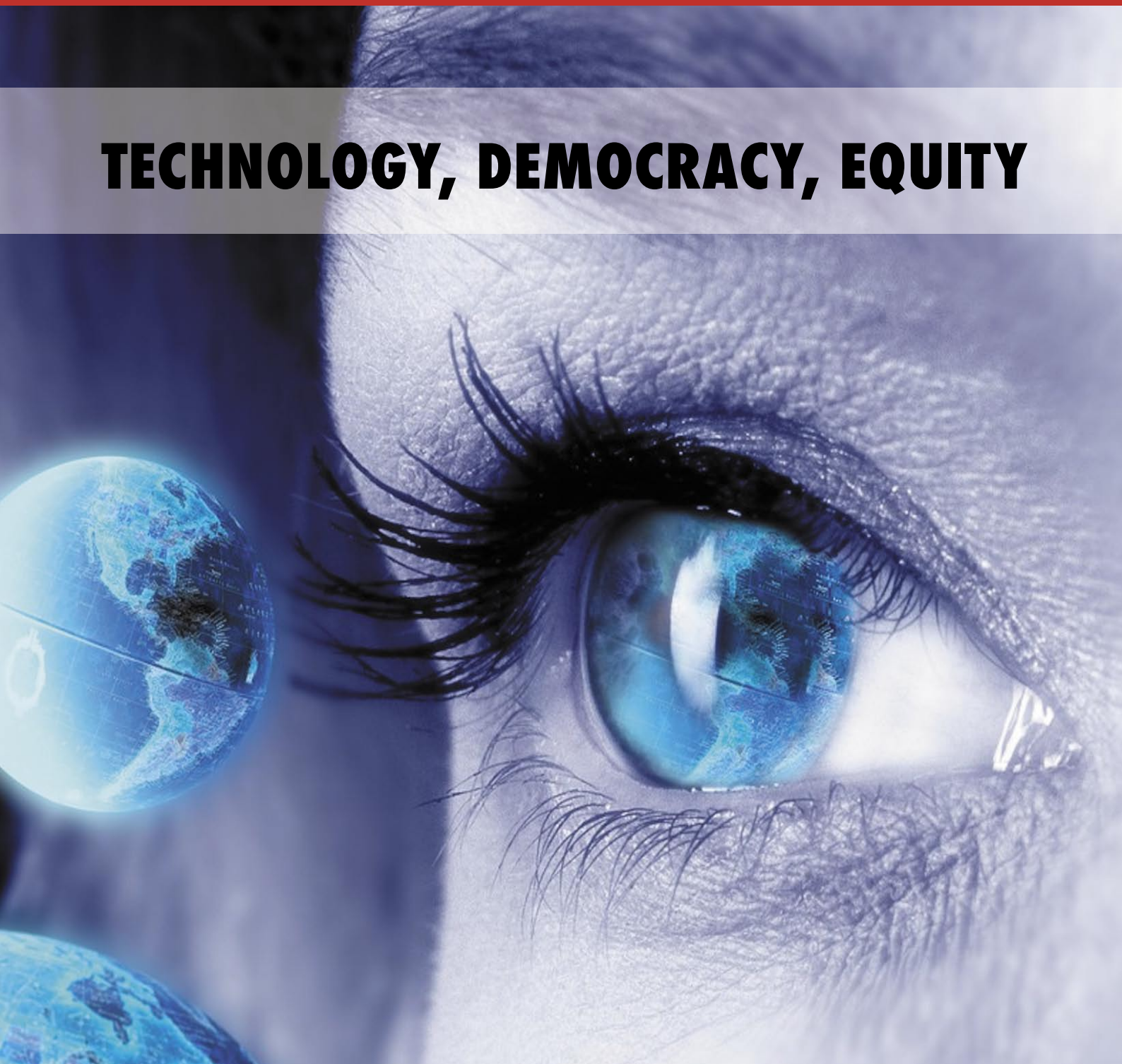


# CHAIN REACTION

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## TECHNOLOGY, DEMOCRACY, EQUITY



### IN THIS ISSUE

- *Ecofeminism and Fukushima*
- *Luddites and the politics of technology*
- *Synthetic biology and the bio-economy*
- *Climate geoengineering*
- *GMOs and food politics in Africa*
- *Nano-silver risks ignored*
- *Anarchism and technology*
- *What's holding renewables back?*
- *Myth of the peaceful atom*

A photograph of a woman with long dark hair, wearing a black top, smiling warmly as she holds a baby. The baby is wearing a red long-sleeved shirt and a light green vest with a floral pattern and is yawning with its mouth wide open. The background is a plain white wall with a framed picture of bare tree branches.

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# FOE AUSTRALIA NEWS

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Friends of the Earth Australia is a federation of independent local groups. You can join by contacting your local group - see the inside back cover of Chain Reaction for contact details or visit: [www.foe.org.au/groups](http://www.foe.org.au/groups).

There is a monthly FoE Australia email newsletter which - subscribe via the website [www.foe.org.au](http://www.foe.org.au). To financially support our work, please visit: [www.foe.org.au/donate](http://www.foe.org.au/donate). To find us on social media, visit: [www.foe.org.au/news/2010/finding-us-on-social-media](http://www.foe.org.au/news/2010/finding-us-on-social-media)

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## 'Wind Energy: Myths and Facts' animated film released

'Wind Energy: Myths and Facts' is a short animated film which has been created in response to the common myths and confusions that threaten the future development of wind farms. The film has been produced by Pablo Tochez Anderson and has been produced as part of FoE's Yes 2 Renewables project ([www.yes2renewables.org](http://www.yes2renewables.org))

You can watch the film at the FoE Australia youtube channel: [www.youtube.com/user/FriendsOfTheEarthAUS](http://www.youtube.com/user/FriendsOfTheEarthAUS)

## Nano-silver breeds superbugs

A report released by FoE in September reveals experts believe that widespread use of nano-silver could breed superbugs, leading to more Australian deaths in hospitals. Antibiotic resistant bacteria (superbugs) in our hospitals claim over 7000 Australian lives each year. Public health experts have called this one of the greatest health threats of our time.

"Australia's top microbiologists are warning that the widespread use of nano-silver in 'antibacterial' and 'odour-killing' consumer products will breed superbugs," said report lead author and FoE nanotechnology spokesperson Dr Gregory Crocetti (see his article on pp.22-23 of this edition of Chain Reaction).

The report 'Nano-silver: Policy failure puts Public Health at Risk' is posted at [www.nano.foe.org.au](http://www.nano.foe.org.au)

## FoE activist halts Gladstone port dredging

On November 9, Friends of the Earth (FoE) Brisbane activist Derec Davies locked on to a Gladstone port corporation dredge after being ferried in by a fast-travelling Zodiac inflatable speed-boat. He unfurled a banner which read "Save the reef, halt dredging". FoE spokesperson Drew Hutton said that the purpose of the protest was to call for a halt to all dredging in the harbour until a genuine independent enquiry was held into the causes of the apparent ecosystem collapse in the harbour. He said the disproportionate number of marine animal deaths and diseased fish in Gladstone harbour reflected an ecosystem under extreme stress and FoE has no faith in the Queensland government's preparedness to look seriously for the causes.

More information: [www.sixdegrees.org.au/gladstone](http://www.sixdegrees.org.au/gladstone)

## David vs Goliath legal case in Queensland

A landmark case in Australia's environmental history began in Brisbane in August with FoE taking on global mining giant Xstrata in a bid to have a proposed mega coal mine in Queensland rejected. The court case is the first ever in Australia to argue exclusively for outright refusal of a coal mine based on climate change impacts. "If not rejected, Xstrata will be given the green light to build the

biggest mine in the southern hemisphere," FoE spokesperson Dr Bradley Smith said. "It will destroy 11 000 hectares of irreplaceable farmland, have a detrimental effect on farmers in the region, and have catastrophic impacts on the climate through coal burning."

Swiss owned Xstrata is proposing to establish the mine just 600 metres out of the small town of Wandoan, 400 kms north west of Brisbane, which would extract 30 million tonnes of coal each year, and create 1.3 billion tonnes of carbon dioxide pollution. "This mega mine will be one of the largest coal mines in the world, and contribute a sizable 0.15% of annual global emissions every year," Dr Smith said. "This might sound like a small number, but in fact it's the equivalent to the combined emissions of 72 countries around the world, and roughly equivalent to the fossil fuel emissions of New Zealand. "We have engaged some of the world's leading climate change experts as witnesses to assist the Queensland Land Court in understanding our climate change case.

Follow the action at: <https://twitter.com/#!/sixde6rees>

## Backwards March in Melbourne

The Victorian National Parks Association, the Wilderness Society, Environment Victoria and FoE organised a 'Backwards March' on November 13 in Melbourne to protest the state government's policies.

In just one year Premier Baillieu has taken Victoria decades backwards on the environment: cattle trampling our national parks; new wind farms blocked; CO2 emissions target ignored; endangered species habitat logged; new coal-fired power station approved; green Wedges threatened; and Westernport destruction fast-tracked.

### **South Melbourne Commons**

The South Melbourne Commons is up and running. On December 10 there will be an official opening for the Commons, including the new café and food cooperative, with market stalls, entertainment for kids and tours and workshops. Recent activities include:

- The Commons hosted the 2011 Permaculture Melbourne Conference where they celebrated Permaculture Melbourne's 30 birthday.
- The next round of the Apples and Jam dirty dozen garden club is underway and the kids are loving it!
- The food co-op fit-out is progressing well with more shelving installed to complement the main counter and recycled produce display storage boxes.

*Help is always welcome: email [ecomarket.melbourne@foe.org.au](mailto:ecomarket.melbourne@foe.org.au)*

*A new website is under development for the Commons: [www.commonsof.org.au](http://www.commonsof.org.au)*

### **Roadshow brings leading anti-CSG campaigner to Vic**

In October, FoE held a series of forums in western Victoria to highlight the threat posed by the expansion of Coal Seam Gas (CSG), coal, and shale gas in the region. It featured leading anti-CSG campaigner Drew Hutton, president of the Lock the Gate Alliance. We held events in Warrnambool, Colac, Ballarat, Geelong and Melbourne.

We want to pass on big thank-yous to our local partners, including the Sustainable Agriculture and Communities Alliance, Otway Ranges Climate Action, BREAZE (Ballarat Renewable Energy And Zero Emissions), and Geelong Sustainability Group. Thanks to the organisations that provided speakers, including Doctors for the Environment and Moorabool Environment Group, and to Dr Gavin Mudd from Monash Uni, who spoke at the Melbourne forum. Special thanks to the Environment Defenders Office, who spoke at each of the forums. Their presentations on land owner rights were warmly welcomed at each forum.

We had a good outcome in Colac, where two days after our forum there,



the company that holds the exploration permit for the region announced it would surrender its permit. This is a great testament to the community campaign being built by Otway Ranges Climate Action and the Colac Sustainability Group – congratulations to them. This makes seven victories to the community this year when it comes to new coal and CSG operations!

*More information, including contact details for local hosts, is posted at [www.melbourne.foe.org.au/?q=node/992](http://www.melbourne.foe.org.au/?q=node/992)*

With the Victorian government finally beginning to understand the level of concern in the community about new coal and CSG, it is imperative that we continue to increase pressure on key politicians. Please support our online petition, calling for a ban on coal seam gas and new coal mining operations: [www.change.org/petitions/stop-dangerous-coal-seam-gas-mining-in-victoria](http://www.change.org/petitions/stop-dangerous-coal-seam-gas-mining-in-victoria)

### **Govt rejects labelling of nano-sunscreens**

Confidential government documents obtained by FoE under Freedom of Information laws reveal that the federal government has decided to reject calls for labelling of nano-sunscreens (and probably other products). Mandatory labelling of nano-ingredients in sunscreens is supported by the Cancer Council, the Australian Council of Trade Unions, Choice (the Australian Consumers Association),

the major industry group Accord and many others.

At a time when health experts are warning that young children, people with damaged skin, and people who use sunscreens regularly should avoid using nano-sunscreen, this attack on labelling is a big concern.

*More information: <http://nano.foe.org.au/secret-docs-reveal-feds-position-nano-labelling>*

This revelation comes in the wake of the national sunscreens regulator's decision to ban a sunscreen manufacturer from labelling its sunscreen as 'not nano' (despite the sunscreen being not nano!).

*More information: <http://nano.foe.org.au/australian-regulator-tries-quash-not-nano-labelling>*

Please email or call the Industry and Innovation Minister, Senator Kim Carr. Tell him you want the government to:

- act now to protect our right to know, and manufacturers' right to label their products as "not nano";
- keep nanomaterials out of consumer products and workplaces until the government is confident it can enforce labelling and develop reliable new safety regulations.

*Phone (02) 6277 7580, fax (02) 6273 4104, email [minister@innovation.gov.au](mailto:minister@innovation.gov.au) and cc [nicola.roxon.mp@aph.gov.au](mailto:nicola.roxon.mp@aph.gov.au) and [catherine.king.mp@aph.gov.au](mailto:catherine.king.mp@aph.gov.au) Thanks!*

## Magic Harvest DVD available

Following its success at the 2011 Adelaide Film Festival and the Feast of Film, FoE Adelaide is delighted to now be able to offer DVDs of the homegrown, food-growing film sensation "Magic Harvest".

Inspired by Lolo Houbein's One Magic Square concept and under the guidance of grower Tori Moreton, in this inspiring film residents of Adelaide's southern suburbs create a food plot in one square metre of their own gardens, harvesting it through the seasons and sharing the bounty in their community. FoE Adelaide was delighted to be able to assist with the funding of "Magic Harvest", nominated for Best Documentary at the SA Screen Awards.

The DVD of 'Magic Harvest', featuring the 24-minute film, is available for \$15, plus \$5 postage and packaging. Buy it online at PayPal – here is the web shortcut: <http://tiny.cc/inkic>. Or you can order online at: [www.adelaide.foe.org.au/2011/09/magic-harvest-dvd-now-available](http://www.adelaide.foe.org.au/2011/09/magic-harvest-dvd-now-available)

## Murray Darling Basin water report

FoE and the Inland Rivers Network released a new briefing paper in November on the environmental water needs of major wetlands, lakes and river reaches in the Murray Darling Basin. The document provides a visually engaging snapshot of what is at stake for the environment in the Draft Murray Darling Basin Plan. FoE has questioned the independence of the Murray-Darling Basin Authority after it was revealed it is planning to allow a massive increase in groundwater extraction in the Murray-Darling Basin.

The briefing paper includes photos, maps and contact details for scientists, local residents, naturalists, graziers, conservationists and traditional owners who are available to speak to the media about environmental water needs in their district. It details the water needs of 25 significant environmental sites from the Coorong to the Murrumbidgee.

The report is posted at [www.melbourne.foe.org.au/?q=bmc/media/7nov11](http://www.melbourne.foe.org.au/?q=bmc/media/7nov11)

## Vic koalas suffering from logging: inquiry

FoE's Anthony Amis provided evidence to a Senate inquiry in August regarding the threat to a population of koalas threatened by logging in Victoria. FoE is calling for



the Strzelecki Koala to be recognised as a threatened species because its natural food source is being eroded.

[www.abc.net.au/news/2011-08-01/environment-groups-call-for-koala-protection/2819498](http://www.abc.net.au/news/2011-08-01/environment-groups-call-for-koala-protection/2819498)

<http://news.smh.com.au/breaking-news-national/vic-koalas-suffering-from-logging-inquiry-20110801-1i7qz.html>

## Another 50 years of coal mining at Anglesea

In October it was announced that coal mining will be allowed to continue at Anglesea on Victoria's Surf Coast, to the west of Geelong. Alcoa began operating the mine in 1961 and indicated in 2008 that it would exercise its right to extend its lease another 50 years.

FoE campaigner Cam Walker said: "Who wins? Alcoa, who gets to continue to burn dirty, high sulphur coal. Who loses? The community of Anglesea, who will have to bear decades of public health impacts. The environment loses, as climate pollution will continue. The highly significant coastal heath lands will continue to be negatively impacted." FoE believes that the Baillieu government has missed a significant opportunity to begin the transition to sustainable energy and

has launched an ongoing advertising campaign in regional media and also a petition calling on Alcoa to source its energy needs from renewable sources.

Please get in touch with Cam if you would like to help letterbox the Surf Coast: [cam.walker@foe.org.au](mailto:cam.walker@foe.org.au), 0419 338 047

More information:

[www.melbourne.foe.org.au/?q=node/1025](http://www.melbourne.foe.org.au/?q=node/1025)

The petition is posted at [www.change.org/petitions/premier-of-victoria-alcoa-must-transition-to-renewable-energy](http://www.change.org/petitions/premier-of-victoria-alcoa-must-transition-to-renewable-energy)

The ads placed in regional media are posted at [www.melbourne.foe.org.au/?q=node/1031](http://www.melbourne.foe.org.au/?q=node/1031)

Interestingly, despite approving the extension and expansion of the coal mine / power station licence, the state government has also agreed to support a clean power project exploring geothermal potential in the area.

## Anti-nuclear and Clean Energy (ACE) campaign

FoE's ACE campaign has been very busy in recent months:

- FoE helped organise the annual meeting of the Aboriginal-led Australian Nuclear Free Alliance ([www.anfa.org.au](http://www.anfa.org.au)) in Alice Springs.

- Tully McIntyre and others have been working on events around the BHP Billiton Annual General Meeting. They have produced the latest in a series of BHP 'Alternative Annual Reports', this one focussed on 'dirty energy'. The report will be available online and is now available on request from [jim.green@foe.org.au](mailto:jim.green@foe.org.au)

- We have working hard on the campaign to stop Martin Ferguson dumping nuclear waste on Aboriginal land in the NT, and to draw attention to the issue in towns along the proposed transport corridor.

- FoE's national nuclear campaigner Jim Green went to Malaysia to participate in a conference which has kick-started a campaign to prevent the introduction of nuclear power.

- We've been helping with the campaign to prevent the first uranium mine being established in Western Australia – Toro Energy's proposed Wiluna mine.

Nectaria Callan and the FoE Adelaide team have been doing great work drawing attention to the many problems with the planned expansion of the Olympic Dam uranium/coppermine. Sadly, the expansion has been approved and critics (especially the SA Greens) have been subjected to a disgraceful smear campaign by the SA Labor government and the Murdoch press for raising questions about the expansion and the enabling legislation



Rally: Don't Let Baillieu Pull the Plug on Renewable Energy, September 29, Parliament House, Melbourne.

– the Roxby Downs Indenture Act. They have been accused of holding the state's economy to ransom for raising legitimate questions and proposing amendments to the Indenture Act. The SA Liberal Party has acknowledged that every aspect of the Indenture Act favours BHP Billiton at the expense of South Australians – yet the Liberals are reluctant to propose or support amendments. Go figure.

While the Olympic Dam situation is distressing, and the tiny Honeymoon uranium mine has reportedly begun operations, there has been much to celebrate for anti-nuclear campaigners this year:

- Uranium mining has been banned in the Arkaroola Wilderness Sanctuary in SA, putting to an end Marathon Resources' plan for a uranium mine at Mt Gee.
- A strong campaign has put in jeopardy the proposed Angela Pamela uranium mine in the NT. At various stages both the NT Labor government and the Country Liberal Opposition have opposed the mine.
- Traditional Owners have put an end to plans to mine the Koongarra deposit in the NT. Plans are in train to incorporate Koongarra into Kakadu National Park.
- ERA has abandoned plans to use heap-leach uranium mining at Ranger in the NT (though it still plans to expand the mine).
- The extraordinary early-1980s film 'Dirt

Cheap' has been updated and is being launched in November/December.

- At least two proposed uranium mines in WA have been put on hold (and hopefully abandoned).
- The WA Labor Opposition has strongly reaffirmed its no-uranium policy.
- All the eastern states/territories maintain their bans on uranium mining.
- The corporate partners in the Beverley Four Mile uranium mine in SA are engaged in a protracted legal dispute.
- Figures from the Bureau of Resources and Energy Economics showing a 19% fall in the value of Australian uranium exports from 2009-10 to 2010-11. Uranium accounts for a paltry 0.3% of Australia's export revenue and 0.03% of jobs in Australia – if the industry disappeared tomorrow, few would notice and still fewer would care.

The uranium industry is in denial, continuing to claim that the uranium debate has been settled in Australia (in its favour) and making comparisons between Australian uranium and Saudi oil exports which distort reality by many orders of magnitude. The industry has also been busily peddling lies about the Fukushima nuclear disaster, and its culpability in the disaster by turning a blind-eye to literally hundreds of safety breaches at Japanese nuclear plants over the past decade.

## Baillieu's wind energy policy stinks

In August, the Victorian government implemented new planning rules which place large parts of Victoria off-limits for wind farm developments and set in place a 'right of veto', whereby a single household can block any turbines within two kilometres of their house. Planning Minister Matthew Guy said at the time that he did not believe the policy would stop developers investing in wind energy in Victoria. Sadly, the facts of the matter are very different. FoE has released an initial estimate of the likely impacts on potential employment and investment as a result of this policy. In a little more than three weeks, lost or stalled investments amounted to around \$955 million and around 630 direct jobs in construction and ongoing management of wind projects. When indirect job creation is factored in, the lost and stalled job opportunities are close to 1900.

FoE's full assessment is posted at: [www.melbourne.foe.org.au/?q=node/1007](http://www.melbourne.foe.org.au/?q=node/1007)



# FOE INTERNATIONAL NEWS

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Friends of the Earth International is a federation of autonomous organisations from all over the world. Our members, in over 76 countries, campaign on the most urgent environmental and social issues, while working towards sustainable societies.

- Web: [www.foei.org](http://www.foei.org)
- Subscribe to 'Voices', the bimonthly email newsletter of FoE International, at [www.foei.org/en/get-involved/voices](http://www.foei.org/en/get-involved/voices)
- Cyber-actions: [www.foei.org/en/get-involved/take-action](http://www.foei.org/en/get-involved/take-action)
- Campaign videos: [www.foei.org/en/resources/video/campaign-videos](http://www.foei.org/en/resources/video/campaign-videos)
- Youtube channel: [www.youtube.com/user/FriendsoftheEarthInt](http://www.youtube.com/user/FriendsoftheEarthInt)
- FoE International in the media: [www.foei.org/en/media/media-review](http://www.foei.org/en/media/media-review)
- Facebook: [www.facebook.com/foeint](http://www.facebook.com/foeint)
- FoE's web radio station (in a choice of five languages): [www.radiomundoreal.fm](http://www.radiomundoreal.fm)
- FoE International online shop (calendars, t-shirts, greeting cards, subscriptions to FoE publications, and more): [www.foei.org/en/get-involved/shop](http://www.foei.org/en/get-involved/shop)

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## Report salutes heroes

On November 10 – the 16th anniversary of the murder of Nigerian Ken Saro-Wiwa – Friends of the Earth (FoE) International released a new report entitled 'Memory, Truth and Justice for Heroes in the Resistance against Mining Oil and Gas'. It exposes the murders of many human rights and environmental activists all over the world for defending their rights and natural resources. Ken Saro-Wiwa and eight other Ogoni leaders were executed on 10 November 1995 for speaking out against the impact of Shell and other oil companies in the Niger Delta.

Nigerian Nnimmo Bassey, the chair of FoE International, said: "Ken Saro-Wiwa was a hero who died because of the world's addiction to fossil fuels. His words still ring true in our ears today. This is why we set November 10 as a day of remembrance of the victims of mining, oil and gas. We demand that those who have



orchestrated the murder of people for the sake of profits should be held to account. We also demand environmental justice and an end to fossil fuels: be it crude, tar sands or coal."

Romel de Vera, coordinator of the Resisting Mining, Oil and Gas program of FoE International, said: "We condemn the fact that many governments favor and protect the interests of extractive industry corporations instead of the right of communities to land and resources. The list of community rights defenders, environmentalists and social activists killed in the course of their struggle against mining, oil and gas continues to grow even longer. On November 10, remembrance actions are held all over the world to commemorate their heroism and celebrate their lives and struggles, as well as to condemn the culture and cycle of death forced upon us by the extractives industry."

*The report is posted on the FoE International website – here is a web shortcut: <http://tiny.cc/aa5q6>*

## Shell fails to meet environmental standards in Nigeria

FoE International welcomed the recent report by the United Nations Environmental Programme (UNEP) that reveals the true

extent of the environmental devastation caused by fifty years of oil operations in Ogoniland, Nigeria. Shell has not only failed to meet the environmental guidelines and standards for petroleum industries in Nigeria but also its own standards.

*The report is posted at [www.unep.org/nigeria](http://www.unep.org/nigeria)*

## FoE Japan calls for a nuclear free world

FoE Japan is calling on the Japanese government to abandon its policy of promoting nuclear power technology to other countries and to take the lead in phasing out nuclear energy worldwide. Please support them by signing the petition at: [www.foejapan.org/en/news/110831.html](http://www.foejapan.org/en/news/110831.html)

## Scotland: FoE 'girl band' parodies bank greenwash

A 'girl band' from FoE Scotland dressed as 'oily bankers' in September to record a song protesting the Royal Bank of Scotland's destructive oil and gas investments, including mining tar sands in Canada, coal mining, and deep water oil exploration in the Arctic. The bank sponsored the Scottish Low Carbon Investment Conference – a spot of greenwashing according to FoE Scotland.

*The 'girl band' video is posted at [www.youtube.com/user/FriendsofEarthScot](http://www.youtube.com/user/FriendsofEarthScot)*

## Sri Lanka: lead paint victory

FoE Sri Lanka is celebrating a recent court victory that will dramatically reduce the amount of lead in paints made and imported into Sri Lanka. Lead in paint is highly toxic and especially damaging to children. Speaking about the victory, FoE Sri Lanka director Hemantha Withanage said: "The standards just established are a great achievement for consumers who get contaminated every minute due to unknown toxics in consumer products such as decorative paints at home, in the school or in the work place".



## Malaysian anti-nuclear campaign

FoE Malaysia (Sahabat Alam Malaysia) worked with other NGOs to organise a conference in October to launch a campaign to promote energy efficiency and renewables as alternatives to the government's plan to introduce nuclear power. NGOs representatives from Japan, South Korea and Australia joined about 100 Malaysians at the conference in Kuala Lumpur.

Representative of the Fukushima Network for Protecting Children from Radiation, Seiichi Nakate said: "I would not want Malaysian people to experience the tragedy that people in Fukushima are now facing. I came here only because I wanted to tell you this.

In Fukushima, more than 100,000 families have been separated because of the nuclear accident. And even now, one million people still live in contaminated areas with deep sufferings and anxiety. Human beings must abandon nuclear power plants. We must not allow a single nuclear power plant to be built anymore."

Dr Jim Green, national nuclear campaigner with FoE Australia, said: "Australian uranium was used in the Fukushima reactors that were destroyed in March. We Australians do not want to be responsible for similar disasters in Malaysia." He further noted that nuclear power is the only energy source with the capacity to produce weapons of mass destruction.

Following the forum, several Malaysian NGOs pledged to work together in a concerted campaign against the proposed nuclear power plants.

## Spain: GM trials stopped

FoE Spain (Amigos de la Tierra) is celebrating the suspension of GM trials with human genes after mass mobilisations by the general public.

FoE worked with many other social, ecologist and peasant groups and individuals in achieving this outcome. Valencia's local government has revoked the permit of an Italian pharmaceutical company to experiment with GM rice combined with human genes in Castellon. The municipality declared the Castellon region would remain GM-free.

However, there are still numerous experiments with GM crops taking place in Spain. The country is the only EU member state that cultivates large-scale commercial GM corn.



## France: the pinocchio prize

FoE France (Les Amis de la Terre) has initiated the Pinocchio Sustainable Development Awards to expose the lies of French companies that boast about their development on the one hand whilst privately trashing the environment on the other. There are three categories:

- One for all, all for me! Award for the company with the most aggressive policy in terms of appropriation and exploitation of natural resources
- Greener than green. Award for the company which has conducted the most abusive and misleading communications campaign with regard to its actual activities
- Dirty hands, pockets full. Award for the company with the most successful policy in terms of opacity and lobbying.

More information: [www.prix-pinocchio.org/en](http://www.prix-pinocchio.org/en)

## Two new reports on food

Two reports were launched at a conference organised by FoE International in South Africa in July. 'Women and Food Sovereignty: The voices of rural women from the south' provides an overview of the situation of peasant women in the Global South. The document highlights the problems faced by these women, as well as their different forms of resistance and struggle in demand for food sovereignty. It includes testimonies of rural women from Africa, Latin America and Asia. They explain why it is necessary to struggle for access to land, for the conservation of seeds and for small-scale farming.

The report is posted at: <http://tiny.cc/ier3z>

'For the Land that Feeds us: Experiences of struggle and victories' is a case study report with examples of communities and small farmers that produce or obtain their food locally and sustainably, instead of depending on large scale agriculture. It highlights the strategic role played by peasant agriculture, urban agroecology and family farming in the defense of territories and the resistance to the advance of monoculture plantations.

The report is posted at: <http://tiny.cc/3eh57>

## Uganda: save the Mabira forest

FoE Uganda is working with many others to stop the Ugandan government giving away more than 7000 hectares of the Mabira rainforest to the Sugar Corporation of Uganda which plans to cut down the trees and establish a sugarcane plantation.

## Community rights, corporate wrongs

A new FoE International report, 'Community rights, corporate wrongs', illustrates the importance of enforcing local community and Indigenous Peoples' rights. The report features local struggles that have the defence and enforcement of community rights at their heart and includes cases from the Asia, Africa, Latin America and Europe.

Speaking at the launch of the report, Isaac Rojas, coordinator of FoE International's Forests and Biodiversity Programme, said: "Community rights allow us to protect traditional knowledge and ownership, as well as our natural resources. By enforcing their rights communities can overcome local struggles and win."

The report is posted on the FoE International website - here is a web shortcut: <http://tiny.cc/1x2jp>

## UN climate talks

FoE International has expressed strong concerns over renewed attempts by rich countries to tear up the framework for global action on climate change at the United Nations climate negotiations. At the latest round of talks, held in Panama, rich countries pushed to scrap the convention and replace it with a new, weaker climate treaty which would set the world firmly on a path to catastrophic climate change.

More information: [www.foei.org/en/what-we-do/climate-and-energy](http://www.foei.org/en/what-we-do/climate-and-energy)



# Editorial: Technology, Democracy, Equity

*Elena McMaster*

Much of the work that we at Friends of the Earth are involved in (climate, renewable energies, mining, emerging technologies and nuclear) is about challenging technologies and/or strategies proposed by industrial-capitalists and challenging the idea that limitless economic growth is somehow possible and desirable. We believe that we need to continue finding points of convergence for resisting inappropriate, unsustainable and unjust technologies and the dominant narratives of industrial science, growth and progress.

In bringing a critical perspective to technology issues there is a sense of frustration with getting bogged down talking about the very immediate environmental and health risks that many new technologies bring. As activists challenging corporate and militarised technologies we get sick of putting out spot fires. It seems as soon as we confront one new technology being foisted upon us (e.g. genetically modified organisms) another springs up with incredible new promises and the potential to cause new kinds of social and environmental harm (e.g. nanotechnology).

In the long shadow of the climate crisis and continuing global inaction, while communities in Africa suffer from severe drought and food shortages and the global economy teeters again on the brink of collapse, it has never been more essential that technological innovation is placed in social, political and economic context. It has never been more essential that we understand the intrinsic relationship between industry, technology and capitalist markets and the need to dismantle the stories which maintain this relationship and perpetuate inequities and environmental devastation.

Questions about democracy and equity are much thornier than the standard risks vs. benefits treatment that applies to new technologies, but they are essential to developing a rigorous and effective critical framework for managing the assault on ourselves, our communities and our planet from unjust, unsustainable and dangerous technologies. They are also essential for acknowledging the vast gulf between Northern and Southern countries when it comes to suffering from the negative impacts of technologies.

Underlying a whole range of technologies, from new renewable energy technologies to nanotechnology to synthetic biology are several problematic assumptions. The first is that technological innovation = progress, i.e. that our social progress is the same thing as continuous technological advancement. The second is that it is somehow possible to achieve limitless growth, i.e. that economic growth can be disconnected from resource constraints. The third is that technology is neutral, not subject to the social, political and economic conditions in which it is developed and marketed.

In order to resist dangerous, unsustainable and unjust technologies and ensure that useful technologies are used equitably we need to challenge these assumptions. We need to shed light on the extent to which technological innovation is driven by commercial and military interests and the extent to which state power is used to further these interests through the funding and promotion of some technologies.

Our critique of emerging technologies and the economic activity that accompanies them is underpinned by the belief that social change is far more important for creating the future we want than technological change. It is based on an understanding that people already disadvantaged and marginalised, peasant farmers and indigenous people, who already bear the brunt of the impacts from climate change also bear the brunt of impacts from industrial-scale technologies through land appropriation, mining, and waste disposal. Our critique is based on an understanding that we don't want to put out spot fires forever. Let's imagine a future where technologies serve the social good rather than the corporate or military good and everybody has access to them.

# Luddites and the politics of technology

*David King*

November 2011 – January 2013 marks the 200th anniversary of the Luddite uprisings in England: a great opportunity to celebrate their struggle and to redress the wrongs done to them.

Today science and technology raises many more critical social, environmental and ethical issues, but from GM food and eugenics to plans for engineering the planet's climate, from surveillance to nuclear power, these issues are rarely addressed properly, partly because anyone who raises criticism is denigrated as a 'luddite'. History has been written by the victors and the Luddites are portrayed as opposed to all technology and progress. It is ironic that while the ideology of progress through technology has hardened into a rigid dogma, which must condemn all critics as 'anti-science', in fact the Luddites opposed only technology 'hurtful to Commonality', (i.e. the common good). They destroyed some machines whilst leaving others: in their spirit, I make no apology for calling for real democratic control over science and technology.

The Luddites were textile workers in Nottinghamshire, Yorkshire and Lancashire, skilled artisans whose trade and communities were threatened by a combination of machines and other practices that had been unilaterally imposed by the aggressive new class of manufacturers that drove the Industrial Revolution.

The workers had a number of grievances, including wage-cutting and the employment of unapprenticed youths as well as the machines which were taking their jobs, offering them little choice but to work for a pittance in the appalling conditions of the new mills. Trade unions were illegal, and in 1809, under pressure from the manufacturers, Parliament repealed old legislation banning such machines, thus removing the artisans' last hope of redress for their grievances by legal and democratic means. At the time the cloth trades were depressed due to the wars with France, and unemployment often meant destitution and starvation.

The uprising began in Nottingham in November 1811, and spread to Yorkshire and Lancashire in early 1812. The Luddites' main tactic was first to warn mill owners to remove the frames: if they refused, the machines were smashed in nocturnal raids. The Luddites were a secret society which administered oaths of silence which were extremely effective in preventing capture: for nearly a year, despite flooding the North of England with spies, and more troops than were fighting Napoleon in Spain at the time, the authorities made only a few arrests.

Although there were already many laws on the statute books making the Luddites' activities capital crimes, in February 1812 the government passed the Frame Breaking Act, which specifically introduced the death penalty for frame breaking. In Yorkshire, attacks on shearing frames began in January 1812, and were highly successful in the smaller workshops. However, resistance from some of the larger mill owners, supported by magistrates and the troops, was stronger.

Luddite attacks on machines gradually declined in mid-1812, and some Luddites turned to night-time raids on armouries, in the hope that a general armed insurrection could be mounted. But in October 1812, the authorities finally arrested George Mellor, a key leader of the Yorkshire Luddites. He and 13 others were hanged together in January 1813. By the end of the uprisings, thousands of frames, a significant proportion of the total number in England, had been smashed.

The cause of the uprising was the imposition of the new free-market industrial regime. The machines were perhaps the sharpest edge of the new regime and were chosen as targets because they symbolised the power of the new masters. As the great apologist for industrialism, Andrew Ure, wrote in 1835, "This invention confirms the great doctrine already propounded, that when capital enlists science in her service, the refractory hand of labour will always be taught docility." The uprisings can be seen as the last gasp of the old order, a howl of protest against the Industrial Revolution, or, as the writer Kirkpatrick Sale puts it, "a rising not against machines but against The Machine".

## The politics of technology today

This anniversary comes at a timely moment because, at the beginning of the 21st century, the consequences of the whole industrial capitalist path of development are becoming so severe that millions of people are coming to doubt its mythology of progress. From global warming, resource depletion and biodiversity extinction to epidemics of mental and stress-related illness, drug addiction and crime, these inevitable products of industrial society are becoming impossible to ignore.

Although the Luddites were not opposed to technology as such, merely to machines that they judged 'hurtful to Commonality', 200 years of experience with technology in the industrial capitalist system shows that there is a problem with technology itself, which is at the root of the problems posed by particular technologies. Although this comes close to sounding



like the incorrect popular usage of Luddism, this general problem must be faced.

The fundamental cause of the problem is the relationship of science and technology to nature in a capitalist society. As was stated explicitly by many of the founders of modern science in the 16th and 17th centuries, the role of science is to penetrate the secrets of nature with the aim of controlling it for human benefit. Many of these writers, such as Francis Bacon, describe nature as an unruly female which must be subdued and ordered through a masculine science. In the 20th century the Frankfurt School sociologists, and later, eco-feminists such as Carolyn Merchant have argued that it is that attitude of domination towards nature that is inherent in science which has led to the environmental crisis we face today.

Since the Scientific Revolution, science and technology have existed primarily to serve the state, the military and private capital and it is this structural alliance that decisively distinguishes modern Western civilisation from all previous civilisations. This synergy of science and capitalism only came to its full expression in the Industrial Revolution, which the Luddites were fighting.

Throughout the 19th century, industrialism, aided by slavery and by imperialism based upon technological superiority, dramatically increased the accumulation of wealth, which, had it been evenly spread could have led to material comfort for all. From the mid 18th century, the enclosure by rich landowners of the common land that provided the basis for subsistence paved the way for agricultural intensification that led in the 20th century to industrial agriculture, as well as creating the 'army of surplus labour', landless proletarian workers at the mercy of the market. Whilst there is a discussion to be had about the degree to which science is socially constructed, with technology we can be certain that anything that emerges from the R&D departments of corporations is designed primarily to further their interests. This may be in a number of different ways, e.g. planned obsolescence, compulsory tie-ins to other products of the same corporation, such as herbicide-resistant GM crops.

More broadly, such products invariably express and serve the deeper structures of the capitalist system in many ways:

- Commodification of what was previously free or obtained through social networks (such as the family and the local community). Capitalist technologies tend to atomise society, breaking down social bonds. This forces people to consume and be dependent on the market for basic needs.

- Creation of new 'needs', or in the case of the pharmaceutical industry turning normal human diversity into 'diseases' e.g. depression, to be cured by pills.

- On the supply side, from primary resource extraction through to retail, from the Luddites until today, technology always replaces labour, creating structural unemployment and a pool of cheap labour.

- Deskilling, and dependency on technological systems lead to the loss of craft skills and individual skills for self-reliance e.g. the ability to repair things.



*A rioting mob of Luddites as depicted by 19th century illustrator Phiz (a.k.a. Hablot Knight Browne).*

Overall, along with their benefits, capitalist technologies generally tend to empower the powerful and marginalise the weak. Technologies are not 'neutral', it is not just a matter of 'how we use them': the idea that they are neutral is ideology designed to blind people to what is really going on. Technology is as much an instrument of power as legislation, financial coercion and physical force.

It is precisely because of the way the Luddites exposed the power relations that are embedded in capitalist technology that they have been portrayed not just as another bunch of troublemakers, but as idiots opposed to progress. People often find a way to use technologies for their own ends, but we should not forget that they are never innocent.

The current crisis of industrial society is forcing upon us a transition to a more sustainable and socially-just society, which must at the very least mean a drastically modified version of capitalism, if not its abolition. Part of that transition will be to address the question of which technologies we need. While the Luddites were not against technology, their example calls us to look for paths away from industrial capitalist modernisation and its fetish of progress through science.

Luddism is a middle way between primitivism and the capitalist and Marxist fetish of 'progress through technology'. In the 21st century being a Luddite is about being a sceptic about that myth, without denying that technologies can be useful: rather, we need to judge which technologies are 'hurtful to Commonality' and which are not.

# Synthetic biology and the future bio-economy

*Eric Hoffman*

In May 2010, Craig Venter announced that he had created “the first self-replicating species that we’ve had on the planet whose parent is a computer.” This was the first time most people had heard of the emerging field known as “synthetic biology,” which is attempting to write genetic code, design entire genomes, and even create life from scratch.

Venter and his team made headlines since they were able to copy the genome of a natural goat pathogen, “print” it out from a computer, and insert this synthesised genome into a cell that was then able to self-replicate. This was a technical breakthrough in that it was the first time a fully-synthetic genome was shown to function in a cell and was the result of years of work and upwards of \$40 million USD.

While this synthetic cell was the first time most had heard of synthetic biology, the field had been growing well before Venter’s announcement and continues to develop rapidly today without any real oversight or governance. Hundreds of start-up companies, public universities, government institutions, and even big oil and pharmaceutical companies are investing heavily in synthetic biology in the hopes that this emerging technology will provide the next generation of clean fuels, chemicals, plastics, and even medicines and vaccines.

Unfortunately, synthetic biology may just be the next iteration of the broken promises the public have been sold by the biotechnology industry for decades. Synthetic biology raises many risks to the environment and biodiversity, and may deepen the socio-economic and political injustices that exist between the global North and South.

## Synthetic Biology – what is it?

Before we get into how synthetic biology is being used and its risks, it’s worth taking a moment to define synthetic biology and review the technologies that fall under this umbrella term. There is no agreed upon definition of synthetic biology, but generally the technologies are taking genetic engineering to a new extreme. Scientists have been manipulating the genetic code since the early 1970s when they began genetically engineering bacteria, plants, and animals. This “old” form of genetic engineering involves taking a short segment of DNA from one organism and inserting it into another organism.

Synthetic biology, on the other hand, is a “new”, extreme form of genetic engineering. Scientists are now able to manipulate genetic material like never before due to advances in genetic engineering, DNA sequencing, nanotechnology, and robotics. The ETC Group defines synthetic biology as “the design and construction of new biological parts, devices and systems that do not exist in the natural world and also the redesign of existing biological systems to perform specific tasks.” In other words, synthetic biologists hope to create new genes, new genomes, and even new organisms.

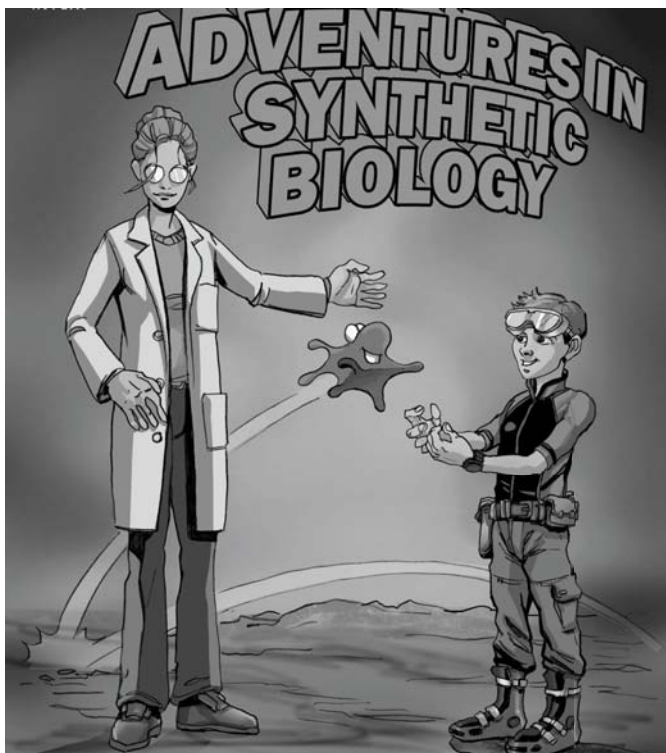
A number of different technologies are being used under the umbrella of synthetic biology. At the most basic level, synthetic biology involves the use of synthetic DNA that was uploaded or written on a computer and “printed” out onto sheets of glass from bottles of nucleic acids (adenine, thymine, cytosine, and guanine) and then inserted into organisms. Taking DNA synthesis a step higher, some are trying to create standard DNA sequences that code for specific functions. These open-source “biobricks” can be purchased and shipped around the world, put into an organism, and code a predictable function. For example, one could order a biobrick to make an organism glow or produce a specific scent. These technologies are more extensions of “old” genetic engineering than really creating synthetic life.

On the more extreme side, others are looking into xenobiology, which hopes to create organisms that use non-natural nucleic acids and even to create DNA with an entirely different sugar back-bone than that found naturally in all living organisms. Even more extreme are those trying to create “protocells” by combining inanimate chemicals without DNA entirely. These protocells would be like truly creating life from scratch. Much of this work is still theoretical and may not even be possible.

## Applications of synthetic biology

Proponents claim that synthetic biology will revolutionise the way products are made; anything from sustainable fuels, green industrial chemicals, food crops, plastics, and even cheap vaccines and medicines could be made by synthetic organisms in bio-refineries. While still a nascent industry, a number of products are moving towards commercialisation, with significant funding from the oil, pharmaceutical, and agriculture industries. One known product of synthetic biology, a bio-plastic from DuPont, is already on the market.

The next products to hit the market will be biofuels, industrial chemicals, and medicines. Craig Venter, for example, is working with Exxon Mobile to produce oil directly from synthetic algae. Amyris Biotechnologies is hoping to produce fuel by breaking down sugarcane with synthetic yeast. Amyris got its start working to produce an anti-malarial from their synthetic yeast with funding assistance from the Gates Foundation, and Craig Venter is promising publicly that next year’s flu vaccine will be produced by synthetic bugs. The end goal of synthetic biology is to replace oil from our economy with products made



## Case study: Amyris Biotechnologies in Brazil

One of the first examples to emerge of this bio-economic transition comes from Amyris Biotechnologies. As mentioned, Amyris Biotechnologies has synthetically engineered yeast to produce fuels, medicines and plastics by breaking down sugarcane. In order to have access to cheap sugarcane, Amyris has set up shop in Brazil with the creation of their subsidiary Amyris Brazil and already have deals with major sugarcane producers and processors.

Unfortunately, sugarcane production in Brazil is far from sustainable and the recent increase in demand for biofuels is accelerating deforestation, soil degradation, water contamination, destruction of native vegetation and increasing atmospheric pollution from sugar cane fires – particularly in the Cerrado region.

Sugarcane plantations require an incredible amount of water and often divert local rivers away from communities and farmers growing food. They have also led to increased use of fertilizers and pesticides. The sugar plantation industry also has a dark history of slave labor and worker exploitation that it has yet to eliminate. According to the Society, Population, and Nature Institute in Brazil, deforestation for sugarcane production “directly harms rural populations who survive off the biodiversity of the Cerrado...small food farmers leave their lands, having been lured into temporary employment in the sugarcane fields. This will diminish the food production in the area, which only serves to aggravate the migration to urban slums.” Despite these facts, the Brazilian government has targeted the Cerrado as the center of their emerging biofuels industry.

## Conclusion

Synthetic biology is not just being used in a race to produce the next-generation fuels; it is a race to control the next global economy. If we’ve learned from history, the relationship between the global North and South in this new bio-economy (just as it was in the old black carbon economy) will be one of resource exploitation and political domination rather than sustainability and justice.

The UN Convention on Biological Diversity is the first international body to seriously look at synthetic biology and the impact it may have on biodiversity and livelihoods of communities. In October 2010, the parties to the convention agreed to use precaution when dealing with synthetic organisms and asked the convention’s scientific review body to further study synthetic biology. The UN and governments around the world must implement a moratorium on the release and commercial use of synthetic organisms until the full environmental and socio-economic impacts of this emerging technology can be fully assessed and before this new unjust bio-economy becomes a reality.

*More information: [www.foe.org/healthy-people/synthetic-biology](http://www.foe.org/healthy-people/synthetic-biology).*

from these super bugs. Theoretically, anything that is currently produced by petroleum today could be produced by synthetic organisms in biorefineries.

## The bio-economy and an unjust future

Synthetic biology is seen as the enabling technology to allow the switch from a “black carbon” economy dependent on oil and coal to a “green carbon” economy, in which living and dead plant matter is converted into all the “stuff” listed above. With advances in synthetic biology, novel organisms will be tailored to break down any kind of biomass (think: sugarcane, corn stover, grasses, trees, etc).

Picture a world where all the earth’s arable land that was dedicated to food production has shifted to wide-scale planting of monocultures to feed these synthetic bugs. Since land, water, and fertilizers are already in short supply for food production, the picture that begins to emerge does not look good. Nearly all the synthetic biology corporations, research, funding and patents are housed in the US and Europe whereas a vast majority of the planet’s biomass – over 86% of the earth’s plant matter – is in the global South.

As Jim Thomas with the ETC Group tongue-in-cheekily stated, “eighty-six percent of global biomass is stored in the tropics or subtropics – exactly where the world’s 1.5 billion peasants are also inconveniently located. Liberating biomass for a new bio-economy means first clearing away the ‘old bio-economy’ of subsistence farming, pastoralism and hunter gathering. Even as this bio-economic transition gets under way, we are already seeing a voracious global grab on land, plant material, and natural resources.” Synthetic biology, he continues, “will bring us cheaper plastics by ruining the poorest nations on Earth.”

# A Trojan Hose for climate geoengineering

Diana Bronson

In late September, ETC Group and Friends of the Earth (and many of our allies) celebrated a victory – we received the news that a controversial experiment we had been campaigning against was being called off. The experiment planned to test a kilometer-long delivery hose for chemicals to the upper atmosphere, quickly dubbed a ‘Trojan Hose’ for climate geoengineering.

That might seem like a small thing but it was highly symbolic and potentially precedent-setting. For the first time in ages, geoengineers had to back down! The decisions governments make on geoengineering could determine the fate of the planet for a very long time and the controversy generated by this experiment has given them reason to pause.

The suspended experiment was part of a large research project sponsored by four universities in the UK, a military contractor (Marshall Aerospace), three research councils and several government departments. The research project is called SPICE or Stratospheric Particle Injection for Climate Engineering. It is, as the name suggests, an investigation into the mechanics one of the leading geoengineering proposals known as stratospheric aerosols.

This technology, often touted as “fast and cheap”, falls into the hubristic category of Solar Radiation Management. The idea is to shoot tiny chemical particles (likely sulphur dioxide, or perhaps aluminum or other nanoparticles) into the upper layer of the Earth’s atmosphere in order to reflect a portion of the solar radiation that reaches the Earth back to outer space.

The theory, inspired by the global cooling that occurs after large volcanic eruptions like Mount Pinatubo in 1991, is that you can cool the Earth without changing the level of greenhouse gases in the atmosphere (or the way we live). For this reason its proponents often refer to it as Plan B – to be used when multilateral negotiations on reducing emissions fail, perhaps when tipping points are imminent (or passed).

In 2009, seeing the sci-fi field of climate engineering gather momentum at roughly the same pace as climate negotiations were losing it, but we drew a “line in the sand” at real world experiments. In a submission to the Royal Society’s landmark 2009 report, ‘Geoengineering the Climate: Science, policy, uncertainty’, ETC Group argued: “how the Royal Society handles real-world experiments in its report will signal whether the group has been able to take an impartial, considered and responsible view” ([www.etcgroup.org/en/nodel/742](http://www.etcgroup.org/en/nodel/742)).

Sadly, geoengineering enthusiasts dominated the Royal Society report and while the Working Group wrung its hands about the need for governance, it spent much more time insisting on the need to move forward on research, including real-world experimentation. Scientists themselves, it argued, could develop “voluntary standards” – a notion civil society organisations have grown to deeply distrust.

Indeed, immediately after the launch of the report, the big research councils in the UK put out a call for participation in a “sandpit exercise” (still boys with toys it seems) to define the research projects that would receive funding. The SPICE project was conceived in the sandpit and received 1.6 million pounds to answer three questions about aerosols:

- What is the ‘perfect’ particle, which maximises solar radiation scattering, and minimises negatives impacts (on the ozone layer, weather, human health);
- How can we refine delivery systems and specifically test the feasibility of using a tethered-balloon pipe to inject particles into the stratosphere;
- What are the most effective locations for injection.

Of course what the scientists forgot to ask is whether we want to go down this road at all! And who would be the appropriate body to make such a momentous (and irreversible) global decision? That is when civil society – again with Friends of the Earth and ETC Group working together – started a global petition against geoengineering experiments called HOME: [www.handsoffmotherearth.org](http://www.handsoffmotherearth.org)

## Moratorium on experiments

The first success of the HOME campaign was to help broker an agreement against geoengineering at the Convention on Biological Diversity. In October 2010 at the Convention’s meeting in Nagoya, Japan, 193 governments adopted – with the standard science-based caveats – a moratorium on real-world geoengineering experiments ([www.etcgroup.org/en/nodel/5236](http://www.etcgroup.org/en/nodel/5236)). The Convention urged governments to ensure that no geoengineering activities that could affect biodiversity take place until a number of key conditions were met.

Civil society is not alone in this battle. Scientists such as Alan Robock and Sallie Chisholm, historians such as James Fleming



and ethicists such as Clive Hamilton, in addition to many civil society organisations have spoken out against real-world experimentation of geoengineering technologies. In many cases, they have shown that there is no real distinction between testing and deployment: to really see how stratospheric aerosols will affect rain patterns, or how ocean fertilisation will draw down carbon, tests must in fact be done on a scale so massive that what is really happening is not experimentation but rather deployment.

Despite the CBD victory, scientists lobbying for more research and credibility took their campaign to the Intergovernmental Panel on Climate Change which gathered in Lima, Peru for an invitation-only expert meeting on the topic in June 2011. Again, NGOs wrote an open letter but we were not allowed to attend the meeting – neither our observer status nor our many publications were enough to get us in the door. On the other hand, geoengineers with private interests, including patents, companies and research budgets, were placed in leadership roles.

The challenge ahead will be to strengthen the CBD moratorium by the adoption of a global ban. With Fukushima still fresh in our minds, providing a vivid example of technology gone wrong, policy-makers are perhaps more open to a

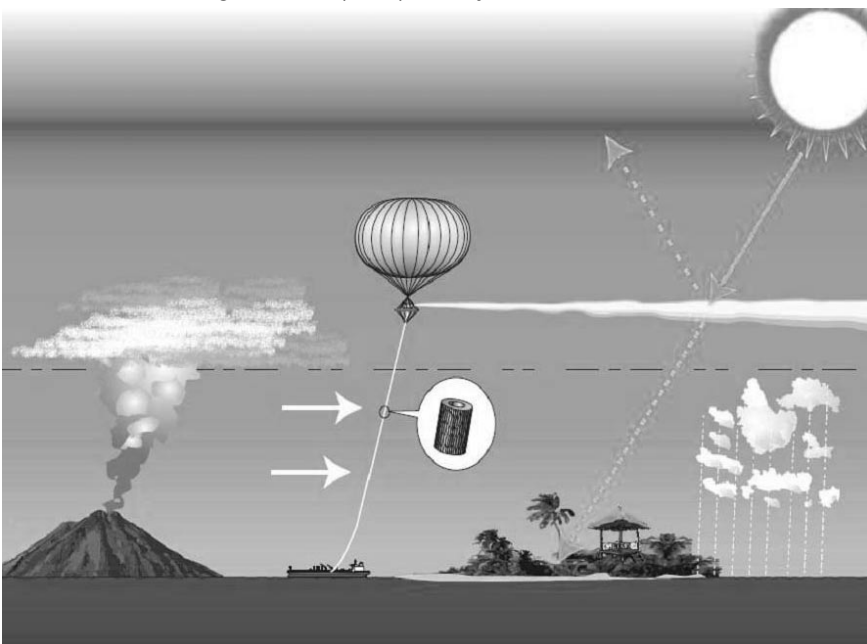
precautionary view than they have been in the past few decades where the pace of technological change has been hard to keep up with. We cannot afford to have scientists scattered across the global north experimenting on our planet – whitening clouds over the ocean, changing the chemistry of our seas, intervening in our stratosphere or planting trees with shiny leaves to change the Earth's albedo.

A much more careful and considered approach is urgently needed and for that reason civil society groups should be united in our demands that the Rio+20 summit adopt a global ban on these technologies – at the very least until the world has had a chance to debate and decide upon the issue. In the meantime, Hands Off Mother Earth.

*More information: [www.etcgroup.org](http://www.etcgroup.org)*

*Diana Bronson is the programme manager with the ETC Group.*

From left: 1. Schematic diagram of stratospheric particle injection. 2. Diana Bronson



# GMOs and the politics of food in Africa

Anne Maina



In November 2010 the African Biodiversity Network held a Climate, Seed and Knowledge meeting in Ethiopia. The meeting brought together 30 participants from 12 countries. Photo by Damian Prestidge for ABN.

Widespread debates and media coverage about Genetically Modified Organisms (GMOs) in East Africa from 2010 to 2011 have left GMO proponents baffled. What they do not realise is that from as far back as 2004, grassroots community organisations and NGOs have been working with small holder farmers, consumers, fisherfolk and even animal welfare organisation to educate them about the threat of the introduction of GMOs to their food and even livestock.

These capacity-building efforts have borne fruit and now even when you walk in the streets and market centres, you hear people from all walks of life expressing their concerns about this 'new' GMO maize that threatens their health, environment and livelihood. While there is a broad range of misinformation out there with some members of parliament even claiming that GMOs will make young men infertile, the fact that people are talking about it is a great achievement. The capacity-building efforts may have not reached everyone but the fact that people are speaking about it has created a thirst for more information.

So what are the key concerns regarding GMOs? The implications and risks of GMOs include risks to the health, challenges of contamination, biodiversity loss and threats to agriculture practices, seed and food security. With regard to health concerns, scientists have documented cases of skin and eye irritation, respiratory complications among BT cotton farmers in the Indian towns of Barwani and Dhar District of Madhya Pradesh ([www.gmwatch.org/print-archive2.asp?arcid=6265](http://www.gmwatch.org/print-archive2.asp?arcid=6265)).

Feeding trials on mice in Australia from 2004-2005. South Africa, India and Burkina Faso are said to be leading in the adoption of BT cotton while Kenya is conducting contained field trials. However, a critical analysis reveals there are many challenges with BT cotton. A fact-finding mission to the

Makhatini flats in South Africa – which is promoted as a success in BT cotton production – revealed a failed project. While there are other reasons for its collapse apart from the unfulfilled promise of higher yields, the farmers appeared disillusioned as the programme with the Land Bank of South Africa had failed miserably.

Maize is the staple grain in Eastern, Southern and to smaller extent in West Africa. GMO proponents say that maize/corn is consumed in the US and has not affected the population. That is largely not true because most of the corn in the US is for animal feed. The little maize that is consumed directly is in processed foods like corn flakes, as corn syrup found in tomato sauce, fizzy drinks and others. In addition, not much research has been done to assess whether increased cases of the so called 'affluent' diseases are also related to the use of GM corn in many processed foods and products.

## Colonisation

For thousands of years, family owned farms in Africa have employed various agro-ecological practices to produce food for their families. Colonisation displaced Africans from their traditional lands and family owned farms were replaced huge monocultures dependent on synthetic fertilisers, pesticides and other chemicals. Gradually, Africans were brainwashed to think that the Western concept of agriculture was the best way.

Even with independence and the redistribution of lands in some countries, the land had become degraded such that it needed more fertilisers. However, the African farmers lacked the advice, resources and even collateral to sustain the lands with appropriate fertiliser mixes. The result was reduced produce. Those who tried to return to the traditional practice of the use of animal manure, composting and even mixed cropping struggled for a while. However, those who persevered were able to revive agro-ecological systems and produce the food sustainably.

The emergence of the NGO movement supported sustainable agricultural practices especially with the distress most African countries faced with the introduction of Structural Adjustment Programmes in the 1980s. Some governments like Malawi completely stopped training extension officers as the World Bank and IMF cut funding. Governments were advised to employ economies of scale. In the case of Malawi, they were told it was not wise to keep grain reserves in silos. The best way is to sell their maize in the international market and purchase when they need maize.

What most governments did not realise was that most of their exports were in the form of raw materials like tobacco, coffee, tea and pyrethrum whose price fluctuated in the world market.

In the case of Malawi, when they attempted to buy maize from the world market, the price had increased considerably. Things would have been different if they had maintained their strategic grain reserves for times of distress such as famines.

In recent times with the climatic changes, increased droughts have affected many countries in Africa. This also evident with the vibrant food aid 'industry'; even when global statistics show an increase in global grain food production. So if there is an increase in world grain production, then why is grain becoming more expensive leading to food riots?

## Engineering hunger

Who benefits from the business of food aid? At a recent workshop on 'Hunger politics' organised by Friends of the Earth Africa, Nnimmo Bassey, the Chair of FoE International, argued that food aid is not as philanthropic as we are made to believe but actually business. Hunger in the world is engineered. Food aid has taken the form of Programme Aid where cheap food is sold to help donors dispose of surpluses. It is often purchased with money borrowed at lower than market interest rates.

The characteristic feature of this 'aid' is that the money is borrowed and the food is bought. Project Aid seeks to promote agricultural or economic development of nutrition and food security. A good example is food given to school children. In Kenya, it has recently been revealed that even with the enactments of the Kenya Biosafety law in 2009 and the need for the National Biosafety Authority to approve any GM contaminated products, the World Food Programme

**“ The essential purpose of food has been subordinated to the economic aims of a handful of multinational corporations that monopolise all aspects of food production. ”**

**- Miguel d'Escoto, President of the UN General Assembly, September, 2008.**

got approval to bring in GM contaminated food aid without testing. This raised a huge storm leading to the sacking of the head of the National Biosafety Authority.

Another type of food aid is Relief or Emergency Aid employed to fight hunger in emergency situations such as wars and natural disasters. It is mainly handled by CARE, World Vision and Catholic Relief Services. The global drive for land grabbing together with the conflicting priorities on whether to grow 'food or fuel' has spurred the increase in global grain prices. In addition speculation and trading of grains in stock exchanges has led to increased prices.

When countries in Europe, America and Asia are busy grabbing land in Africa, the notion is that they want to use underutilised land. This is the same argument used by Europeans superpowers in their 1884 partitioning of Africa in Berlin. A lot of the development in Europe was achieved through the plunder of Africa's mineral and natural resources.

## Agrofuels

This colonisation has continued with agrofuels such as jatropha. Jatropha has been promoted as a crop that is ideal for marginal lands, but research is now emerging that to make economic and business sense, it will need sufficient water and nutrients. Further to this, will the energy from jatropha, palm and castor seeds benefit the small farmers displaced from land in Tanzania, Ghana, Ethiopia or Uganda? The farmer faces the challenge of access to water and grazing land because multinational companies grab the land and block access routes. Those found violating the rules are prosecuted for trying access their traditional lands.



Rosemary and Kago, from the the Kamburu community in central Kenya, continue using organic farming methods. African Biodiversity Network partner the Institute for Culture and Ecology worked with the community for two years to revive their traditional knowledge and practices for ecological agriculture. A video about the project, *The Kamburu Story*, is posted at [www.africanbiodiversity.org/content/latest/kamburu\\_story](http://www.africanbiodiversity.org/content/latest/kamburu_story)



*Climate, Seed, Knowledge meeting, Ethiopia, 2010. Photo by Damien Prestidge for ABN.*

We also need to question the role played by African governments. Even with independence, Western-educated leaders in Africa continue with policies that promote the interests of the West. This was to ensure they remain in the 'good books' of the Western powers to ensure donor funding for example. Those who attempted to go against the grain, like President Robert Mugabe of Zimbabwe, were vilified and donor funding withdrawn. The likes of Bingu Mutharika, Malawi's President, began a subsidy program to supply fertilisers to farmers against World Bank recommendations.

Though the Malawi program is not sustainable in the long run due to the extensive use of fertilisers, as opposed to the promotion of agro-ecological practices, it is interesting that IMF and World Bank quickly back-tracked on their stand and now support the subsidy program having seen that it was achieving success. The tragedy is that Malawi now has to allocate over \$200 million every year to sustain this. Is this really sustainable in the long run?

Back to the issues of policies, the over-reliance of maize as a measure of food security has had it undoing. Many governments have referred to food security as the presence of maize. However maize and especially hybrids are very susceptible to climate variation. The reduction in rainfall or inputs such as fertilisers can lead to a crop failure.

The lack of prioritisation of traditional/indigenous crops such as cassava, yams, millet, sorghum and even local maize varieties has both limited our options and seen a lack of funding in supporting these varieties.

## **Seed market**

The input manufacturers have seen an opportunity in the seed market and are on the run to control it. The seed market in Africa is still 80% controlled by the informal seed market. The loss of African seed and our genetic pool is imminent.

Realising this threat, the African Biodiversity Network has been supporting capacity building and coalitions in Africa to

challenge the false solutions being pushed in Africa including GMOs, agrofuels and the green revolution. This has had its success with coalitions like the Kenya Biodiversity Coalition (KBioC).

An example of key successes is when KBioC was alerted in March 2010 to the fact that the multinational corporation Louis Dreyfus Commodities was granted export permits to bring into Kenya huge quantities of GMO maize. The South African authorities for the first time abided by the Cartagena Protocol on Bio-safety by notification through their website. No notification from the Kenyan side was forthcoming, indicating how lax biosafety matters are taken in Kenya.

The KBioC led a major media campaign, including protest letters to Kenya Bureau of Standards, Kenya Plant Health Inspectorate Services, Ministry of Agriculture, National Biosafety Authority and the parliamentary committee on agriculture protesting the illegal imports. As a result, the maize was frozen at the Port of Mombasa.

To tackle the challenges of laws and regulations not being abided to, KBioC through its members continues engaging with government in the development of standards and guidelines on threshold levels and seed regulations among others. Given Kenya's new constitutional dispensation, KBioC will be engaging on amendment of the biosafety law and monitor its implementation.

We end with a quote from Miguel d'Escoto, President of the UN General Assembly, who said in September, 2008: "the essential purpose of food, which is to nourish people, has been subordinated to the economic aims of a handful of multinational corporations that monopolise all aspects of food production, from seeds to major distribution chains, and they have been the prime beneficiaries of the world crisis".

*Anne Maina works with the African Biodiversity Network  
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# Confusion, coercion and collusion: why we are eating GM food

Frances Murrell

What has genetically modified (GM) food got to do with corn plants failing in Illinois, Roundup in the rain in Mississippi, birth defects in Argentina and your lunch? Most people are likely to have no idea. GM affects our health, legal, economic, scientific, educational, democratic, farming and regulatory systems as well as the genetic integrity of the living world.

The mainstream media has been unable, or unwilling, to unravel this complexity. No doubt this is partly because the experts they rely on for comment and information are frequently involved in the promotion of GM. The mainstream media, with some exceptions, tends to report GM as a promising new scientific advance being resisted by technophobes.

GM food is being eaten because the US government was persuaded by the biotech industry that the development of this technology was advantageous. Successive US governments have aggressively promoted GM crops and their acceptance worldwide. GM crops were first grown in North America in 1996. Farmers were given limited information on what they were growing. The US public had, and still has, virtually no idea they are eating GM food.

Australia allows the import of GM food. It would have been politically extremely difficult to reject it. The WTO ruled against the EU's de facto ban on GM food in 2006. Some politicians and state governments in Australia have supported popular concern and rejection of the technology. However conditions and governments change and the relentless pressure from the GM industry is increasing the penetration of GM crops and food into Australia. The dominant ideology, across all Australian governments, that public private partnerships are entirely beneficial is assisting the growth of the GM industry.

## Confusion

Reports on GM technology often make unsupportable claims about future benefits. The ABC's science show *Catalyst* aired a "GM for Good" program which claimed that a GM soy will produce an oil with the same heart-healthy omega 3 fatty acids found in fish: "Now the standard oil has about 10% of those

heart-healthy omega 3 fatty acids in it. This one has 25%. And the omega 3 in here is in a much healthier form."

These statements were presented as if they were thoroughly researched and proven. In fact this GM soy doesn't produce the omega 3 oils that cold water ocean fish provide (EPA and DHA). Rather it produces an omega 3 fatty acid that is usually present only in small quantities in our diet (SDA). The GM oil also has a 450% increase in trans fats generally regarded as detrimental to heart health. The program did not ask basic questions but seemed to endorse Monsanto's statements without further investigation.

Australian children are being targeted as well. ABC's 'Behind the News' program stated: "Imagine eating chocolate that's as healthy as a banana, or a hamburger without any fat! Thanks to genetically modified food that might one day be possible." This is currently impossible for GM, or any other, technology.

Thirty years of GM crop breeding has produced two main traits. Herbicide tolerance means GM plants survive being sprayed with weed-killers. The idea is that the crops live while surrounding weeds die. The other main trait is insect resistance. The GM plant produces toxins to kill certain insects that eat it. The toxins cannot be washed off as they are produced inside the cells of the plant.

Both traits are supposed to make weed and pest management easier for farmers. Instead super weeds and super pests are developing. Rootworms, once killed by GM corn toxins, have become immune to one of these poisons. They are eating through the roots of GM corn causing it to collapse in the field.

In the Mississippi Basin, use of the weedkiller Roundup increased eight-fold between 1992 and 2007. Most is being sprayed on GM soy, corn and cotton crops and Roundup is now being found in the rain and rivers. Superweeds that survive being sprayed with Roundup are estimated to cover 11 million acres of US farmland leading to a loss of crop yields and the use of more toxic herbicides.

A new report says the independent scientific literature shows "Roundup and glyphosate cause endocrine disruption, damage to DNA, reproductive and developmental toxicity,

neurotoxicity, and cancer, as well as birth defects.” Industry and regulators appear to have dismissed these findings. An Argentinean TV report “Poison on the Pampas” shows “the tragic human consequences of glyphosate spraying of GM soy, including babies with birth defects.”

These reports are available on the net, as is equally concerning information from scientists, researchers, farmers, film makers, journalists, academics, environmental groups, and individuals. Google the film “The World According to Monsanto” to learn of the criminal behaviour and lethal products of the company that owns most GM crops. “Scientists under Attack - Genetic Engineering in the magnetic Field of Money” reports on the GM industry’s systematic, worldwide and co-ordinated attacks on scientists whose research challenges it.

Why do reports in the mainstream media tend to ignore or minimise the reporting of this information? GM takes time and effort to understand. The issues cross many fields including science, law and agriculture. Journalists may not have the energy, interest or editorial support to sift through the competing claims. Many find GM too hard to question and do not know who, or what, to believe. The uncomfortable truth is that, if the concerns about GM agriculture are valid, its introduction is a scandal with huge implications.

## Coercion

We all need to eat. Controlling food is good business. In 1980 the US Supreme Court granted a patent over a GM bacterium. This was a radical step as, until this case, life forms were not considered patentable. This decision laid the foundation for the current GM industry where patent holders can prevent farmers saving and replanting GM seed. They can sue farmers for having the patented gene in their crops, even if it is present because of contamination beyond the farmers’ control. They can also prevent independent testing of their GM crops and food.

GM transgenic techniques involve creating a “gene cassette” of DNA from organisms such as bacteria, viruses, plants or man-made (chimeric) DNA. This may be shot into a cell on a tiny bullet or transferred via an agrobacterium.

If this new DNA is adopted by the cell genome, the transformed cell is grown into a GM plant. GM transgenic techniques are random, have low success rates and produce wide-ranging unpredictable effects beyond the intended alterations. It is completely different to the selective breeding that has been used over thousands of years to create the plants and animals we have now.

The large GM companies began buying seed companies in the 1990s. They are still acquiring them and now dominate the world seed market. They are: Monsanto, Du Pont, Syngenta, Bayer, Dow and BASF. These companies also sell pesticides and pharmaceuticals.

Monsanto persuaded the US government that GM crops should not be hindered by regulation, although they wanted the appearance of it. The solution was the creation of “substantial

equivalence”. This is the fiction that GM crops are equivalent to non-GM crops. The GM companies can voluntarily notify the US Food and Drug Administration (FDA) that their GM crops are safe. The FDA does no safety evaluation and requires no GM food labels before GM foods can be sold.

Once allowed in the US, Monsanto worked for their adoption globally. A document leaked to Gene Watch UK shows Monsanto’s intent to “buy influence with key individuals, stack committees with experts who support them, and subvert the scientific agenda around the world.”

The release of the WikiLeaks cables shows US governments have acted to force the adoption of GM worldwide. Special penalties were proposed by the US’s Paris Agency following France’s persistent rejection of Monsanto’s GM corn: “Country team Paris recommends that we calibrate a target retaliation list that causes some pain across the EU since this is a collective responsibility, but that also focuses in part on the worst culprits.”

## Three supports

The intense and sustained rejection of GM food by people around the world would reasonably have been expected to halt the spread of GM crops. However GM crops have three powerful supports: animal feed, agrofuels and agribusiness.

The main GM crops are soy, corn, canola, sugarbeet and cotton. Soy, corn and canola are used as feed for the increasing number of animals in feedlots. EU trade agreements and agricultural policies mean European feed crops are undercut by cheap soy imports. This allows GM soy grown in North and South America to enter the EU. A 2009 conference on GM in supply chains noted that animal feed was a larger market than human food.

The production of agrofuels from crops like corn, canola and sugar is supported by most G20 governments. The Worldwatch Institute notes: “Such a mobilization of government policies and incentives and farm resources has never been done in the name of fighting hunger, poverty or environmental destruction – exposing an ethical black hole.” Agrofuels are becoming the most attractive market as cars do not reject GM crops, unlike people and some parts of the livestock sector.

Finally, an estimated 75-90% of the global grain market is controlled by four companies: ADM, Bunge, Cargill and Louis Dreyfus. They have deep alliances with Monsanto and Syngenta. Louis Dreyfus imported GM maize into Kenya last year in an apparent breach of the biosafety law.

An intersection of patent law, company influence, US government support, trade policies, subsidies and cartels in the global grain trade is enforcing the adoption of GM crops.

## Collusion

There is an echo chamber of government departments, regulators,

scientists, universities, farming bodies enabling and promoting GM. They frequently have partnerships with the biotech industry. The Victorian government has formed a research partnership with Dow AgroSciences to develop GM crops. The WA government sold 19.9% of the ex-public plant breeding company InterGrain to Monsanto in 2010. InterGrain provides 40% of Australia's wheat germplasm.

Greenpeace's report into the development of GM wheat in Australia described how: "The CSIRO works with the Australian Centre for Plant Functional Genomics (ACPFPG) at the University of Adelaide. ACPFG is a key partner with Arcadia Biosciences – the company that licensed its last plant breeding trait to Monsanto – to commercialise GM wheat. ACPFG works with Australian Grain Technologies and Intergrain."

The Federal Department of Innovation has provided \$38.2 million over four years for a New Enabling Technology Strategy to "... provide a framework for the responsible development of enabling technologies such as nanotechnology, biotechnology and other technologies as they emerge in Australia." It will spend \$9.4 million on increasing consumer acceptance of new technologies. It funds "Tech N You" based at Melbourne University which provides the community and schools with information on GM. No scientists in Australia are being specifically funded to test the claims of the biotech scientists and industry.

Our food regulator, FSANZ, bases its approval of GM foods on data supplied by GM companies. It does none of its own testing and commissions no testing. FSANZ doesn't require the companies to undertake animal feeding trials.

A review looking at Conflict of Interest has found that where at least one of the researchers was connected to the GM industry, 100% of peer-reviewed studies made a favourable GM safety finding.

The Domingo review looked at all the safety studies on GM food to date. It concluded that there are very few studies, that the ones reporting favourable findings had been conducted by the GM companies, and that the issue of safety was undecided at all levels.

The American Academy of Environmental Medicine has asked doctors to educate the public to avoid GM foods due to the "serious health risk in the areas of toxicology, allergy and immune function, reproductive health, and metabolic, physiologic and genetic health."

Avoiding GM is hard as most processed food contains GM ingredients. FSANZ states it is mandatory for GM food to be labelled. Yet its definition of a GM food requiring labelling is extremely narrow. FSANZ exempts highly refined ingredients like oils, sugars and starches made from GM crops, products from animals fed on GM feed, GM processing aids, accidental contamination under 1% and GM additives.

Therefore very few GM ingredients are labelled. The public has been let down by a lack of independent information, precautionary regulation, and critiquing science. The institutions expected to act in the public interest are frequently found to have an interest in promoting GM.

## Where to go from here?

Dan Hind's book 'The Return of the Public' shows how our democracy and our lives are being undermined by the control of the media and science by industry and government.

Private media groups or public broadcasters decide what stories are reported. This shapes the discussion, public understanding and creates the political climate. Hind's solution to this is 'Public Commissioning'. The public would vote on how to allocate funds to journalists to investigate topics put forward in town meetings, petitions and discussions. Commissioned journalists would have the public as their client, not a government broadcaster or a private media mogul. The resultant information could then be broadcast by a variety of media. The public would be able to get proper investigation into topics of interest.

Industry and government fund science. Governmental use of public funds to enter into partnerships with industry creates an environment where science is increasingly focusing on creating patented products with a commercial benefit. It can be hard to see what the public gains from this.

Hind suggests a similar public commissioning for scientists. The public could then ensure that some of its tax dollars are spent on research and development projects of its choice. Integrated problem solving science, like how to translate the gains in agro-ecological agriculture into an Australian context, would be more likely to be funded.

GM is challenging us to become active citizens. We need to question, take action and demand accountability. The reward for this effort would be a media and scientific renaissance. This in turn would create the basis for a healthy democracy. It would also create a healthy, safe and delicious food system.

*Frances Murrell is a spokesperson for MADGE – Mothers Are Demystifying GE. MADGE advocates on behalf of consumers for the right to know what is in our food, and promotes information on natural foods and healthy farming practices. info@madge.org.au, www.madge.org.au*

# Nano-silver immune to government regulation

Gregory Crocetti

For decades, we have been waging a “war on germs” – and breeding a fear of all things micro. As a result, the public perceives the need for ever-greater levels of hygiene. Corporations, all too keen to pander to an obsessive-compulsive approach to cleanliness, are increasingly exploiting this opportunity to market anti-microbial and odour-controlling products to a fearful society.

However, leading Australian health experts are now urging us to rethink this obsession with cleanliness, warning that our extreme approach to killing germs is potentially creating serious public health problems such as breeding more superbugs in hospitals and more allergies in children. In spite of these calls for a re-evaluation of our attitudes to microbes, the federal government refuses to heed these warnings.

The latest anti-microbial weapon is nano-silver, tiny nanometre sized particles of silver. These microscopic particles of nano-silver can now be embedded in practically any material, from polymers and textiles to ceramics and even glass. Companies like LG, Samsung, Daewoo, Crocs, Remington and Vidal Sassoon, now use nano-silver in everyday items such as toothbrushes, hairbrushes, socks, shoes, sports clothing, towels, cleaning products, computer keyboards, fridges, washing machines, baby bottles ... it's a big list, and it's growing.

Nano-silver is a much more powerful weapon against ‘germs’ than larger versions of silver. However, unlike other anti-microbial compounds such as penicillin or bleach, scientists do not fully understand how nano-silver kills microbes. And unlike most anti-microbial compounds, nano-silver is a potent killer of all types of microbes, including bacteria, fungi, algae and viruses.

Laboratory studies with zebrafish and mammalian cell lines have also demonstrated the toxicity of nano-silver to larger forms of life. Yet its potential toxicity to humans is poorly understood. Considering the near-universal ability of nano-silver to eradicate or disrupt living systems, it is surprising that it is used so freely by corporations seeking to cash in on hygiene-obsessed ‘markets’.

That's not to say that nano-silver doesn't potentially have some appropriate – strictly controlled – uses in our society. In a hospital setting, nano-silver is used in the lining of burns dressings and devices like catheters and stents. In these clinical situations, bacterial infections can (and often do) kill already-compromised patients. It is no wonder then that nano-silver was developed as a weapon of last resort to protect these highly compromised patients in hospitals. It is only in recent years that companies have been able to exploit this nanotechnology to escalate their war against germs in our homes.

## Scientific warnings

The scientific community is now sounding urgent alarms over the widespread use of nano-silver. In interviews for a new report commissioned by Friends of the Earth, leading Australian health experts have warned that the widespread use of nano-silver is not only unnecessary, but also dangerous.

The president of the Australian Society for Microbiology and Clinical Director of Microbiology and Infectious Diseases at the University of Adelaide, Prof. John Turnidge, describes the escalating use of nano-silver in consumer products as “frustrating, bizarre and stupid”, explaining that fear of bacteria was being used “as a marketing tool to introduce products that are unnecessary”.

Health experts have been warning for years that the overuse of antibiotics ultimately breeds antibiotic-resistant superbugs – superbugs which claim around 7000 Australian lives every year in hospital-associated infections. Given this context we need less use of nano-silver and it should be used as a weapon of last resort. Bacteria regularly trade packages of antimicrobial-resistance genes in mobile DNA ‘cassettes’, which can copy themselves independently of their genomes, particularly in times of stress. This means that the use of nano-silver, rather than reducing or controlling infections, can actually drive the creation of more superbugs.

Childhood allergies and immune deficiencies have rapidly risen to epidemic proportions in industrialised nations. With nearly 40% of children in Australia living with an allergy of some kind, some public health observers say that the current generation of young children should be labelled generation ‘A’ – for Allergy. Scientists once looked to explain this rapid increase in allergies in terms of inheritable genes or industrial pollutants, but comprehensive studies have ruled these causes out. It now appears that our widespread use of antimicrobials weapons like nano-silver might be a key causal factor behind this trend.

Nanosilver is an unselective antimicrobial – meaning that it indiscriminately kills both good and bad microbes. Widespread use in consumer products means that we are routinely placing this potent antimicrobial in close contact with our bodies. In addition to promoting microbial resistance, this will reduce our body's exposure to good microbes, potentially compromising our immune system and increasing the chance of contracting immune diseases and allergies.

Immunologists now recognise that humans need to be exposed to 'friendly' microbes like bacteria and fungi during our childhood to help prime our immune systems. Too little exposure to these microbes prevents the development of a well-balanced immune system, leading to a range of potential diseases, allergies and disorders later in life.

In regard to hygiene, this presents society with a double-edged sword. On the one hand, the rise of modern sanitation and antimicrobial technologies have led to the dramatic decrease in infectious diseases as well as other important health indicators such as lowered infant mortality (for non-indigenous Australians, that is).

On the other, autoimmune diseases and allergies were virtually unknown to medicine before the 20th century. Health professionals universally agree that hand-washing plays one of the most important roles in preventing the spread of disease – yet research has also demonstrated that regular soap provides the same amount of protection against disease-causing microbes as soaps containing compounds like triclosan or nano-silver.

## Government response

No research currently exists into the long-term environmental or public health impacts from the widespread use of nano-silver. As with all emerging technologies, scientists simply haven't had enough time to perform these experiments. When confronted with the issues raised by the recent Friends of the Earth report into nano-silver, the Australian government stalled, arguing for more time.

Or, as Cathy Foley, the chief of the CSIRO Division of Material Science and Engineering, argued on ABC radio in response to the report, "I think until there is absolutely some evidence that says 'Woo, we need to wait' ... at this stage there has been no definitive work that has been done. ... We haven't got the other point of view yet to be able to say whether or not there is a level of risk that is worth pulling back on."

In The Australian on October 5, Kim Carr, Minister for Innovation, Industry, Science and Research, further explained the government position: "When we confront new technologies that may have ethical or safety concerns, it is natural that we are cautious. And we have elaborate regulatory systems to exercise that caution. ". These elaborate regulatory systems are essentially broken, addressed shortly. But first back to the Minister.

In the next breath, Minister Carr, claims that to admit to risks posed by any nanotechnology would be "to fall victim to scare campaigns". And his suggestions for "Australians to turn their backs on those who would encourage us to stay in the caves of mediocrity" ring hollow given the recent warnings around the widespread use of nano-silver from Australia's most senior microbiologists. So the lines of the debate are drawn: corporations may use any and all fear campaigns they choose to market products whose safety and utility remains unproven, and those arguing for caution and more research are, in Kim Carr's words, threatening to "wind back the clock of human progress".

In the US, Europe, and Australia, regulation is primarily focused on the assessment of "new" chemicals. To date, despite widespread recognition that nanoparticles possess different properties to the same chemicals in larger (bulk) form, nanoparticles are not recognised as "new". This means that although many nanoparticles present new and often greater toxicity and health risks, they do not trigger new assessment processes.

This leaves nano-silver effectively unregulated, with no requirements for companies to conduct and submit risk assessments before use. Companies are still not required to identify nanoparticle ingredients on product labels, or to conduct nano-specific safety tests on these ingredients. Even more troubling is the fact that regulatory bodies are still not required to assess public health impacts when conducting assessments of new chemicals.

## Moratorium needed

For several years, public health and environmental groups including Friends of the Earth have been calling for a moratorium on products using nanotechnology until safety testing has been performed. In response, Australian regulatory bodies consistently claim to have "programs in place" and "reviews underway" to close gaps in the nanotechnology regulation.

However, efforts to close regulatory gaps will have to confront a market in which corporate gain far outweighs issues of the public good. As a 2008 government report boasted, Australia's approach to regulation was cited by the OECD as "a best practice benchmark for other OECD countries. Australia was identified as having the fewest restrictions on product markets of the 30 OECD countries, the least public ownership of business and the least restrictive impact of business regulation on economic behaviour."

However in the Friends of the Earth report, Prof. John Turnidge (Adelaide Uni), Prof. Hatch Stokes (UTS), and Assoc. Prof. Tom Faunce (ANU) describe the government's handling of nano-silver regulation as a "policy failure".

Given the rising human toll from the war on germs, and the lack of political will to confront the marketability of antimicrobial nano-silver, it is time for us to question the choice we are now confronted with: an immune system that gets plenty of practice 'on patrol', or the completely sterile alternative embedded in toothpastes, fabric softeners, bath towels, medicines, cosmetics, deodorizers, baby clothes, baby bottles, refrigerators, food containers, kitchen cutting boards, wrist bands, underwear and much more.

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*The FoE report 'Nano-silver: Policy Failure puts public health at risk' is posted at [www.nano.foe.org.au](http://www.nano.foe.org.au)*



# Anarchism and the Politics of Technology

Uri Gordon



**“A nuclear weapon by its very existence demands the introduction of a centralised, rigidly hierarchical chain of command ... it would simply be insane to do otherwise.”**

Among contemporary writers on the politics of technology, little needs to be said concerning the ‘neutrality’ of technology – the socio-political nature of technological development has been exposed by academic Langdon Winner and others, and few adhere to the ‘neutrality of technology’ thesis.

As Winner argues, “technologies are not merely aids to human activity, but also powerful forces acting to reshape that activity and its meaning”:

*As technologies are being built and put into use, significant alterations in patterns of human activity and human institutions are already taking place . . . the construction of a technical system that involves human beings as operating parts brings a reconstruction of social roles and relationships. Often this is a result of the new system’s own operating requirements: it simply will not work unless human behavior changes to suit its form and process. Hence, the very act of using the kinds of machines, techniques and systems available to us generates patterns of activities and expectations that soon become “second nature.”*

Winner’s approach focuses the discussion of technology on issues of power – a perspective usually ignored in policy debates. It argues that technologies both express and reproduce specific patterns of social organisation and cultural interaction, drawing attention “to the momentum of large-scale sociotechnical systems, to the response of modern societies to certain technological imperatives, and to the ways human ends are powerfully transformed as they are adapted to technical means”.

Winner gives several examples of technologies employed with intention to dominate, including post-1848 Parisian

thoroughfares built to disable urban guerrillas, pneumatic iron molders introduced to break skilled workers’ unions in Chicago, and a segregationist policy of low highway overpasses in 1950s Long Island, USA, which deliberately made rich, white Jones Beach inaccessible by bus, effectively closing it off to the poor.

In all these cases, although the design was politically intentional, we can see that the technical arrangements determine social results in a way that logically and temporally precedes their actual deployment. There are predictable social consequences to deploying a given technology or set of technologies.

New technologies must be integrated into an existing socio-technological complex and as a result are imprinted with its strong bias in favour of certain patterns of human interaction. This bias inevitably shapes the design of these technologies and the ends toward which they will be deployed. Because of the inequalities of power and wealth in society, the process of technical development itself is so thoroughly biased in a particular direction that it regularly produces results that favour certain social interests.

What this adds up to is what Winner calls the “technical Constitution” of society – deeply entrenched social patterns that go hand in hand with the development of modern industrial and post-industrial technology. This constitution includes a dependency on highly centralised organisations; a tendency toward the increased size of organised human associations (“gigantism”); distinctive forms of hierarchical authority developed by the rational arrangement of socio-technical systems; a progressive elimination of varieties of human activity that are at odds with this model; and the explicit power of socio-technical organisations over the “official” political sphere.

Multinational corporations spend billions on research and development – whether in-house, through funding for universities, or in public-private partnerships. Academia is also encouraged to commercialise its research, through a combination of funding pressures created by privatisation and direct government handouts. In policymaking on technological development, corporate representatives often sit in committees of bodies such as the UK academic Research Councils, which allocate huge amounts of funding.

Unofficially, there are industry-funded lobby groups and a revolving door between the corporate world and senior academic and government posts relevant to science and technology policy. As Winner notes this is “an ongoing social process in which scientific knowledge, technological invention, and corporate profit reinforce each other in deeply entrenched patterns, patterns that bear the unmistakable stamp of political and economic power”.

## Hierarchy and capitalism

A society biased toward hierarchy and capitalism generates the entirely rational impetus for the surveillance of enemies, citizens, immigrants, and economic competitors. In such a setting, technologies such as strong microprocessors, broadband communication, biometric data rendering, and face- or voice-recognition software will inevitably be used for state and corporate surveillance, whatever other uses they may have. It should not be surprising, then, that the decision on the viability of a technological design, as Noble notes, “is not simply a technical or even economic evaluation but rather a political one. A technology is deemed viable if it conforms to the existing relations of power”.

Meanwhile, technological literacy becomes all but a prerequisite for membership in society – which itself has come to depend on the stability of large-scale infrastructures that allow systemic, society-wide control over natural variability. While infrastructure breakdowns are treated either as human error or as technological failure, Edwards notes that few will “question our society’s construction around them and our dependence on them ... infrastructure in fact functions by seamlessly binding hardware and internal social organization to wider social structures. ... To live within the multiple, interlocking infrastructures of modern societies is to know one’s place in gigantic systems that both enable and constrain us.”

In an even stronger sense, many technologies can be said to possess inherent political qualities, whereby a given technical system by itself requires or at least strongly encourages specific patterns of human relationships. Winner suggests that a nuclear weapon by its very existence demands the introduction of a centralised, rigidly hierarchical chain of command to regulate who may come anywhere near it, under what conditions, and for what purposes. It would simply be insane to do otherwise.

More mundanely, in the daily infrastructures of our large-scale economies – from railroads and oil refineries to cash crops and microchips – centralisation and hierarchical management are vastly more efficient for operation, production, and maintenance. Thus the creation and maintenance of certain social conditions can happen in the technological system’s immediate operating environment as well as in society at large.

On the other hand, some technologies would seem to have inherent features that are strongly compatible with decentralisation because of their availability for deployment at a small scale and because their production and/or maintenance require only moderate specialisation. Solar- and wind-powered generators are often mentioned in this context, although they could also operate on a centralised model. Besides scale and intelligibility, some technologies encourage community more than others – consider the two-way telephone compared to the one-way television.

The evaluation of any particular technology on these grounds requires both factual and political assessment of the specific case. Still, Winner offers a few general maxims: technologies should be given a scale and structure of the sort that would be immediately intelligible to non-experts; be built with a higher degree of flexibility and mutability; and be judged according to the degree of dependency they tend to foster (less is better). Yet while these may be desirable qualities, “the available evidence tends to show that many large, sophisticated technological systems are in fact highly compatible with centralized, hierarchical managerial control”.

These critiques of technology provide useful markers for anarchists. With their focus on power they clearly indicate the often inherently hierarchical and exploitative nature of the socio-technological complex while providing criteria for judging particular technologies on their political merits. Where these critiques are weaker is in their attached proposals for change.

## Proposals for change

Winner suggests a process of “technological change disciplined by the political wisdom of democracy,” which would give citizens a true opportunity to approve or reject new technologies. Apparently forgetting everything he knows about the state and capitalism, Winner expects a reform of the present system to include “institutions in which the claims of technical expertise and those of a democratic citizenry would regularly meet face to face”.

Can such concessions be expected? At a time of a general trend away from democracy in advanced capitalist societies, the prospects for the democratisation of an entirely new sphere appear very unlikely. Rather than a modification of the existing regime, the move to human-scale technologies and participatory decision making about them requires thorough decentralisation – an increase in the number of centres, their

accessibility, relative power, vitality, and diversity.

Yet Winner himself is sceptical about this option: ... any significant attempt to decentralize major political and technological institutions ... could only happen by overcoming what would surely be powerful resistance to any such policy. It would require something of a revolution. Similarly, to decentralize technology would mean redesigning and replacing much of our existing hardware and reforming the ways our technologies are managed ... retro-fitting our whole society.

That technological decentralisation requires “something of a revolution” should not bother anarchists so much – it is, after all, no less achievable than the rest of the sweeping political decentralisation that anarchists propose. Yet when push comes to shove Winner is too committed to industrial modernity to countenance the option. He argues that it is no longer possible to “imagine an entire modern social order based upon small-scale, directly democratic, widely dispersed centres of authority” or that “decentralist alternatives might be feasible alternatives on a broad scale.”

Anarchists are going to have to bite the bullet where Winner fails to. For he has a point in saying that a modern social order is incompatible with thorough decentralisation. Can a society based on neither profit nor command even maintain modern infrastructures on their present scale, let alone engineer technological leaps?

It is certainly hard to imagine how the levels of coordination and precision needed for high technological exploits from biotech to space exploration could be achieved in a society that lacks both centralised management and the incentives and threats of capitalism. Political and technological decentralisation may indeed require a significant slow-down, halt, and/or roll-back of technological capabilities.

Decentralisation also appears increasingly inevitable in the long run, if climate change and peak oil are recognised as realities. As capitalism meets the ecological limits of its expansion, global industrial civilisation may face fragmentation and decay whatever anarchists do.

*Uri Gordon is an Israeli activist and writer, formerly active in Britain and now a supporter of the Negev Coexistence Forum and Anarchists Against the Wall. He teaches at the Arava Institute for Environmental Studies and is the author of Anarchy Alive!: Anti-Authoritarian Politics From Practice to Theory (Pluto Press, 2008).*

*A longer, referenced version of this article originally appeared in WorkingUSA: The Journal of Labor and Society and is posted at <http://anarchyalive.com>*



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**Friends of the Earth  
Australia**

# Earthworker Cooperative: green jobs for Australia

Dave Kerin



Unions, community and environment groups gather in Melbourne to launch Earthworker's 100,000 Australians Campaign.

**E**arthworker Cooperative is a social enterprise with a mission to create solutions for transitioning Australia's workforce into a low carbon economy. It aims to create jobs, build social capital and protect the environment in local communities through the manufacture of renewable energy infrastructure. The cooperative factories will be established in regional areas where large proportions of the workforce are dependent on carbon intensive industries and energy generation.

The cooperative's current objective is to get 100,000 Australians to contribute to the establishment of a solar water heating factory in Morwell, Victoria through a \$20 membership fee. Joining the Earthworker Cooperative is simple and can be done at [www.earthworkercooperative.com](http://www.earthworkercooperative.com)

There are numerous benefits of a cooperative structure:

- A cooperative cannot be wholly owned by any one party or entity; it cannot be bought out. This guarantees that the venture will remain Australian owned and operated.
- As cooperatives have a closed loop of finances, the sole beneficiaries of the income generated by the enterprises are the cooperatives themselves and the communities in which they work. This ensures that products manufactured by the cooperative can be sold at a competitive price and surpluses will be used to further expand activities of new cooperatives.
- A cooperative structure is compatible with the philosophy that socially and environmentally responsible approaches to economics, in addition to worker's rights, are paramount.

- Large scale, corporate capitalism will not support new manufacturing in this country while there are cheaper, non-union options in other countries; neo-liberal governments will never get back into large-scale ownership and employment and especially not in manufacture. One of the clearest options is for organised labour and our constituent communities to develop new democratic economic structures and systems which are responsive to our real needs.

The United Nations has declared 2012 the International Year of Cooperatives (IYC) in recognition of their contribution to socio-economic development and in particular their track record in poverty reduction, employment generation and social integration. The IYC Steering Committee has adopted our cooperative as one of the projects it will support in 2012. Earthworker Cooperative will provide support to establish the solar factory in Morwell – Eureka's Future Workers Cooperative – and other cooperatives to be established in its wake.

The Eureka Cooperative will produce the Everlast tank, solar collectors and associated components – a water heating system which is already successful in the marketplace. Once the factory is producing the entire unit, there will be 50 jobs in manufacture, sales, maintenance, clerical and transport, per solar hot water unit factory we build.

*For more information and to jump on board, visit [www.earthworkercooperative.com](http://www.earthworkercooperative.com)*

# What's holding renewables back?

*Ben Courtime*

**T**he barriers to renewable energy are many: it's not just a matter of the draconian new Victorian laws against wind farms: the legacy of government support for fossil fuels also hangs heavily over the renewables sector.

The Australian Conservation Foundation released a study in March which revealed that for the 2010-11 financial year, incentives to fossil fuels, such as the failure to index the fuel excise for a decade, total over \$12 billion. By contrast, climate programs attracted just over \$1 billion. And this ACF figure includes \$100 million for clean coal – not a real climate expenditure in most people's view. The fossil fuel incentives are built into the economy in an ongoing way. They are a stable environment for investment. The climate expenditure tends to be sporadic, liable to change at the whim of government.

The other legacy hanging over renewables is the privatisation of the energy sector. Before the privatisation of Victoria's State Electricity Commission in the 1990s, its workshops in the Latrobe Valley began building wind turbines. The project was abandoned with privatisation.

Academic Sharon Beder wrote in her 2003 book 'Power Play' that, following privatisation, "A report commissioned by electricity distributor Origin Energy found that ... Victorian brown coal plants had, to a certain extent, displaced the cleaner NSW black coal plants and SA gas plants in electricity generation. Even outside Victoria baseload electricity tends to be generated by old coal plants rather than the newer gas-fired plants that emit less carbon dioxide. The latter tend to be used for peak loads because marginal costs are higher."

## **Renewables are lowering prices**

The high marginal costs of gas plants are because they have to buy gas to burn, on the market. Wind turbines may have relatively high costs to construct, but their marginal cost is negligible because they need no fuel. As a result, the spot-market for energy tends to integrate wind farms whenever the wind blows, displacing the expensive peaker gas plants.

Peak loads are growing faster than overall demand, fuelled primarily by the uptake of airconditioners. This leads to higher energy prices – partly through the use of expensive peaker plants (which may only operate for a few days of the year, but charge exorbitant spot prices) and partly through upgrading the electricity distribution network to accommodate peak loads.

It is a golden opportunity for reducing demand (by energy efficiency in buildings, for example, and installing solar panels) to reduce prices. But renewable energy is also keeping prices down.

Over the past five years, South Australian wind power has grown to provide 20% of that state's electricity, largely displacing their import of dirty Victorian electricity. Over that time, carbon emissions have decreased from 9.8 to 8 million tonnes CO<sub>2</sub> equivalent, despite an overall increase in electricity use, and wholesale prices have fallen. Clearly, renewable energy has a valuable role. It actually works, despite the years of naysaying that it is too unreliable and too expensive. In fact, renewable energy continues to become cheaper. Solar panels have now reached cost parity with coal power in some regions of Australia.

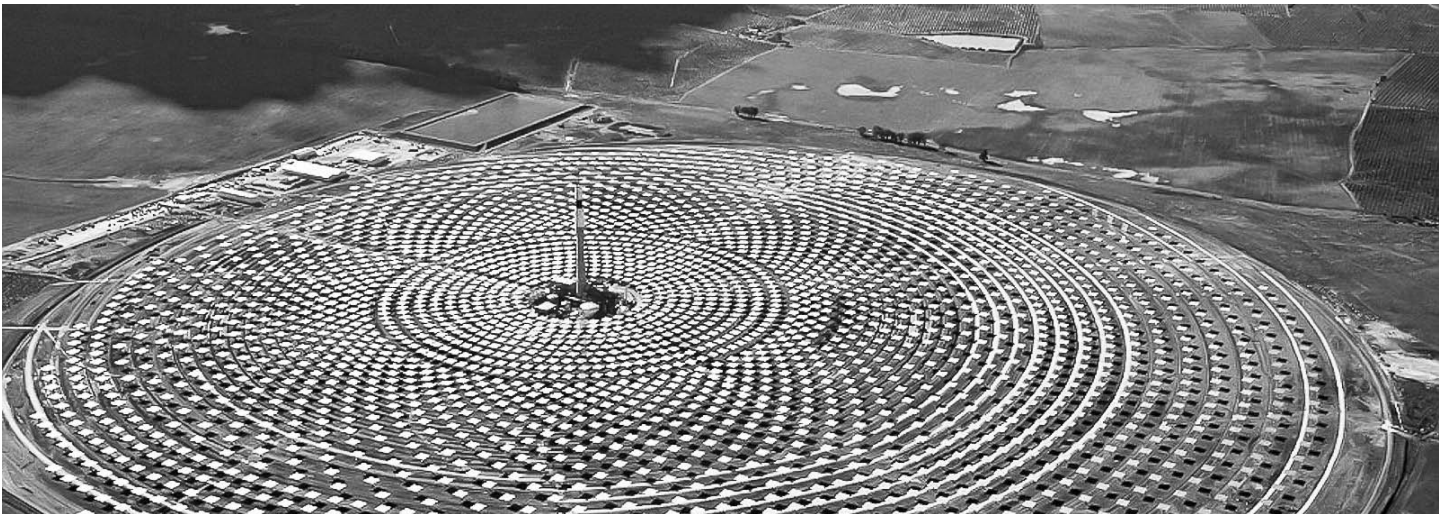
## **Gas is the main rival to renewables**

It is becoming harder and harder to quarantine Australia from the developments in renewable energy, which the extreme anti-wind laws in Victoria are a testament to. These restrictions won't hold new technology out forever – but that's not an excuse to be complacent.

The battle on now is between gas and renewable energy. In the competition to displace Old King Coal, gas is the preferred option of capital. Gas is highly profitable because it's a commodity in its own right. The 'greenhouse mafia' fossil fuel lobby will use its privileged access to the corridors of power in Canberra, and as significant investment into gas generation is made it will accumulate further political and economic inertia of its own. Gas investors will fight to retain their assets. Yet gas, as an internationally traded commodity, is going to increase in price. Choices to move to cheap gas now will not be cheap forever. And the environmental cost will grow even further as the gas industry moves into coal-seam gas and shale gas with the attendant environmental destruction.

Put bluntly, no mineral gas extraction is environmentally safe. There is too much CO<sub>2</sub> in the air already: renewables are the only safe ecological option, and we can't wait for price disparity to slowly bring them to the top. We have to build the support framework for renewables now. This is where the problem arises. Despite formally approving many wind farms, and opposing the reactionary new anti-wind





The Torresol Gemasolar plant in Spain

laws in Victoria, Labor governments (state and federal) have not yet ensured the level of support for renewables that we need.

### Getting the right support mechanisms

Currently, large-scale renewables are supported by the Renewable Energy Target (RET). Renewable energy generators are awarded Renewable Energy Certificates (RECs), which they sell to generators, who then surrender a set number each year to the government to prove they are meeting the RET.

But under the Rudd government, home solar panel and hot water installations were awarded five times the number of RECs for each unit of energy generated or saved. These extra 'phantom' RECs caused a glut in the market, which has not yet passed and is keeping the REC price low enough that new wind farms can't get finance to begin construction. Renewable energy needs certainty and stability. Previous support schemes have been altered and withdrawn with such capriciousness that it has amounted to almost as much disruption as it has provided support. A set feed-in tariff for large-scale renewables would remove the uncertainty of a fluctuating REC market. It is what is driving the rapid expansion of large-scale solar and wind energy in countries like Spain: not enough, perhaps, but light years ahead of Australia.

Under the carbon price package currently in federal parliament, the sweeteners for the Greens and the climate movement are a promise to close 2000 MW of the dirtiest coal power stations, and the establishment of the Clean Energy Finance Corporation (CEFC). The CEFC will have \$11 billion to leverage finance for renewables projects. Half of this, however, will be available for projects that are not 100% renewable, potentially giving gas a role, like in the recently approved solar thermal power station to be built in Queensland – perhaps not coincidentally, in the centre of Australia's coal seam gas fields.

The problem with the CEFC is that on commercial principles, it is likely to support the most profitable and cheapest renewable options, not necessarily the most

strategically useful. Solar panels and wind turbines are great and they are necessary, but the essential link is 24-hour solar power.

### Baseload solar power: the game changer

The Torresol Gemasolar plant in Spain concentrates the sun onto a heat receiver and stores the heat in a great tank of molten salt. The tank, like a giant thermos, only loses around 1% heat per day, and contains enough energy to run for 15 hours after the sun goes down. This style of concentrated solar power (CSP) with heat storage would be ideal for Australia. It is currently very expensive, but the cost reduction from building one plant to the next is steep, as it is relatively simple technology, and scaling up reduces costs rapidly.

To build CSP with storage in Australia would not only provide clean energy, but even more importantly, the power of a tangible, real-life example that could not be ignored. It would change the debate irrevocably. Activists in South Australia are now campaigning to use these two "sweeteners" in the carbon price package to call for Port Augusta to replace its coal plants with CSP. While we battle against the conservative reaction against wind power in Victoria, South Australia is set to lead the way again!

We can't afford to be complacent. The forces mobilised against wind power are against all renewable energy when you scratch the surface. We have to overcome their resistance, but we have to keep going beyond that. We need to develop a viable political framework for a transition into 100% renewables, not simply adding a few wind farms into the current mix. That needs strategic planning that hasn't been seen since the electricity grid was in public ownership. It needs serious government investment, also unseen since privatisation, and to get these we will have to mobilise serious community pressure and support for the process.

*Ben Courtice is a renewable energy campaigner with Friends of the Earth, Melbourne.*

# The case for direct action against fossil fuel expansion

*Shaun Murray*

Limiting global warming to 2°C in order to ‘avoid dangerous climate change’ has been the vacuous, much-repeated rhetoric of many governments around the world for some time. Leaving aside the issue that the climate crisis is already causing hundreds of thousands of deaths annually (according to the World Health Organisation), and particularly impacting countries that have both contributed little to the problem and have relatively little capacity to adapt, the truth is that the countries most responsible have done little to address this crisis.

Furthermore, during this period of inaction the scientific evidence has become more dire, with emissions tracking at worst-case scenarios and the climate proving to be significantly more sensitive than first thought. As Prof. Kevin Anderson from the UK Tyndall Centre for Climate Change notes: “the impacts associated with 2°C have been revised upwards, sufficiently so that 2°C now more appropriately represents the threshold between ‘dangerous’ and ‘extremely dangerous’ climate change.”

If we extrapolate Australia’s potential failure to meet its obligations to a global carbon budget, to a collective failure by many high emitting countries, the world could then be on track for up to 4°C of warming by the end of this century, and potentially as early as 2060. Unfortunately, 4°C of warming doesn’t equate to sipping on gin and tonics on balmy Winter evenings, but rather a mass extinction event and the end of human civilization as we know it.

Prof. Kevin Anderson states: “For humanity it’s a matter of life or death, I think it’s extremely unlikely that we wouldn’t have mass death at 4°C. If you have got a population of nine billion by 2050 and you hit 4°C, 5°C or 6°C, you might have half a billion people surviving.” Prof. John Schellnhuber states that with 4°C of warming, “population carrying capacity estimates are below 1 billion people.”

## The task at hand

In order to preserve a climate that can continue to support life on Earth as we know it, we now need an urgent transition away from fossil fuels. Very high per capita emitters such as Australia need to essentially cease using fossil fuels this decade in order to equitably and effectively address this crisis.

As organisations such as Beyond Zero Emissions are demonstrating, wealthy countries like Australia have the economic and technical capacity to move to a zero emissions society this decade using existing technologies and without major economic sacrifices. The missing ingredient is political will, and in the context of the current public discourse on climate change, where both the federal government and opposition espouse 5% emissions reduction targets (including loopholes) by the end of the decade, it is easy to believe that a 100% emissions reduction is impossible.

Accepting that failure is unconscionable, we need to consider how those of us that appreciate the gravity of the situation can act to help redefine the Australian political landscape. To do this may require sacrifices and re-examining what we consider most important in our lives. For the biosphere, for billions around the world today who are most vulnerable to climate impacts, and for all future generations, the stakes have never been higher.

The simplest and most urgent action facing us is to halt the expansion of the fossil fuel industry. This is of course only the first of a number of necessary steps, but is nevertheless a massive task in its own right. Given that this could be regarded as the first hurdle, let’s focus on how this could be achieved as a starting point.

Currently one of the most successful campaigns against fossil fuel expansion in Australia is the Lock the Gate Alliance, which has managed to significantly threaten the viability of many new coal and coal seam gas projects primarily through a campaign of direct action and non-cooperation.

The Lock the Gate Alliance has harnessed both the concerns of local communities over impacts on human health, farmland, ground water, and land owners’ rights, with the concerns of the environment movement. Lock the Gate members have employed a range of direct action tactics from simple refusal of access to mining company representatives, to blockading and locking on to machinery. After just over one year, these actions have caused significant delays, threatened the viability of new projects, and very publicly removed the social license, particularly for coal seam gas.

The lesson from this success is that where there is new exploration taking place, and particularly where there is also local opposition to new projects, we need to focus



Above: Photo from Lock the Gate Alliance. Right: Muwillumbah, NSW, May 14, 2011

on building strong resistance on the ground in solidarity with local groups as a first line of defense. Another great example of this tactic is the Save the Kimberley campaign, which has also seen a strong alliance of people engaging in direct action to halt the construction of a massive gas development.

### Join the struggle

We have just a small window of opportunity remaining to avoid catastrophic climate change. Success in frontline community struggles against expansion of the fossil fuel industry is vital to removing the industry's social license, and building the direct action capacity of grassroots groups is essential to bringing this about. There are currently plans for major expansion of the coal industry in Queensland, NSW, Victoria, SA and WA.

Here is a round-up of grassroots groups that are engaging direct action in Australia (though it is not a comprehensive list). Please consider getting involved with or donating to these campaigns:

In Queensland, Six Degrees (a Friends of the Earth campaign) is currently locked in a legal battle with Xstrata over the establishment of what would be the largest coal mine in the Southern Hemisphere at Wandoan. Six Degrees also engages in direct action against the coal industry. Web: [www.sixdegrees.org.au](http://www.sixdegrees.org.au), email: [bradley.smith@foe.org.au](mailto:bradley.smith@foe.org.au)

Based in Newcastle, Rising Tide Australia is leading the fight against coal exports in the world's largest coal port. It is Australia's longest running, most experienced community campaign engaging in direct action against the coal industry and is fighting a difficult battle against

plans to build new terminals and greatly expand to the volume of coal exports. Web: [www.risingtide.org.au](http://www.risingtide.org.au), email: [risingtide@risingtide.org.au](mailto:risingtide@risingtide.org.au)

The Lock the Gate Alliance is currently resisting coal and coal seam gas mining, predominantly in Queensland and NSW, and forging a paradigm-shifting alliance between farmers and greenies. Web: [www.lockthegate.org.au](http://www.lockthegate.org.au), email Drew Hutton: [dhutton97@gmail.com](mailto:dhutton97@gmail.com)

In Victoria, Quit Coal (a Friends of the Earth campaign) is the leading community group fighting the coal industry. It currently has campaigns in progress against HRL's proposed new coal-fired power station, and Mantle Mining's plan to mine, dry and export brown coal from Bacchus Marsh. Web: [www.quitcoal.org.au](http://www.quitcoal.org.au), email [shaun.murray@foe.org.au](mailto:shaun.murray@foe.org.au), phone Shaun Murray 0402 337 077.

In WA, Save the Kimberley is leading the fight against plans to build one of the world's largest oil and gas refineries on the Kimberley coast. Web: [www.savethekimberley.com](http://www.savethekimberley.com), email: [info@savethekimberley.com](mailto:info@savethekimberley.com)

*Shaun Murray is coal spokesperson for Friends of the Earth, Australia.*

# Ecofeminism and Fukushima – Life Before Profit

*Ariel Salleh*



*Radiation testing in the wake of the Fukushima disaster.*

On 11 March 2011, the Fukushima nuclear electricity plant in Japan was hit by a powerful earthquake and tsunami. An undetermined land area remains uninhabitable; thousands of people are trying not to breathe, touch, eat or drink, the toxic levels of radiation in their environment.

Moreover, Japanese citizens have become increasingly disturbed by an absence of transparency from both the Tokyo Electric Power Company (TEPCO) and government officials. And neither the World Health Organization, nor the International Atomic Energy Agency, has provided women with information about radiation exposure effects on their reproductive function. If anything, dis-information is the order of the day. One Genichiro Wakabayashi from Kinki University's atomic-energy research institute, even claimed that wearing masks or staying indoors during summer will harm children more than radiation will.

The self-interest of those who deny nuclear risk is both capitalist (economic) and patriarchal (cultural). Psychological denial protects a structural hierarchy of wealth, power, and bonding opportunities between men. Around the base of this narrow ladder of rewards, stand youth, indigenous peoples, and housewives – the 'periphery' of neoliberalism and its hegemonic masculinity. These 'others' exist in direct contradiction to the military-industrial complex, and they each bring complementary insights and skills to its political transformation.

However, my focus in this essay is on women, mothers, housewives, many of whom are also indigenous, giving double-strength to their political work. People whose labour sustains human bodies and links to natural habitat prioritise social reproduction over economic production. They put life before profit. This observation gives rise to a distinct political analysis known as ecofeminism. It emerged fifty years ago, from thinkers and activists on every continent, and the nuclear question was central to it. After a review of the formative years of this radical political resistance, I will touch on the rise of 'management environmentalism' and its cultivation of liberal feminists, before returning to the situation in Japan arising from the Fukushima nuclear disaster.

## The birth of ecological feminism

What is unique about women's ecological struggle is how they have combined it with their self-understanding as 'women'. The focus on pollution is both inner and outer, personal and political. Women demeaned by men's objectification of their 'femininity' have felt a need to purify and rebuild a self-identity on their own terms. Ecofeminists reject what they see as 3000 thousand years of mal-development in the social construction of sex-gender relations. Their political activity would thus take shape hand-in-hand with attention to psychological growth in mutually supportive consciousness-raising sessions. This revolutionary strategy is a profound existential commitment. And many women have come to be disappointed to find so few environmentalist brothers entering into a parallel reflection on the gendering of their selfhood under the predatory model.

So it was, that in the US, as far back as 1962, law suits against the corporate world were coming out of the kitchens of mothers and grandmothers – Mary Hays v Consolidated Edison, Rose Gaffney v Pacific Gas, Jeannie Honicker v Nuclear Regulatory Commission, Kay Drey v Dresden Nuclear Power Plant, Dolly Weinhold v Nuclear Regulatory Commission at Seabrook. Japanese women were also foot soldiers in campaigns against local pollution. One, Ishimure Michiko founded the Citizens' Congress on Minamata Disease Countermeasures in 1968.

Others set up the path-breaking producer-consumer cooperative known as the Seikatsu Club – which economic model would grow to some 200,000 or more members. Parisian writer Françoise d'Eaubonne's book, *Le féminisme ou la mort*, and US Democratic Socialist Rosemary Ruether's *New Woman: New Earth* gave early intellectual impetus to the idea of ecofeminism. A conjectural history of the self-deforming practices of western mastery was drawn. If the Greek word 'oikos' was etymological root of both ecology and economics – the latter had lost its way.

In 1974, the unquiet death occurred of whistleblower Karen Silkwood, a unionist at Kerr-McGee's Oklahoma plutonium processing factory. In 1975, women blockaded land clearing for construction of a nuclear reactor at Wyhl in Germany. More than economic loss of vineyards, they said, it was a matter of 'our human-being-in-nature'. By 1976, in Australia, women Friends of the Earth in Brisbane were conferencing on women and ecology, and some taking a co-ordinating role in the new Movement Against Uranium Mining. Even the mainstream women's magazines were printing pieces on women and the anti-nuclear issue. In 1977, a consciousness-raising group Women of All Red Nations (WARN) emerged among tribal Indians in South Dakota. They were especially worried about weapons tests, aborted and deformed babies, leukaemia and involuntary sterilisation among their people.

Women circulated articles on artificial needs and consumerism, animal exploitation for cosmetic manufacture, recycling, indigenous health, and of course, uranium. Separatist anti-nuclear groups were established in Australia – Women Against Nuclear Energy (WANE) in the eastern states, and a Feminist Anti Nuclear Group (FANG) in the west. Women's ecology collectives started up in Paris, Hamburg and Copenhagen, and ads for feminist organic farming communes appeared on noticeboards. Susan Griffin's *Woman and Nature: the Roaring Inside Her* was published in 1978. Elizabeth Dodson Gray's *Green Paradise Lost* followed in 1979. Each author in her own way described the self-alienation of the andro-centric ego-construct; the obsession with control of 'other' peoples, the fascination with militarism, and its counterpart in instrumental logic and scientific calculation. Many women wanted nothing less than a new language, reintegrating reason and passion.

In the late 1970s, the US League of Women Voters began lobbying for a moratorium on nuclear plant construction licences; the YWCA initiated an anti-nuclear education campaign; while the National Organisation of Women (NOW) instituted a National Day of Mourning for Silkwood. A further group – Dykes Opposed to Nuclear Technology (DONT), organised a New York conference on the energy crisis a patriarchally generated pseudo-problem, and a Women and Technology Conference was held in Montana the same year. Delphine Brox-Brochot of the Bremen Greens called for an end to high-tech aggrandisement while millions around the world still starve.

Everywhere in the so called 'developed world', women's political lobbies and protests over effects on workers and children of pesticides and herbicides, of formaldehyde in furniture covers and insulation, of carcinogenic nitrate preservatives in foods, of lead glazes on china, were gaining momentum. But there was a weary road ahead – to quote Joyce Cheney:

*I am annoyed that I feel forced to deal with the mess the boys have made of the earth. It is a hard enough struggle to survive and to build and maintain a life-affirming culture....*

In 1980, a collective called Women Opposed to Nuclear Technology (WONT) organised a Women and Anti-Nuclear Conference in Nottingham, UK. Women in Solar Energy

(WISE) began meeting in Amherst, Massachusetts, and Ynestra King mounted the first Women and Life on Earth Conference. By November 1981 a 2000 strong body of women marched on the US capital, symbolically encircling the Pentagon. By now, Australian activist Helen Caldicott, president of Physicians for Social Responsibility, had started a Women's Party for Survival in the US, with some 50 state and local chapters. This was subsequently broadened to become Americans for Nuclear Disarmament. In India, the Manushi collective published their influential piece *Drought: God Sent or Man Made Disaster?*

Historian of science Carolyn Merchant's classic *The Death of Nature: Women, Ecology and the Scientific Revolution* began to make itself felt in academic circles from this time on. By the mid 80s, the following networks were operating in the US: Lesbians United in Non-Nuclear Action (LUNA) v Seabrook Reactor; Church Women United; Feminists to Save the Earth; Feminist Resources on Energy and Ecology; Dykes Opposed to Nuclear Technology (DONT) v Three Mile Island and Columbia's TRIGA Reactor; Women for Environmental Health demonstrating in Wall street; Mothers and Future Mothers Against Radiation v Pacific Gas and Electricity; Women Against Nuclear Development (WAND); Spinsters Opposed to Nuclear Genocide (SONG), and Dykes Against Nukes Concerned with Energy (DANCE) v United Technology. Women's environmental conferences were held at Sonoma and San Diego State universities.

In Japan, a kamakazi encampment of grandmothers known as the Shibokusa women were running continual guerilla disruptions on a military arsenal near Mt Fuji, while a further 2500 women marched on Tokyo in the cause of world peace. By 1981, Women Opposed to Nuclear Technology had grown into a string of non-violent direct action cells around the UK; many began what would become the perennial encirclement of Greenham Common missile base; and in Germany 3000 women were demonstrating at Ramstein NATO base. In Australia, Margaret Morgan drew together a rural anti-nuclear organisation at Albury, and the Sun Herald newspaper was reporting on Labor Party and Democrat women's decisive inter-party policy stand against lifting bans on uranium-mining.

In 1983, a new collective, Women's Action Against Global Violence was encamped at Lucas Heights Atomic Energy Establishment near Sydney. This was followed by a protest in the desert with Aboriginal men and women outside the secret US reconnaissance station at Pine Gap. A first ecofeminist anthology, *Reclaim the Earth*, was brought out in the UK by Leonie Caldecott and Stephanie Leland. An Environment, Ethics and Ecology Conference in Canberra opened up debate between women ecofeminists and not so gender aware deep ecologists. British elections saw a combined Women for Life on Earth & Ecology Party ticket; and a year later, ecofeminist Petra Kelly led Die Grunen into the Bundestag. Kelly's passionate biography, translated as *Fighting for Hope*, told how her own anti-nuclear politics began as she watched her young sister die of leukaemia.

The soviet reactor accident at Chernobyl in 1986 alerted women to the lack of accountability in capitalism and socialism





After a six-year campaign, the Kupa Piti Kungka Tjuta defeated the Howard government's plan to dump nuclear waste in South Australia in 2004.

alike. Across Germany and Eastern Europe, a 'birth strike' expressed outrage, as governments from Turkey to France suppressed vital facts about environmental radiation levels for fear of damaging national economies. Sami people to the north of Scandinavia met official lies about post-Chernobyl radiation with a firm resolve for land rights.

From the other side of the earth, Joan Wingfield of the Kokatha tribe flew from the Maralinga site of 1950s British bomb tests to address an International Atomic Energy Agency conference in Vienna. German sociologist Maria Mies published *Patriarchy and Accumulation on a World Scale*, the first substantial socialist ecofeminist statement. A more New Age rejection of high-tech 'progress' was US bioregionalist Chellis Glendinning's *Waking Up in the Nuclear Age*. In 1987, Darlene Keju Johnson from the Marshall Islands and Lorena Pedro from Belau, both Women Working for a Nuclear Free and Independent Pacific, went public about the 'jellyfish' babies born to islander women and cancers in ocean communities following US atomic bomb tests.

The First International Ecofeminist Conference was held in 1987 on campus at the University of Southern California. North, south, east, and west, women's commitment to life on earth now spanned the nuclear threat, reproductive technologies, toxic chemicals, indigenous autonomy, genetic engineering, water conservation, and animal exploitation. Depleted uranium would later become a focus with the Balkan and Middle East wars. Women's International League for Peace and Freedom (WILPF), Code Pink, Madre, and the World Women's March continue to pursue many of these concerns. It is now two generations since ecofeminists came to politics, the movement continues to grow in experience, cross-cultural networks, and theoretical sophistication. Debates over gender literacy in environmental ethics or eco-socialist formulations

have become standard fare for university courses, academic journals, and publishing houses. International initiatives by Vandana Shiva have even been recognised with an Alternative Nobel Prize.

### The liberal backlash

Ecofeminism is at once an autonomist socialism, an ecology, a postcolonial movement, and a case for respecting women's initiatives in designing 'another world'. Yet while ecofeminist ideas challenge a variety of social movements, changes in the political character of both feminism and environmentalism have impacted on this work. One-dimensional thinkers unaware of the depth and complexity of women's eco-political renaissance, would judge it to be little more than a public extension of the housewife role. Articles from liberal feminists have sometimes used patronising and demeaning titles like 'Still Fooling with Mother Nature' and 'Calling Ecofeminism Back to Politics'. But a glance at the now extensive literature of ecofeminism shows its reach from epistemology to economics.

My sense is that the establishment became uneasy about this radicalism quite early on, because as women were writing their herstory, and indigenous peoples and youth were making their claims, transnational corporations began stepping up proactive measures – structural and ideological measures – for global control of the environmental agenda.

In the structural domain, the principle of neoliberal competitiveness would be legally embedded in international treaties and bureaucratic agencies like the UN. First the 1982 Brundtland Commission routinised a materially contradictory policy of growth with 'trickle down benefits' for sustainability. Then the 1992 Rio Earth Summit leveraged this up, setting the politics of Bio-Diversity and Climate Change Conventions

in motion. Soon the Kyoto Protocol and a rolling agenda of international meetings would have movement activists running to keep up with the newly institutionalised discourse of environmental management, and the politically aware public was carefully marginalised and disempowered by the academic complexities of 'risk analysis' and 'biosecurity'.

The globally orchestrated politics of liberal environmentalism enlisted UN, private foundation, and government sponsorship of special women's ecology organisations to 'mainstream' women's views in international policy. Women's 'citizenship' became the new liberal mantra. Women's Environment and Development Organization (WEDO) founded by the late US Congresswoman Bella Abzug in the early 90s, played a big role in this. Thus, by the time of the UN Framework Convention on Climate Change meeting in Bali, December 2007, Women in Europe for a Common Future are hard-pressed keeping nuclear power out the Clean Development Mechanism. The depth analysis of hegemonic masculinity that once framed ecofeminist politics, is now reduced to ironing out patriarchal capitalist incoherencies.

Interminable international environmental meetings focus on women as 'victims' or objects of natural disaster and women who play the liberal feminist card to this policy are rewarded as 'professionals' for not rocking the androcentric boat to much. There is no place for an ecofeminist diagnosis of the cultural context of such 'crises'. Nor is the knowledge of indigenous women from say Oceania, acceptable as an existing model of low carbon provisioning. Instead, the curiously named German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety will draft women from the global South into 'capacity building' workshops for 'climate adaptation and mitigation'. While such neoliberal operations are ostensibly about 'justice and sustainability', the orientation is always framed by business as usual.

In the ideological domain, management environmentalism relies on several techniques for the pacification of citizens and governments. Public relations firms are employed to 'greenwash' or minimise local damage from capitalist industrial enterprises. Again, the packaging of ecology as a media commodity thins out the reporting of grassroots voices in favour of a few colourful and iconic feminist 'personalities'. A further silencing of ecofeminist politics has occurred as a result of public reliance on the internet as chief recorder of radical movements – since 90% of web-based material is selected and posted men – radical youth notwithstanding.

A final ideological assault on women's ecological struggles has come through the universities. In the 1990s, as Left analysis was overtaken by a new field of cultural studies, many women students took to the deconstructive study of political texts, an innocent but elitist move, leaving the concerns of threatened communities far behind.

## Another periphery speaks out

While the institutions of eurocentric globalisation insured themselves against critique from within, peoples at the geographic periphery began celebrating the 500th year of Columbus. Then, at the 1992 Earth Summit in Rio de Janeiro, grassroots environmental politics would implode, taking a distinctly postcolonial turn. The articulation of this

perspective by South American activists is very rich. In 2009, as anti-nuclear activists from the Arrernte, Tuareg nomads, and Acoma Pueblo, spoke truth to power in Washington, a First Continental Summit of Indigenous Women in Peru produced a Manifesto in the cause of all life. The preamble to the document shows the women weaving together a seamless politics of sex, class, ethnicity, and species justice.

We are the carriers, conduits of our cultural and genetic make-up; we gestate and brood life; together with men, we are the axis of the family unit and society. We join our wombs to our mother earth's womb to give birth to new times in this Latin American continent where in many countries millions of people, impoverished by the neo-liberal system, raise their voices to say ENOUGH to oppression, exploitation and the looting of our wealth. We therefore join in the liberation struggles taking place throughout our continent.

In short, from the Mujeres Creando of La Paz: 'You cannot decolonize without de-patriarchalizing'. In Bolivia, this deeply integrative indigenous politics opened into The Peoples Alternative Climate Summit at Cochabamba, April 2010, advancing a substantive economy based on the principle of 'living well', to replace the death risking formal economy of the mega-machine. In 2011, the circle closes with Vandana Shiva and Maude Barlow seeking UN ratification of a Declaration of the Rights of Mother Earth "affirming that to guarantee human rights it is necessary to recognize and defend the rights of Mother Earth and all beings in her and that there are existing cultures, practices and laws that do so ..."

## A political turning point?

In the current crisis of global warming, the international nuclear industry presents itself as 'a clean, green, alternative' to fossil fuel based power generation. But not only is it a threat to all natural processes, the engineering of installation components and their daily operation draws massive amounts of electric power. Nevertheless, following the nuclear disaster at Fukushima, Japan's ruling class with US corporate partners aims to put nuclear power back on track with more science and better 'technocratic management', even as Silvia Federici and George Caffentzis point out:

*... the damaged nuclear reactors can hardly be blamed on the lack of capitalist development. On the contrary, they are the clearest evidence that high tech capitalism does not protect us against catastrophes, and it only intensifies their threat to human life while blocking any escape route.*

It is not rational to pursue a fantasy of 'ecological modernisation' by means of this arsenal. The Fukushima disaster may be a bonanza for reconstruction companies like Haliburton once they're done in Iraq, but the revolving door of men in suits know well that 'business is merely war by other means'.

Will Fukushima become a political turning point? Japanese women and men have pioneered nuclear resistance. I think of the late Women and Life on Earth activist, Satomi Oba, president of Plutonium Action, Hiroshima. And the perennial warnings of Kenji Higuchi, much sought after for the lecture circuit now. Hisae Ogawa and others in the international ecofeminist peace organisation Code Pink are working all over Japan. Friends of the Earth is attending the special needs



*Muckaty Traditional Owners campaigning against a proposed nuclear waste dump.*

of women and children, demanding wider evacuation zones --- and sackings in high places. Greenpeace is encouraging the public to mobilise, and in the months since March, mass demonstrations have rolled across Japan urging the end of nuclear power. Suddenly politicised, angry mothers and housewives have taken to the streets in their thousands.

The Fukushima nuclear disaster has re-energised international opposition to the industry and here too, women's organisations are highly focused. The Asian Rural Women's Coalition meeting in Chennai has condemned plans for nuclear power plants in India, Burma, Thailand, Indonesia and the Philippines. The Gender\_CC Network is contesting nuclear power through its regular climate change campaigning. In the US, the National Organization of Women (NOW) and United Farm Workers are looking into the possibility of bioaccumulation of radioactive caesium from Japan in California cows milk. In Australia, indigenous women continue fighting the government's proposed nuclear waste site on their land at Muckaty, Northern Territory.

The Asia Pacific Forum on Women, Law and Development, an NGO with consultative status to the UN, recently wrote to the Prime Minister of Japan, observing the unique vulnerability of women in post-disaster situations – as objects of violence, as part-time employed, and as those doing most of the country's care work. They noted only one woman among the 16 members of the Reconstruction Design Council. They referred the Prime Minister to Japan's obligations under the United Nation's Committee on the Elimination of Discrimination Against Women (CEDAW). They urged that gender disaggregated statistics be collected to prepare gender specific budgets. And the letter requests the Japanese government to exercise accountability by consulting with local women's organisations and promoting women's participation as planners and decision makers at prefecture, municipal, and town council levels.

How can a country call itself a democracy when it does not give women equal seats on its Reconstruction Design Council? Yet would the achievement of this liberal feminist objective actually turn Japan around? Like the affirmative action for women at big international environment meetings, it would simply paper over an unjust and unsustainable order.

An ecofeminist politics is essential to expose and neutralise the deeply cultural androcentric interests that let Fukushima happen. A balanced committee is one thing, but it is even more essential to redefine its 'terms of reference' – by putting life before profit. Workers responsible for the labour of social care think differently about 'value' and 'security' – this is why women must take leadership in Japan now.

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*A referenced version of this article is posted at [www.foe.org.au/resources/chain-reaction](http://www.foe.org.au/resources/chain-reaction)*

# Proliferation-resistant nuclear power and other fairytales

*Jim Green*

The nuclear lobby routinely reduces complex sociotechnical problems to merely technical issues. This problem was addressed by physicist James Acton in the December 2009 issue of the *Bulletin of the Atomic Scientists*. Acton's article concerns the weapons proliferation risks associated with 'next generation' nuclear power concepts.

No-one disputes the proliferation risks associated with existing nuclear technology. But what about 'next generation' reactor concepts? Let's consider the 'integral fast reactor' (IFR) concept favoured by Adelaide Uni's Prof. Barry Brook among others. In theory, there is much to like about the concept. IFRs could not only destroy plutonium and other nuclear nasties such as depleted uranium or long-lived wastes produced in conventional reactors, but also generate low-carbon electricity in the process.

The 'integral' part of the IFR involves on-site 'pyroprocessing' – an electrolytic process which recycles nuclear wastes to generate additional electricity and to largely destroy the troublesome wastes in the process. Importantly, plutonium would never be separated as it is in conventional reprocessing plants. In an IFR plant the plutonium would always be contained in a mixture of other long-lived radioisotopes which would be impossible or near-impossible to use directly in nuclear weapons (though the plutonium could be separated from the IFR mixture at a conventional reprocessing plant – a point that IFR advocates generally ignore).

But before we get too excited, let's get back to James Acton's article in the *Bulletin of the Atomic Scientists*. His central argument is that "a failure to appreciate fully the political dimension of nonproliferation risks makes the concept of proliferation resistance at best irrelevant and at worst counterproductive." He notes the growing consensus among scientific experts that the technical aspects of proliferation resistance have been exaggerated while the equally-important social and political aspects tend to be overlooked.

So how do Acton's points apply to IFRs? At the simplest level, we can ask how a would-be weapons proliferator could misuse IFRs. Advocates assume that an IFR will be run on a normal operating cycle such that it would produce low-grade, highly contaminated plutonium which would be contained within an intensely radioactive and intensely hot mixture that would greatly frustrate proliferators. But a proliferator would simply operate the reactor on a short irradiation cycle (and they'd find a way to irradiate some uranium or depleted uranium in addition to the usual IFR fuel), thus producing weapons-grade plutonium contained in a mixture which is not nearly so radioactive or hot.

Prof. Brook wrote in *The Australian* that IFRs "cannot produce weapons-grade material." Presumably he meant to

say that weapons-grade plutonium is not produced during the normal operation of an IFR (either that or he was lying). However, George Stanford, who worked on an IFR research program in the United States, notes that proliferators "could do [with IFRs] what they could do with any other reactor \_ operate it on a special cycle to produce good quality weapons material."

Extracting the plutonium from an IFR mixture would require a conventional reprocessing plant (the same applies to plutonium produced in conventional reactors). Prof. Brook claims that exceptionally heavily-shielded reprocessing facilities would be required because of the intense radioactivity and heat of the IFR mixture – but he's making the implausible assumption that a proliferator would run the reactor on a normal operating cycle.

James Acton's emphasis on the social dimensions of proliferation also lead us to consider the broader political environment. Advocates assume that IFRs will consume more fissile (weapons) material than they produce – such reactors are called 'burners'. But IFRs are close relatives of the 'breeder' reactors that do the opposite. Some IFR advocates even propose building an initial fleet of breeders to build up stockpiles of fissile material to provide the initial start-up fuel a second fleet of IFRs. So be careful what you wish for – the end result could be breeders instead of burners, more fissile material not less.

Another important social dimension of the proliferation problem is the international nuclear safeguards system. Here, the social dimensions of the problem were explained by former South Australian Premier Mike Rann way back in 1982: "Again and again it has been demonstrated here and overseas that when problems over safeguards prove difficult, commercial considerations will come first."

Prof. Brook's indifference to the social dimensions of the proliferation problem were evident at a forum in Melbourne in November 2010. He was asked to list his major concerns with the safeguards system and what he thinks that academics such as himself can do to help address the problem. Prof. Brook's underwhelming answer: "That's a political and legal question and I have no comment."

So Prof. Brook wants us to support WMD-capable technology in conjunction with a safeguards system that provides little more than an illusion of protection against weapons proliferation. Thanks, but no thanks.

*Jim Green is the national nuclear campaigner with Friends of the Earth and a member of the EnergyScience Coalition.*

# The Prime Minister's U-turn

*Jim Green*

Prime Minister Julia Gillard's arguments in favour of uranium sales to India are dangerous and dishonest. Her written statement in support of uranium sales to India failed to even acknowledge the crucial problem – India's refusal to sign the Nuclear Non-proliferation Treaty (NPT). The NPT is the main international nuclear treaty and is routinely described by Australian political leaders as the "cornerstone" of the non-proliferation system. The NPT has its flaws, not least the failure of the nuclear weapons states to take seriously their disarmament obligations, but that is no reason to junk the Treaty or to disregard it.

On the contrary, the NPT needs much greater support. The least we should expect is that Australia maintains its policy of requiring uranium customer countries to be NPT signatories and to take seriously their NPT obligations.

The United States and some other countries have opened up nuclear trade with India in recent years. Thus the NPT has already been damaged and weakened. But that is no justification for Australia to weaken it further. According to the nuclear lobby Australia is now isolated in its stance. Nothing could be further from the truth – only a minority of countries support the opening up of nuclear trade with countries that refuse to sign the NPT. The 118 countries of the Nonaligned Movement voiced strong objections during the NPT Review Conference in New York last year.

The events set in train by the opening up of nuclear trade with India have been disastrous from a non-proliferation standpoint. They have led to an escalating nuclear arms race between India and Pakistan, and a weakening of the global non-proliferation and disarmament regime which others are now exploiting (e.g. China's plan to supply reactors to Pakistan).

Another serious problem is that the precedent set by nuclear trade with India increases the risk of other countries pulling out of the NPT and building nuclear weapons with the expectation that nuclear trade would continue. As former Australian Ambassador Prof. Richard Broinowski notes: "The sale of Australian uranium to India would signal to some of our major uranium customers, such as Japan and South Korea, that we do not take too seriously their own adherence to the NPT. They may as a result walk away from the NPT and develop nuclear weapons without necessarily fearing a cut-off of Australian supplies."

Prime Minister Gillard argues that "we must, of course, expect of India the same standards we do of all countries for uranium export – strict adherence to International Atomic

Energy Agency arrangements and strong bilateral undertakings and transparency measures that will provide assurances our uranium will only be used for peaceful purposes."

Such claims are uninformed or dishonest. The International Atomic Energy Agency safeguards agreement with India does not provide for comprehensive or full-scope safeguards. Safeguards apply only to that part of the nuclear program that India considers surplus to military 'requirements'. IAEA safeguards inspections in India will at best be tokenistic and will most likely be non-existent (as they are in Russia – another of Australia's uranium customer countries).

Moreover, even if a rigorous safeguards regime was in place in India (and it most certainly is not), that would in no way undo the damage done to the NPT by opening up nuclear trade with countries that refuse to sign and abide by the Treaty.

Prime Minister Gillard argues that "as in other areas, broadening our [uranium] markets will increase jobs." However if Australia supplied one-fifth of India's current demand, uranium exports would increase by a measly 1.8 per cent. Even if all reactors under construction or planned in India come on line, Australia's uranium exports would increase by just 10 per cent.

That level of uranium exports might – might – support one very small, additional uranium mine employing a few dozen people. Much more likely, exports would come from existing mines and no additional jobs would be created. Moreover, there are plenty of jobs going in the mining industry – uranium sales to India would not generate additional jobs but, at most, transfer a few jobs from one part of the mining industry to another.

Uranium exports will do nothing to reduce greenhouse emissions in India, twice over. Firstly, because uranium supply is no constraint to nuclear power expansion in India. Secondly, because renewables and energy efficiency could very easily substitute for India's nuclear program – providing low-carbon energy solutions without all the problems that attend nuclear power.

*Jim Green is the national nuclear campaigner with Friends of the Earth and author of a detailed briefing paper on uranium sales to India ([www.choosenuclearfree.net/india](http://www.choosenuclearfree.net/india)).*

# Martin Ferguson takes a dump on democracy

Molly Wishart

Federal resources minister Martin Ferguson said in a September 28 media release that he welcomes debate on Australia's radioactive waste management options. So Friends of the Earth invited him to participate in just such a debate but we were told by his office that he won't participate.

Small wonder. The government's ongoing attempt to impose a nuclear waste dump on Aboriginal land in the NT is the most disgraceful example of 'radioactive racism' since the Menzies government exploded atomic bombs on Aboriginal land in the 1950s. Mr Ferguson claims that Muckaty Traditional Owners support the dump despite clear evidence that a majority do not. Traditional Owners have written to him repeatedly voicing their objections. They have repeatedly requested a meeting with Mr Ferguson and he repeatedly refuses. Traditional Owner Dianne Stokes said: "Martin Ferguson has avoided us and ignored our letters but he knows very well how we feel. He has been arrogant and secretive and he thinks he has gotten away with his plan but in fact he has a big fight on his hands."

Traditional Owners also initiated (ongoing) legal action in the Federal Court to try to stop the imposition of a nuclear dump – yet Mr Ferguson still claims they support the dump! Julian Burnside and other legal heavyweights are working pro bono on the case. Launching the legal challenge, Mark Lane Jangala, a Senior Traditional Owner, said: "I am senior Ngapa man for Muckaty and I did not agree to the nomination of the site, along with other senior Ngapa elders for Muckaty Station who did not agree. We don't want it. I want to look after my Country and Dreaming, look after the Sacred Sites I am responsible for and to make sure my children are raised properly in their Country."

Worse still, Mr Ferguson has introduced legislation to Parliament which overrides the Aboriginal Heritage Act and disregards the Aboriginal Land Rights Act. As Crikey's Bernard Keane noted in May 2010, Ferguson's draft legislation (which has yet to pass the Senate) "is in many sections a cut-and-paste of the [Howard government's legislation], stripping procedural fairness from the waste dump site selection process, overriding territory laws and neutralising environmental protection requirements."

Mr Ferguson apparently believes he can trample on the rights of Traditional Owners and get away with it. However opposition to the dump goes much further. The NT Government is opposed; the NT Parliament has passed legislation attempting to prevent the imposition of a dump; there has been solid union support for Traditional Owners including from the ACTU; a growing number of councils along the transport corridor have voiced their opposition; churches and environment groups are actively supporting Traditional Owners; and thousands of Australians have attended public meetings around the country to



hear Traditional Owners speak. Teenage Traditional Owner Kylie Sambo has had great success with her 'Muckaty Rap' (available on youtube) – all the more so after she spoke on ABC TV's Q&A program recently:

*Don't waste the Territory  
This land means a lot to me  
Been livin' here for centuries  
This place we call Muckaty.  
You're drillin' a hole  
Right through my soul.*

Mr Ferguson's response to the growing support for Muckaty Traditional Owners? He recently told a constituent of his Batman electorate that Traditional Owners are "puppets" of green groups. Words fail me.

Apparently Prime Minister Gillard is friends with Martin Ferguson – in which case she ought to have a friendly chat with him about alternatives to the NT dump plan. There is a simple solution – leave the waste where it is produced at the Lucas Heights nuclear research centre south of Sydney, operated by the Australian Nuclear Science and Technology Organisation (ANSTO). That is where the waste is produced, and that is where Australia's nuclear expertise is heavily concentrated.

As ANSTO's Dr Ron Cameron said: "ANSTO is capable of handling and storing wastes for long periods of time. There is no difficulty with that." Similar views have been expressed by the Commonwealth nuclear regulator, by the Australian Nuclear Association, and by Mr Ferguson's own department



# The bunyip bird and the Murray-Darling Basin

*Carmel Flint*

If you sit quietly at dusk beside the Gulpa wetlands at Barmah-Millewa, you might hear the eerie, booming call of the 'bunyip bird', a haunting guttural roar that pervades the half-light and disturbs the senses. A sound that triggers the imagination and evokes all sorts of terrifying possibilities of things unknown. Or you might not.

The 'bunyip bird' is the Australasian Bittern, a cryptic, solitary and mysterious creature similar to a heron that lurks amongst the swamps and wetlands of the Murray-Darling Basin and has a deep booming call. Rarely seen, it will occasionally emerge at dusk to feast on frogs and fish, wading out into open water. If surprised in this endeavour it will sometimes lift its long neck, put its beak high in the air and freeze – playing a game of 'you can't see me, no, you really can't see me'.

The Australasian Bittern needs spring floods for breeding and it makes its nest on a platform of trampled reeds. Needless to say it is now under severe threat from reduced flooding and river regulation. It is estimated that the total population of the Bittern in Australia has dropped to less than 800 birds and that its area of occupancy may have reduced by 50% in just 16 years. It has been listed as nationally endangered and globally vulnerable.

To witness a Bittern 'striking a pose', to be terrified momentarily by its haunting call, is a unique and wonderful experience. But it is an experience that is absolutely dependent on returning enough water to the environment to protect the needs of this rapidly declining species. The 'boom' of the Bittern may well be lost forever if we don't get the Murray-Darling Basin Plan right.

## Murray-Darling Basin Plan

And there is very little that is 'right' about the draft Murray-Darling Basin Plan that has just gone on public exhibition. The volume of surface water earmarked for return to the environment is markedly inadequate, groundwater extraction limits are set to double to meet the demands of the mining industry, climate change has not been considered and the highly successful voluntary water buyback scheme will be severely curtailed. The needs of towns, communities and many diverse industries across the Basin have been ignored.



*Australasian Bittern*

The target for environmental water to be returned to rivers has been reduced to 2,800 gigalitres (GL) based on a political compromise, unspecified 'system constraints' and the discretion of the Murray-Darling Basin Authority. At a recent briefing, the Authority could not explain what grounds it had used to choose 2,800GL as a volume to model. It did not model, and still refuses to model, the volume of 4,000GL that is recognised by independent scientists and numerous previous studies as the baseline required to return the rivers to health. The Murray-Darling Basin Authority has admitted that returning only 2,800GL of water represents a high risk that River Red Gum wetlands of the Lower Murray, in particular, will die. This figure effectively consigns the mighty Chowilla Floodplain to history.

Extraordinarily, the modelling by the Authority barely factors in the impacts of climate change, despite CSIRO's advice that under the median climate change scenario, rainfall runoff is likely to decrease 10% by 2030, or up to 37% under more extreme scenarios.

Possibly more shocking than the compromises in surface water returned to the environment is news that the Authority is planning to double the volume of groundwater that can be extracted under the Basin Plan. That's right – a process that was supposed to address the historical over-allocation of our water resources is now planning to double groundwater extraction limits, increasing the current cap from 1787GL to 4213GL basin-wide.

A letter obtained by Friends of the Earth under Freedom of Information makes it very clear that this increase is designed to supply water to the mining industry. In the letter, the Commissioner of the NSW Office of Water writes to the Chair of the MDBA pushing for increases



*Chowilla Floodplain*

in groundwater limits and stating that “These groundwater systems are brackish, undeveloped and not connected to surface water, and represent the only potential source of water for future mining requirements in these areas. The revised volumes are considered sufficient to meet likely demands for the mining industry for the period of the Basin Plan (2012 to 2022)....”

This represents a major risk to water resources, given that almost nothing is known about recharge rates or connectivity in these systems.

### **Water buyback scheme**

The voluntary water buyback scheme is also under threat. Water purchase is the only measure that has thus far been effective in returning substantial quantities of water to the environment. It has proven to be the most effective and efficient means to achieve environmental water outcomes.

However, the intention of the Authority is to cap purchase at a total of 1,100GL, and then to aim to purchase only half of that by 2015. Instead of maximising purchase to 2015 to secure real outcomes for the environment it is going to put most of the available \$10 billion in to dubious infrastructure projects that will ultimately return very little to our rivers.

The people and communities of the Basin have still not been properly considered in the process. The Basin Authority has failed to deliver a proper analysis of the costs to regional communities of ‘business as usual’ for big irrigation. It has failed to quantify the economic benefits to floodplain graziers, Indigenous communities and tourist operators of returning the rivers to health. Our \$10 billion

looks set to be wasted on failed infrastructure projects while opportunities to diversify and develop alternative industries and to genuinely restructure regional economies for the long-term go begging.

There is no doubt that the consequences of the Murray-Darling Basin Plan for our communities, ecosystems and wildlife will echo down through the course of history. The next four months will be incredibly important in the final outcome because the draft Basin Plan is on public exhibition. This is a crucial stage in the process - it is our time, our moment, when we need to produce a noise as profound and unforgettable as that of the ‘bunyip bird’ itself. The federal environment minister needs to hear that call and be shaken into action. The Bittern, that solitary sentinel of our fading wetlands, depends on it.

We plan to have lots of fun whilst booming out the call for action on the Murray-Darling. Come and join us, check out our new website at [www.ourdarlingmurray.org](http://www.ourdarlingmurray.org), send in the photos of ‘Your Darling-Murray’, and add your voice now when it is needed most.

*Carmel Flint works with FoE's Barmah Millewa Collective on the Murray-Darling Basin water campaign. [www.melbourne.foe.org.au/?q=bmclnews](http://www.melbourne.foe.org.au/?q=bmclnews)*

# Robin Hood tax reform

Stephanie Long



turning A GLOBAL CRISIS  
into A GLOBAL OPPORTUNITY

**O**ur national taxation system is a reflection of the type of society we are and what kind of society we want to be. At a macro level, taxation is a means for wealth to be pooled and redistributed and to fund the basic public services that enable us to have safe, healthy lives. Ideally that redistribution would go to those who are struggling – people who in other ways have been marginalised by social, political and economic structures. It is the means through which we, as a society, can ensure that every person can get their basic needs met, to enable them to make a meaningful contribution to society. These two characteristics are the basic components of what we call progressive tax.

Most Australian's believe that wealth in our nation is much more equally shared than it is. Research commissioned by the Australian Council of Trade Unions shows that the richest 20% of Australia have 60% of the total wealth in our country, whereas the poorest 20% share a mere 1% of total wealth. Despite underestimating the level of wealth inequality, overall people want a more even distribution of wealth through a progressive tax system. Additionally, tax is a means to influence how people behave and is an opportunity for the state to internalise the social, economic and environmental costs of goods (e.g. cigarettes) and services (e.g. gambling). It is a way to influence how people invest their money. Influencing behaviour and investment is a key way in which we can use our tax system to create the type of society we aspire to, as well sharing wealth more equitably.

A new tax initiative is being promoted internationally and many in Europe are taking it very seriously. It is called a financial transaction tax (FTT), an extension of an older proposal called the Tobin Tax. The Tobin Tax was originally proposed by James Tobin in the late 1970s as a small tax levied on international currency exchanges, as a means to stabilise national currencies against rapid speculative trading. Now, financial transaction taxes, also becoming known as the Robin Hood Tax, is proposed to apply to all wholesale financial transactions – the buying and selling non-retail products such as stocks, bonds, derivatives, equities and currencies.

The tax is on the transactions, thereby targeting high frequency speculation which now occurs in a matter of seconds as traders use computer programs to buy, hold and sell assets, wanting to make fast profit by outguessing the market.

The proliferation of this high-frequency trading, primarily executed outside public scrutiny in an unregulated trading environment, has made markets less effective at their core function of setting prices, and increased price volatility that has resulted in the boom and bust cycle we have experienced recently in the global financial crisis (GFC).

A tiny tax would dissuade purely speculative short-term trading and shift the balance of trading towards more stable and socially beneficial investment. It would make global markets more stable and strengthen Australia's future as a sound financial hub without attracting risky investments. Currently, financial transactions related to the international trade of goods and services represent only a small proportion of daily trade.

The global value of financial transactions is now many times larger than world GDP due to the enormous growth of financial markets trading over the last two decades. While in 1990 financial transactions were 15 times greater than GDP, they are now 73 times greater. The vast majority of financial markets trades are executed by computer programs for the purpose of exploiting minor price fluctuations. Assets are bought, held and sold in less than 12 seconds, faster than the human mind can assess the productive value of a trade beyond economic profitability.

Austrian economist Stephan Schulmeister has found that instead of improving the efficiency of markets in the 'price discovery process', the increased speed of trading exacerbates runs of asset price fluctuations and increases market volatility. This is evidenced by the increased boom and bust cycles global markets experienced from the inception of the GFC, the serious repercussions of which have been felt by ordinary people in countries around the world.

**“ The Robin Hood Tax – a tiny tax whose time has come. ”**

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Under an appropriately designed FTT, the profitability of financial markets transactions will decrease thus reducing the overall number of trades, especially program (computer-generated) trades. Price runs would become less pronounced and the boom and bust rallies that we have seen in recent years could become less acute.

Despite being at fault, the international finance sector was not made to bear the costs for the long-term social and economic impact of its risky behaviour. Quite the contrary, trillions of tax dollars in US and Europe were spent bailing out the investment banks. Globally, we are continuing to see the impacts of the GFC evidenced in the US debt ceiling debate and European sovereign debt crisis played out in Portugal, Ireland, Greece and Spain.

While it might seem that Australia escaped the impact of the GFC, the recently released Australian Community Sector Survey 2011 reveals otherwise ([acoss.org.au/communitysectorsurvey](http://acoss.org.au/communitysectorsurvey)). The number of times people in need were turned away from welfare agencies due to lack of funds reached 345,000, an increase of 19% since 2008/09.

And if you needed further convincing, this tiny tax could raise a lot of money. The latest global estimate is US\$836 billion each year. If we introduced a an average 0.05% FTT in Australia now, we could raise \$48 billion in a year. This is one of the most progressive forms of taxation around, that would enable a meaningful redistribution of wealth to finance vital social services such as a National Disability Insurance Scheme, equal pay for social and community service workers, increasing funding for welfare services and renewable energy investment across Australia.

The Robin Hood Tax – a tiny tax whose time has come. Join us by supporting the actions on our website: [www.robinhoodtax.org.au](http://www.robinhoodtax.org.au)

*Stephanie Long is the Robin Hood Tax Campaign Coordinator with Jubilee Australia. More information: [stephanie@jubileeaustralia.org](mailto:stephanie@jubileeaustralia.org), [www.jubileeaustralia.org](http://www.jubileeaustralia.org)*



# Australia Palestine Advocacy Network

*Jessica Morrison*

**A**n 1947, when Israel unilaterally declared a Jewish State, it drove two-thirds of Palestinians from their homes and villages. More than 500 Palestinian villages were destroyed by Israeli forces and over 13,000 Palestinians were killed. Sixty years later, Palestinians are now the largest and most long-standing refugee group in the world.

While peace negotiations have been ongoing for 20 years, Palestinians continue to live under a matrix of Israeli control. In the West Bank, an area one-tenth the size of Tasmania, Palestinians are divided into approximately 190 islands or 'Bantustans', with movement between and often within controlled by Israeli forces. The Gaza strip has been described as the world's largest prison. It has a population density which is amongst the highest in the world, and an unemployment rate at over 40%. The Gaza strip is subjected to a continuing Israeli blockade which stifles the movement of both goods and people, including for humanitarian reasons, in and from the territory.

Violence from Israeli settlers is met with almost universal impunity, with attacks on mosques, individuals, and olive groves a regular occurrence. An Israeli human rights group states that over 18,000 Palestinian homes have been demolished by the Israeli army, and 6,000 Palestinians are in Israeli jails, many without charge.

While Israel indicates it supports a two-state solution, it continues to build settlements in the West Bank, compromising the potential for a viable Palestinian State. The Israeli Prime Minister's Likud party platform states, "The Government of Israel flatly rejects the establishment of a Palestinian Arab state west of the Jordan river" (i.e. unless it is in Jordan). Israeli control over Palestine has been reported by the World Bank to have "gradually become more sophisticated and effective in its ability to interfere in and affect every aspect of Palestinian life, including job opportunities, work and earnings".

When Palestine recently became the newest member state of UNESCO through a vote of member States, Australia joined a small minority of countries in voting against it. This reflects the Australian government's policy of favouring Israel and turning a blind eye to Israeli violations of Palestinian human rights in breach of international law.

UN General Assembly resolutions of recent years have dealt with support for an independent investigation after the 2009 incursion of Gaza by the Israeli military; urging Israel to join the Nuclear Non-Proliferation Treaty; and criticism of Israel for violations of Palestinian human rights. Australia has generally stood with a very small minority of countries

in not supporting these resolutions, often on the grounds that they are not 'balanced'.

A recent Roy Morgan poll has recently shown that five times as many people think that the Gillard Government favours Israel over Palestine.

In response to widespread public concern about a lack of balance in Australia's approach to the Israel-Palestinian conflict, a new national membership-based organisation was formed in May 2011. The Australia Palestine Advocacy Network (APAN) provides a national voice for Palestinian advocacy, and seeks to promote a more accurate, responsible and knowledge-based approach to the conflict in Australian public life. APAN is led by church and union leaders, pro-Palestinian and Jewish organisations from Australian civil society, as well as academics and retired diplomats.

With peace talks in disarray, the Palestinian President recently approached the UN seeking recognition of its statehood. With early indications from Prime Minister Gillard that Australia will not support this, APAN has been campaigning for Australia to change its position. APAN gathered support from 22 prominent Australians, including former Prime Minister Malcolm Fraser and former NSW Attorney-General John Dowd, for a statement calling on the government to support Palestinian statehood. APAN sent the statement to the Australian Prime Minister and Foreign Minister, and sent copies to all federal parliamentarians.

APAN has sponsored a petition that has been tabled in the Australian Parliament, and co-sponsored an opinion poll seeking Australian views. The poll shows that a majority of Australians want Australia to support the UN resolution. APAN is currently seeking both individual and organisational members. [www.apan.org.au](http://www.apan.org.au)

*Jessica Morrison is the executive officer with the Australia Palestine Advocacy Network. [jessica@apan.org.au](mailto:jessica@apan.org.au)*



# No Harvey No! Direct action to protect forests

Nicola Paris

Achieving positive environmental change through political process is often fraught with small wins, which can then be eroded over time. In Victoria for example, many hard fought gains of environmentalists over years have been wound back by the Baillieu government and we can see that reflected across Australia.

The Last Stand is a new direct action organisation focused on the retail sector and its involvement in forest destruction. With the need to save our remaining native forests increasingly urgent, and governments not responding as quickly as needed, the organisation was established this year to use direct action to pressure retailers. Market campaigns have been making progress recently. Both within Australia and overseas there have been some great successes – a recent, high profile international campaign by Greenpeace in relation to Mattel, the largest toy company in the world, is a great example.

Featuring colourful actions and creative social media focused on the iconic Barbie brand, the end result was Mattel making a commitment towards a procurement policy that eliminates packaging product lines associated with the large scale environmental damage currently happening in Indonesia.

Kmart recently announced it will cease supply of home brand envelopes sourced from Indonesian rainforest, and The Wilderness Society has been building strong opposition to the Reflex brand – sourced from Australian native forests.

Currently, The Last Stand is focused on Harvey Norman, and its use of native forest timbers in furniture and flooring. The campaign has been based upon research released by Markets for Change. Current furniture ranges are sourced from forests in NSW, Victoria, Tasmania and WA, which are home to many endangered and vulnerable species. Other organisations supporting the campaign include GetUp! and grassroots organisations such as Still Wild, Still Threatened and the Huon Valley Environment Centre.

Whilst the timber used for furniture and flooring makes up a small percentage of the overall forest destroyed for retail gain, it is a large part of the justification and has so far escaped scrutiny. The Last Stand argues that a transition to plantation and recycled furniture needs to happen urgently, and we are hopeful that major retailers could use this opportunity to provide environmental leadership and stop driving forest destruction.

The campaign has been running since mid-2011 with actions in many Harvey Norman stores across Australia, as well as a strong online presence. There has been a focus on engagement with supporters through the website, facebook and twitter. An action highlighting the 'chain of destruction' that leads to Harvey Norman highlighted key links in the chain of custody for timber products that land in showrooms

across the country. Actions occurred on the forest floor in East Gippsland; at Auswest, a timber processing facility in Bairnsdale, Victoria; a furniture wholesaler, Dixie Cummings, in Sydney; and at a large Harvey Norman store in Sydney with a massive banner drop.

Most recently we had a successful global day of action, with over 40 events in 17 countries worldwide, including a daring banner unfurled on the Sydney Opera House, actions at stores in every state and territory in Australia, and we even made it to Harvey Norman stores in Slovenia and New Zealand. We have certainly caught their attention!

We'd love you to join us and keep the heat on – more information is posted at <[www.thelaststand.org.au](http://www.thelaststand.org.au)>. Photos are posted at <[www.flickr.com/photos/thelaststandstudio](http://www.flickr.com/photos/thelaststandstudio)>. The Last Stand has an office in Hobart, and we are also happily working out of the wonderful Friends of the Earth office in Melbourne where we have fortnightly meetings. Email us for details: [info@thelaststand.org.au](mailto:info@thelaststand.org.au)

*Nicola Paris is a campaigner with The Last Stand based in Melbourne. She also supports other campaigns working out of Friends of the Earth, working with the Anti-nuclear and Clean Energy (ACE) Collective.*



Sydney Opera House



# The Sharehood: sharing is as easy as crossing the street

*Liz Shield*

The Sharehood started in 2008 as an idea. Theo was living in an inner city suburb of Melbourne's north and his house didn't have a washing machine. He was walking to a friend's house to do his laundry when he realised many folks in his street would have washing machines and if he knew his neighbours, he might have been able to use theirs. He made a list of all the things that could be shared between neighbours and it was a long list! Then he letterboxed all the people living within a five minute walk of his home, to share his idea and ask them to contact him if they wanted to participate. From there, the first Sharehood was formed.

Since then, the Sharehood has grown to have over 1500 members across four continents. People have been borrowing ladders to put in light bulbs and working together to create food-producing gardens or grey water systems. There have been film nights and BBQs in local parks and street-wide garage sales. People have found babysitters and had their pets walked or minded. There are so many reasons to share with people, and the experiences are as individual as we are.

Sharing things with people in your neighbourhood means you don't spend as much money. Most of us own stuff that we haven't used in years. Do you have a shed full of things you use occasionally, such as a lawnmower, a sewing machine, a ladder or a wheelbarrow? Many of these things take up a lot of space so people in small dwellings simply don't have room for them, and low income people can't afford them. Wouldn't it be great if we could all get what we needed by borrowing and lending things within our neighbourhoods?

Sharing things with people means we don't have to all go out and buy everything we may need. This reduces waste, and excess items ending up in landfill. Sharing skills such as composting, seed saving, baking or making jam not only saves you money, it helps the environment too.

Some Sharehoods have started community gardens in their neighbourhoods. Growing your own fruit and vegetables saves money and helps the environment by reducing the pollution associated with transportation and packaging of conventional produce.

Sharing locally is part of a low-carbon lifestyle that can reduce our collective impact on the environment. Most everyday items involve using fuel for transportation, petrochemicals in construction (plastics) and create pollution caused during production. The more we can sew, bake, create, grow and borrow means the less dependent we are on these non-renewable resources.

Perhaps the best reason for sharing is to meet other people in your local area. This builds trust and that warm feeling you get when you walk down the street and people say hello. It also reduces social isolation and makes for safer streets. When you meet your neighbours with the Sharehood you immediately have a common interest – a belief in the value of sharing things!

Reducing people's isolation drastically improves quality of life. This is particularly important for those vulnerable members of our communities - elderly people living alone, new parents or emerging refugee communities for example. The Sharehood provides a means to remove barriers between people by showing that 'everyone can be your neighbour'. The Sharehood experience can be a bridge between people of different ages, nationalities and cultures, people with mental health diagnoses, lesbian, gay, bisexual and transsexual people. The principle of the Sharehood is that you can share with your neighbours and get to know them, and 'everyone is your neighbour'.

The Sharehood has been discovered from Aotearoa (New Zealand) to the UK. Joining is free. And once you have entered your details, you will be linked to the closest 100 members to you, where you can see what they are offering and seeking to share. If there aren't enough people close to you, the website has instructions and a form letter to help you get a Sharehood started in your neighbourhood. And then the fun begins! It all starts at [www.thesharehood.org](http://www.thesharehood.org). It really is as easy as crossing the street.

*Liz Shield is a project worker for The Sharehood, activist, community cook and frisbee fan. [contact@thesharehood.org](mailto:contact@thesharehood.org)*



*Liz Shield sharing with her mum.*

## Reviews

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### **The Converging World**

***The Converging World: How One Community's Path to Zero Waste is Helping Save Our Planet***

John Pontin

2010

224pp, paperback

Piatkus Books, London

ISBN: 9780749951702

*Reviewed by David Teather*



A tonne of carbon dioxide emitted by burning fossil fuels has the same effect on the Earth's atmosphere no matter where the fuel is burnt. This simple observation was the starting point for a remarkable collaboration between a UK environment group and an Indian social change agency, described in this book.

The Converging World (TCW), a UK charity based near Bristol, raised financial donations from people there in order to reduce global CO2 emissions. It partnered with Social Change and Development (SCAD), an NGO based in the south Indian state of Tamil Nadu.

Demand for electricity is growing rapidly in Tamil Nadu. Coal-fired generation is the usual response, but conditions are very favourable for wind power. TCW has already built two 1.5 MW wind turbines in Tamil Nadu. They have been turning since August 2008 and as of March 2011 have generated over 15 million kWh of electricity and avoided the emission of more than 16,000 tonnes of CO2.

John Pontin explains that donations from UK were used to purchase one turbine, which was then used as collateral for a loan to buy the second. The steady stream of cash from the sale of electricity maintains the turbines, services the debt and, through SCAD, supports social development for the disadvantaged in Tamil Nadu. School places and health services are provided. Women's self-help groups, sustainable agriculture, and measures to mitigate and adapt to climate change are supported.

The wind turbines in Tamil Nadu also earn carbon credits, which are sold in UK and help to fund TCW's work with UK community groups – parish councils, transition groups, schools

– to help them understand their energy needs and reduce their carbon footprints. More details of TCW's community-based work in UK are given at [www.theconvergingworld.org](http://www.theconvergingworld.org)

John Pontin describes the collaboration between TCW and SCAD as a win-win situation, and while this core story could be told in much less than this book's 214 pages, he also weaves in a persuasive justification of the mission and places it in the broader context of convergence globally.

'Contraction and convergence' is about creating equal access to the earth's resources, specifically to the atmosphere as a sink for greenhouse gases, and is an idea developed by the Global Commons Institute in the 1990s (see [www.gci.org.uk](http://www.gci.org.uk)). To achieve convergence, developed nations need to reduce their carbon footprints. But using fewer resources need not mean compromising quality of life, and can bring many benefits.

The partnership between TCW and SCAD brings to mind collaborations in our own region, including the Alternative Technology Association's initiative to install solar panels in villages in East Timor, and New Zealand Forest and Bird's 15-year collaboration with Matantas and Sara villages in Vanuatu to promote native forest conservation.

Such collaborations, argues Pontin, are keys to our future. This book is a fascinating read.



## Repowering Communities

### **Repowering Communities: Small-scale Solutions for Large-scale Energy Problems**

*Prashant Vaze and Stephen Tindale*  
2011

*Earthscan, London/New York*

*Review by Jim Crosthwaite*

I highly recommend this book to both those knowledgeable about energy systems and novices like me wanting to see serious action on climate change. Experts are likely to find something new, perhaps in the critique of what is wrong with current systems, or in how alternative systems can be financed. For others, the book is informative, empowering and written in a very accessible style.

The authors examine two broad types of energy system – one a top-down centralised system, and the other a bottom-up networked, distributed system. They argue that the two are inherently in conflict, and that governments must create space for the distributed system to grow. The latter is needed because centralised systems under private control persistently fail to meet social goals. In addition, distributed systems can potentially encourage a greater degree of innovation, provide scope for community input, and spread the risk of system failure.

After an introductory chapter, there are three chapters on the need for major change in energy systems, and why energy companies and governments aren't making this happen. The next chapter covers what community-based energy systems can look like. There are some truly great innovations now in operation. The authors rely on practical examples from Europe

and North America to show how much potential these have.

In the sixth chapter, the authors show why problems in financing community energy are a critical hindrance. They provide an excellent discussion, accessible to novices reading about this for the first time. I was pleased that the book also devotes a chapter to how energy can be priced appropriately to foster new systems while supporting the less affluent.

Another chapter addresses the necessary behaviour change – how to 'nudge' and 'shove' to achieve this. The final chapter is titled appropriately "bringing this together – a new ecology of energy markets".

The choice between local and large-scale energy is what piqued my interest in this book. I am a great believer in local actions to solve global problems. This philosophy often runs up against my training as an economist. Surely we will get to a low-energy society quicker with mega-scale solutions such as solar thermal, as investigated by Beyond Zero Emissions, rather than with solar panels for households. Moreover, studies show that solar panels are one of the more expensive ways for a society to save energy. Now with this book my preference for local systems has a much stronger intellectual foundation. I am still open to big initiatives such as solar thermal provided that they are truly a dramatic break from fossil-fuel based systems.

In introducing new localised energy schemes, the authors argue that it is critical that access to capital be provided along with mechanisms for appropriately spreading the risk of investing in these systems. New energy schemes won't succeed unless the risks, and how they are to be shared over time, are determined. Currently these are major barriers, but the authors show many innovative ways in which they can be addressed.

The authors are dismissive of NIMBY (Not in My Back Yard) views on alternative energy systems. I found this disconcerting because corporations often wield power unfairly against small communities. However, on closer reading the authors do propose democratic pathways that bring people together around new energy systems. Building community support is a critical ingredient in their design. While the authors focus on Europe and North America, the reader from Australia or elsewhere in the world can easily follow the main arguments, and substitute information and examples.

# Friends of the Earth Australia contacts:

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[www.foe.org.au](http://www.foe.org.au)

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**South Melbourne Commons** (a collaboration between FoEA and the Father Bob Maguire Foundation): [ecomarket.melbourne@foe.org.au](mailto:ecomarket.melbourne@foe.org.au), [www.commonsof.org.au](http://www.commonsof.org.au)

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[adelaide.office@foe.org.au](mailto:adelaide.office@foe.org.au)  
Clean Futures Collective (mining & energy collective) meets 5.30pm, first and third Wednesday of the month; contact Shani shani.burdon@foe.org.au, 0412 844 410  
Reclaim the Food Chain (food and farming collective) meets 6pm, fourth Thursday of the month

### Bridgetown Greenbushes Friends of the Forest

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## Affiliate members

### Food Irradiation Watch

PO Box 5829, West End, Qld, 4101. Email [foodirradiationwatch@yahoo.com.au](mailto:foodirradiationwatch@yahoo.com.au), web [foodirradiationinfo.org](http://foodirradiationinfo.org).

### In Our Nature

In Our Nature is a not-for-profit organisation which is working on the Kitobo Colobus Project, located in southern Kenya. Julian Brown [julian.brown20@yahoo.com](mailto:julian.brown20@yahoo.com)

### Katoomba-Leura Climate Action Now

George Winston [gwinston@aapt.com.au](mailto:gwinston@aapt.com.au)

### Mukwano Australia

Supporting health care in organic farming communities in Uganda. Email Kristen.Lyons@griffith.edu.au or Samantha.Neal@dse.vic.gov.au, web [www.mukwano-australia.org](http://www.mukwano-australia.org)

### Reverse Garbage

PO Box 5626, West End, Qld, 4101. Ph (07) 3844 9744, [info@reversegarbage.com.au](mailto:info@reversegarbage.com.au), [www.reversegarbage.com.au](http://www.reversegarbage.com.au).

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**Tulele Peisa (PNG)** - 'sailing the waves on our own', [www.tulelepeisa.org](http://www.tulelepeisa.org)

### West Mallee Protection (SA)

Breony Carbines 0423 910492, [westmallee@gmail.com](mailto:westmallee@gmail.com)



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