice that humanity will evolve from.

The prize we keep our eyes on is a Nuclear Weapons Convention. It is primarily a treaty – a negotiated agreement or package of linked agreements – but it is also a set of customs or accepted practices, which will reflect norms, or universal principles. The principles are about our survival, now and into the future, and the conditions under which we can best secure it. The practices are about how states and peoples relate to one another internationally, the tools they need to maintain and enhance genuine security.

The treaty will include a mixture of legal, technical and political elements and establish a series of steps to comprehensively prohibit, and systematically eliminate, all nuclear weapons. It will derive from current commitments, legal obligations and security requirements of States, as such providing a practical and realistic path to nuclear weapons abolition.

There is a lot you can do – start by informing yourself on the ICAN website <www.icanw.org> (and check out the short video while you're there), put your name on the petition and sign up for updates.

I can, you can, we can and they can make a nuclear-free world!



<www.scratch.com.au>

Agua Viva! Live Water!



Lead singer Joselo Schuap from the dino. Photo by Sam Cossar-Gilbert

BY SAM COSSAR-GILBERT

A week of activities based around water issues was held in Buenos Aires, Argentina in mid-March leading up to World Water Day on March 22.

Friends of the Earth Argentina and other social and environmental groups organised a range of activities that called for access to clean water for all, water in the hands of the people and against the privatisation and contamination of water.

Water is the most crucial element to human existence yet around 1.1 billion people still do not have access to an adequate supply of drinking water according to UNESCO's 2006 report, 'Water, a shared responsibility'.

Water usage increased six-fold during the 20th century and with a growing global population and global warming it is becoming an even more sought-after and important resource.

People from all over Argentina came to Buenos Aires

to participate in the activities, which included debates, cinema, theatre, music, information sessions, protests and radio.

At the centre of the activities was a group of musicians and artists, who are travelling all over South America in a vintage bus from the 1960s and singing songs to build a movement in defence of water and peoples rights to it.

The bus is called the 'Dino' and is painted all the colors of the rainbow. The Dino is a mobile cultural center with a movie projector, library, art and it is loaded to the brim with musical instruments.

The musicians played a soul-stirring and inspiring type of folkloric music from Misiones, Argentina. Lead singer Joselo Schuap explained: "We cross borders, rivers and mountains, going from town to town with our instruments as our weapons in the fight for mother earth."

Documentaries from a range of independent media groups were shown most nights. Topics included the massive paper factory that is being built in Gualeguaychú, which will use a huge amount of water and contaminate one of Argentina's largest rivers that provides drinking water to millions. Earlier this year over 130,000 people marched in Gualeguaychú against the paper factory.

Indigenous Mapuche speakers provided their important perspective and understanding of water at a conference held during the week. Their message: "We are the earth, water and wind, and that they don't belong to nobody, but to all."

World Water Day saw a lively, musical and fun protest beginning in the outer suburbs of Buenos Aires and marching to the head offices of water management in Argentina. A concert and protest in front of the offices went well into the night, calling for real participatory and democratic control of water.

Yacyreta

On March 14, International Day of Actions Against Dams, people from all over Argentina protested in Buenos Aires against Yacyreta, one of the world's largest dams, situated in north-eastern Argentina.

The story of Yacyreta is one of Argentina's and Paraguay's longest running water conflicts. Construction of the dam began in 1983 but it has still not been completed. It has been an environmental, cultural and social disaster. The project was funded by the World Bank at a time of dictatorship in both countries.

Rising water levels as a result of the dam have caused massive flooding with an estimated 107,600 hectares of land flooded.

It is estimated that 100,000 people are directly affected by Yacyreta – Paraguayans, Argentineans and indigenous peoples. More than 33,000 people have been resettled. The resettlement process has been inadequate with families of fourteen receiving a small two-bedroom house. A 2004 World Bank report found that many of those resettled remained in poverty and had not received any compensation.

Fish numbers have dwindled due to changing water conditions and contamination, related to the water being stagnant for so long and also because fish can not go upstream to reproduce. People who previously lived in harmony with the river can no longer do so because, as one affected fisherman explained to me: "Before the dam we had a life with the river, we had a little land, we had fish. Now my farm is five meters below water! Now we have nothing, there are no fish, there is no work, there is nothing ... nothing!"

Some of the people most severely affected are the indigenous people living in Paraguay. From town to town in the regions affected by Yacyreta the stories are similar, with many not having received a cent of compensation for their losses or still waiting in shanty housing for some sort of proper housing. Many have been waiting for more than 20 years.

Currently, 'The Assembly for Peoples Affected by Yacyreta' are occupying an old train shed in the centre of Buenos Aires, where between 100-300 affected people are living and continuing their struggle for justice.

They are putting pressure on the High Court of Argentina to finally make a decision on their case that could give them millions of dollars of compensation. Many travel more than 30 hours from their homes and families to make their voices heard in the country's capital.

People who have for so many years been horribly affected by the so called "clean energy" of Yacyreta are fighting back. Argentineans, Paraguayans and indigenous people are struggling together.

As one man who has been living there in a train shed for more than two months put it: "we are here fighting not for ourselves, because the dam has already destroyed many of our lives but we are struggling for our children and that this may never happen again, to anyone."



El Dino Photo by Sam Cossar-Gilbert

Sam Cossar-Gilbert is an activist, student and photographer currently travelling around South America and working with different social, politic and environmental groups.

More information:

* Photo exhibitions on Yacyreta:

<picasaweb.google.es/afectadosyacyreta/EnergAYBarabarie>, <ylanaveva.ourproject.org> and <noma.ourproject.org>.

* Friends of the Earth, Argentina <www.amigos.org.ar>.

* Binational Assembly of People Affected by Yacyreta <www.yacyreta.info>.

Australia needs an environment group that is prepared to take risks and say things that might make people uncomfortable. Friends of the Earth is the group that most fits that bill and since 1975 Chain Reaction has been its uncompromising mouthpiece. My heartiest congratulations on the 100th issue of this gutsy, bold and always provocative magazine.

Greg Buckman
Author/researcher,
member of Chain Reaction Advisory Board, Hobart

Tristy Fairfield's article 'How environment groups are financed' (edition #82) is Chain Reaction at its best: clear-minded reflective reporting on how the best intentions can be compromised by the relationships we choose to take on. For Friends of the Earth there are no considerations about keeping quiet so as not to alienate funders - the frequent struggle for funds is the harsh side of keeping it real. Subscribe to Chain Reaction and give to Friends of the Earth and know that your dollars, whether they go toward a campaigner's wage, maintaining the photocopier, or paying for the printing of Chain Reaction, are feeding a movement for cultural and biological diversity both within Australia and internationally.

Anna Demant
Lonely Planet Foundation, and former Chain Reaction editorial team member.

Now more than ever we urgently need action to halt the escalating environmental crisis and Chain Reaction provides the information, analysis and discussion to fuel activists in this campaign. Congratulations to Friends of the Earth for an impressive and important publication!

Kerryn Williams
Green Left Weekly

Free Market Missionaries Suiting Themselves



Sharon Beder, author of 'Global Spin: The Corporate Assault on Environmentalism', summarises her two latest books:

'Free Market Missionaries: The Corporate Manipulation of Community Values', Earthscan, London, 2006, 260pp.

'Suiting Themselves: How Corporations Drive the Global Agenda', Earthscan, London, 2006, 258pp.

In the early 1930s the heads of some of the largest US corporations started meeting regularly for dinner in New York. It was during the Great Depression when public confidence in capitalism was at an all time low and Roosevelt was threatening to regulate corporations and curb their power. The group, calling themselves the 'Brass Hats', oversaw the corporate takeover of the National Manufacturers Association (NAM), and turned it into a propaganda vehicle for big business.

NAM's conversion marked an historical turning point. Until this time, business people had used advertising, public relations and lobbying to sell their products and services, to promote individual companies, industries, or political views such as their preference for private ownership of public services. But they had never teamed up to sell business values as the primary guiding principles for a nation. Now companies that were supposed to be competitors colluded in a united effort to spread the 'free' market message to the public using every available public relations avenue.

This was the first of several mass propaganda campaigns conducted by business associations and coalitions that combined public relations techniques developed in 20th Century America with revitalised free market ideology originating in 18th Century Europe. The aim was to persuade people that it was in

their interests to eschew their own power as workers and citizens, and forego their democratic power to restrain and regulate business activity.

The second major 'free enterprise' campaign occurred in the immediate post war period, key business organisations were concerned about government intervention and controls on the one hand, and union activity on the other — Big Government and Big Labour. What followed was 'the most intensive "sales" campaign in the history of the industry' according to Daniel Bell, then editor of *Fortune* magazine. What was being sold was market dogma, and the full weight of business resources were poured into it.

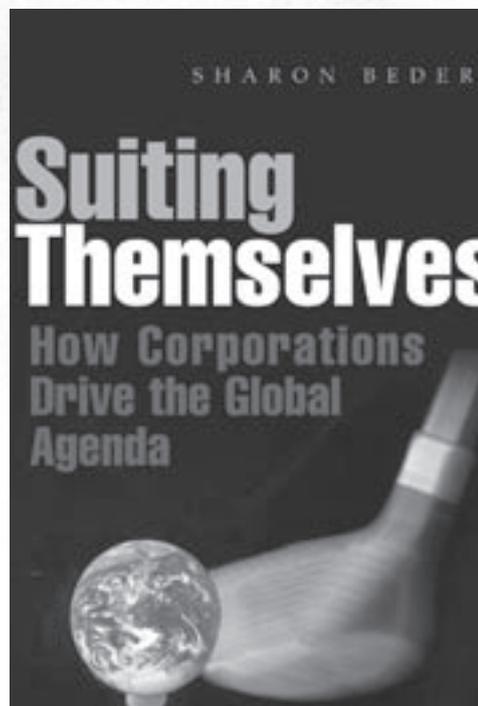
During the early 1970s business was again under attack and public interest groups were challenging the authority of business and seeking government controls over business activities. The first-wave of modern environmentalists were blaming development and the growth of industrial activities for environmental degradation. Their warnings were capturing popular attention, resonating as they did with the experiences of communities facing obvious pollution in their neighbourhoods. Worst of all, from a business point of view, governments were responding with new environmental legislation.

In the US the Advertising Council launched a major campaign in 1976 to promote free enterprise. It was supported by so many major corporations that the Council boasted the list of supporters read like a 'who's who in American business'. The continuous campaign in favour of free enterprise has been described as 'the most elaborate and costly public-relations project in American history.'

In Australia, after the election of a 'progressive' Labor government in 1972, the Australian Chamber of Commerce reacted with a nationwide 'economic education campaign' to promote free enterprise. Enterprise Australia was set up in 1976. It also ran a campaign to sell free enterprise and distributed textbooks, magazines, films and other 'educational' materials in schools, workplaces, clubs and other community forums.

Free Market Missionaries examines these campaigns and the other strategies used by large corporations over the last one hundred years – in the US, the UK and Australia – to persuade people that what is good for business is good for the whole community. Such campaigns have touched every aspect of government policy including environmental policy, which is increasingly market-oriented.

Suited Themselves investigates the growth of corporate power during the same period, detailing the schemes and tactics that corporate interests have used to pressure government, persuade policy makers against the regulation of business, and propel globalisation.



Since the 1970s corporate coalitions have moved from defending their economic freedom from the demands and interventions of labour unions and governments, to being far more aggressive in their goals. They have conspired to increase their power, consolidating their political influence to pressure governments to make decisions in favour of corporate interests.

An inner circle of corporate executives facilitated the formation of many business associations and coalitions that presented a united front for their corporate members and asserted the power of large corporations in political forums. These associations cooperate with each other and 'perform largely complementary tasks.' They not only share members and even leaders, but associations and coalitions often join other associations and coalitions as members, or create new associations and coalitions for specific purposes.

In this way a vast network of business coalitions and groups, supported by an array of well-funded think tanks, front groups and public relations firms, proliferated during the 1980s and 90s. Their purpose is not only to coordinate public relations campaigns as in earlier times but to exert collective pressure on policy makers to ensure that government policies increase the power and autonomy of those corporations. Many of these coalitions are now global in their reach and seek to implement corporate-friendly, open-access policies worldwide through pressure from institutions such as the World Trade Organization (WTO) and the World Bank.

Corporations have been aided in their quest for more power and business opportunities by economic advisers – educated in economic rationalist university

economics departments – and management consultants, who have advised governments and international development agencies on how to implement business-friendly policies.

The revolutionary shift that we are witnessing at the beginning of the 21st Century from democracy to corporate rule is as significant as the shift from monarchy to democracy, which ushered in the modern age of nation states. It represents a wholesale change in cultural values and aspirations. The eclipse of democratic values by corporate values and the growth of corporate power are not a natural evolution but the consequence of a deliberate strategy employed by corporate executives who have combined their financial and political resources to manipulate community values and set global agendas.

For more information on these books and their availability see: <http://homepage.mac.com/herinst/sbeder/home.html>.

Congratulations to FoE on the 100th edition of Chain Reaction. As an active part of the worlds largest environmental federation, FoE is uniquely placed to work for a nuclear free future across Australia and around the globe. FoE cooperates with communities, agencies and groups campaigning against all parts of the international nuclear trade on every continent. In Australia the commitment to “thinking globally, acting locally” means FoE works with affected Aboriginal peoples, workers and the wider community to create the awareness and empowerment needed to motivate effective action for a nuclear free future. ACF has worked closely with FoE to highlight the impacts and risks of nuclear developments and looks forward to more work and success in the future. Well done Amigo’s!

Dave Sweeney
Nuclear-free campaigner,
Australian Conservation Foundation

The Dirty Politics of Climate Change



Clive Hamilton
Scorcher: The Dirty Politics of Climate Change 2007
Black Inc. Agenda, Melbourne
RRP: \$29.95

REVIEWED BY JIM GREEN

Scorcher is an updated, and more accessible, version of Hamilton's equally important 2001 book, *Running from the Storm*. Both expose the corrupt politics of climate change in Australia over the past decade.

Clive Hamilton, executive director of the Australia Institute, provides a blow-by-blow account of the manoeuvrings of the self-described 'greenhouse mafia' of corporate fossil-fuel interests, and their secretive dealings with the federal government.

Outside of the corporate cabal and the inner echelons of the Howard government, Hamilton probably knows more than anyone about climate change politics in Australia and that depth of knowledge makes *Scorcher* a compelling read. (Guy Pearse, a political insider turned whistleblower, has released a book covering similar ground.)

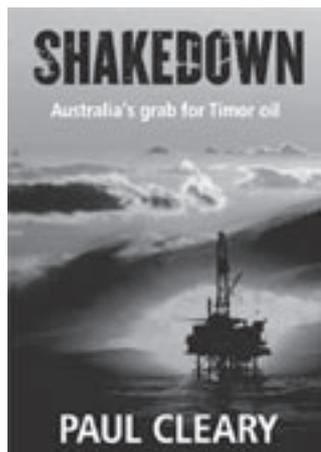
Alongside the political and corporate collusion and corruption, the media plays an important role in climate politics in Australia. Scorcher benefits greatly from Hamilton's analysis of the "studied ignorance" of most of the corporate media.

As if to prove the point, The Australian declined to publish excerpts from Scorcher. Instead, Hamilton wrote in New Matilda on June 15, The Australian used "bullying behaviour" to try to persuade him and his publisher to edit the book to paint the Murdoch press in a better light.

Commenting on The Australian's manoeuvring, Hamilton wrote: "The Australian was always going to lose the climate change debate because, while it dug its heels in to resist the 'green tide,' the science of climate change became stronger and stronger. ... Although it took a long time, Rupert Murdoch could see the writing on the wall – but the gaggle of climate sceptics at The Australian would look like fools if they began too quickly to speak with His Master's Voice. ...

"The Australian has now been mugged by the facts but is not yet ready to admit it. That is why the newspaper – through demands for corrections and threats of legal action – has attempted to silence the criticisms of it made in Scorcher."

An insider's account of the Australia's Timor oil grab



Shakedown: Australia's Grab for Timor Oil
Paul Cleary
June 2007
Allen and Unwin
RRP: \$29.95

Shakedown is an insider's account of how Australia bullied the politically young and economically weak new democracy of East Timor out of billions of dollars – and would have robbed billions more if not for the determination of the Timorese.

Paul Cleary, a former journalist, was appointed by the World Bank as an advisor to the Prime Minister of East Timor on the Timor Sea oil and gas negotiations in 2000.

He took part in East Timor's backroom strategy meetings and was involved in the negotiations as the Australian government tried, with mixed success, to bully and blackmail East Timor.

Greenhouse Solutions with Sustainable Energy

REVIEWED BY PATRICK O'NEILL



Mark Diesendorf
Greenhouse Solutions with Sustainable Energy
May 2007
UNSW Press: Sydney
RRP \$49.95

Mark Diesendorf has written a comprehensive guide to sustainable energy systems. Greenhouse Solutions with Sustainable Energy is simply a joy to read.

Whilst the technical and scientific detail is immense, the language is simple and the book is well laid out. It also engages in related, but oft-ignored areas of the sustainable energy discussion

such as population issues, morality, social justice and equity.

The opening section of *Greenhouse Solutions with Sustainable Energy* outlines succinctly the science of global warming and climate modelling, deals with many myths of the climate change debate, and tables the environmental and economic impacts. There is no "moral case for further delay" in tackling climate change, he states.

Greenhouse Solutions with Sustainable Energy then powers through the world of sustainable energy, and all the significant modes are included. Wind power occupies a significant portion of this work. There is some more myth-busting regarding the ability of wind power to provide baseload electricity, and the oft suggested down-sides are also explored, and in general, busted.

Diesendorf covers extensively the use of biomass as a fuel source. He believes that a well structured biomass energy industry could produce significant amounts of energy with a concomitant reduction in greenhouse emissions. Other benefits include restoration of degraded land and the significant social and economic effects of rural and regional job and industry development.

Solar hot water has a significant, though an often understated role to play in the rapid reduction of greenhouse emissions in the short term. Solar heat and solar electricity, both requiring technological development, will have the greatest impacts when the last of the big emissions cuts are needed.

Diesendorf covers the topic of 'clean' coal (via carbon dioxide capture and sequestration), concluding that while it has future potential roles, the "possibility of geosequestration in the future is being used to divert funding away from cleaner technologies that are more cost-effective now ..."

The chapter on nuclear power concludes that: "The risks of proliferation, terrorism and accidents, taken together with the lack of long-term waste management repositories and the environmental impacts (including CO2 emissions) and high costs of the nuclear fuel chain, characterise a source of electricity that is not, by any reasonable criterion, ecologically sustainable."

Efficiency is a theme turned to many times in this book, and not just in terms of energy supply. Demand-side issues are the simplest and quickest measures at our disposal to reduce greenhouse emissions.

Greenhouse Solutions with Sustainable Energy concludes with an extensive section outlining the relevant policy and governmental aspects of renewable energy, including carbon taxes and emissions trading. The final section involves discussion of the individual and collective ways renewable energy and climate change can be approached.

This book is a wonderfully energising piece of sedition. Diesendorf calls for a "coordinated national strategy for non-violent action". Halt the growth of

energy demand, rethink our economic structure, contraction and convergence – this book is a call for revolution, and not before time. Diesendorf has supplied the science necessary to carry this argument and this movement. It is now for others to come forth, brandishing the book as a manual, to make the change happen.

Like to comment on this article? Write a letter to Chain Reaction <chainreaction@foe.org.au>

Congratulations to Chain Reaction on 33 years and 100 editions of telling it like it is and being at the forefront of reporting on a comprehensive range of environmental issues. Keep it coming!

Beth Schultz
Vice President, Conservation Council of WA

The thing I especially appreciate about Chain Reaction is how it avoids the dualism trap that captures much environmental thinking. The culture of the magazine reflects the interconnectedness of land and people, of problems and solutions, of cities and nature. When we connect ourselves to the problems we subtly shift to become involved in their resolution. Separate and self-righteous, we unwittingly entrench them. Thanks CR, and well done.

Dr Chrissy Sharp
Former Greens MP for the Southwest of WA.

FoE Australia

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BREAK OUT OF THE MOULD

Subscribe now to make sure you receive every issue of Chain Reaction. Chain Reaction receives no financial support relying entirely on subscriptions, FoE Membership and volunteers for its continued existence. All contributions are greatly appreciated by the Chain Reaction editorial team.

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voices for a living planet

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AVAILABLE 8th AUGUST '07

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