

chain. reaction

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www.foe.org.au



JAMES PRICE POINT GAS REFINERY: how a small town stared down a multinational – and WON!

- Irradiated food
- Quitting coal
- Nanomaterials in the environment
- Plan to float carbon price a sham
- 100% renewables for Australia
- Baseload power is a myth
- Algal blooms and toxins in Oceania
- US–Australian war games



Nuclear Policy Scorecard 2013 Australian Federal Election

| LIBERAL | ALP | THE GREENS | |
|---------|-----|------------|--|
| X | X | ✓ | Oppose the operation and expansion of existing uranium mines |
| X | X | ✓ | Oppose new uranium mines |
| X | ✓ | ✓ | Oppose nuclear power for Australia |
| X | X | ✓ | Oppose proposed national radioactive waste dump at Muckaty, NT |
| ✓ | ✓ | ✓ | Oppose international high level radioactive waste dumping in Australia |
| X | X | ✓ | Support an independent inquiry into radioactive waste management |
| X | X | ✓ | Oppose uranium sales to countries outside the Non-Proliferation Treaty |
| X | X | ✓ | Support a ban on nuclear weapons |
| X | X | ✓ | Support nuclear-free defence for Australia |
| X | X | ✓ | Oppose the sale of uranium to nuclear weapons states |



www.choosenuclearfree.net



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Chain Reaction website

www.foe.org.au/chain-reaction

Chain Reaction contact details

PO Box 222, Fitzroy, Victoria, 3065.

email: chainreaction@foe.org.au

phone: (03) 9419 8700

Chain Reaction team

Jim Green, Kim Stewart, Georgia Miller,
Rebecca Pearse, Richard Smith, Elena McMaster,
Tessa Sellar, Joel Catchlove, Ben Courtice,
Kristy Walters, Franklin Bruinstroop

Layout & Design

Tessa Sellar

Printing

Arena Printing and Publishing, Melbourne

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Front cover:

Shane Hughes, a local Broome resident, doubles over
with emotion upon hearing the news that Woodside
would not despoil Walmadan (James Price Point) with
a gas refinery. See page 36. Photo by Damian Kelly

Contents

Friends of the Earth Campaigns

| | |
|---|-----------|
| FoE Australia News | 5 |
| FoE International News | 8 |
| Irradiated food coming to a supermarket near you - Robin Taubenfeld | 10 |
| Radioactive Exposure Tour a big success - Gem Romuld and Jim Green | 12 |
| Plantations and Forest Stewardship Council audits - Anthony Amis | 14 |
| Quitting coal in Gippsland - Livia Cullen | 16 |
| Concerned residents 'shocked' by state of gas wells - Ursula Alquier | 18 |
| Coal trains in suburban Brisbane | 20 |
| Nanomaterials in the environment: an unknown risk - Louise Sales | 21 |
| Rudd's plans to float carbon price a sham - Beck Pearse and Julia Dehm | 24 |

Climate & Energy

| | |
|---|-----------|
| Think again, minister, on uranium deal with Emirates - Dave Sweeney | 27 |
| Green light for King Island wind farm feasibility study - Leigh Ewbank | 28 |
| The tale of two rallies: Canberra demonstrates strong support for wind energy - Odile Gotts and Leigh Ewbank | 29 |
| Zero emissions power is possible, and we know what it will cost - Roger Dargaville | 30 |
| 100% renewables for Australia – not so costly after all - Giles Parkinson | 31 |
| Baseload power is a myth: even intermittent renewables will work - Mark Diesendorf | 32 |
| Nuclear doom, renewables boom | 33 |
| The economics of the uranium export industry - Jim Green | 34 |

James Price Point – Victory!

| | |
|---|-----------|
| James Price Point / Walmadan – A huge win - Nicola Paris | 36 |
| Reflections on winning – from Camp Walmadan | 38 |
| James Price Point victory - Martin Pritchard | 39 |

Other Articles

| | |
|--|-----------|
| Algal blooms and toxins in Oceania - Mark Skinner | 41 |
| Talisman Saber 2013 – bringing war to our door - Robin Taubenfeld | 42 |
| In the name of sustainability: Deforestation in Malaysia and Indonesia - Tully McIntyre | 44 |

Reviews

| | |
|---|-----------|
| The Amazing Gift of Water for a Thirsty World | 46 |
| Mullahs Without Mercy: Human Rights and Nuclear Weapons | 47 |
| Character before knowledge: A history of the atomic scientists | 48 |
| Album Review: Roger Knox and the Pine Valley Cosmonauts | 50 |



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1

Help ensure FoE remains a vibrant & independent voice for social and environmental justice.

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- Giving a one off **Donation**

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Address: _____ State: _____ Postcode: _____

Email: _____ Phone: _____ Mobile: _____

2

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Name on Account: _____ Signature: _____

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Visa Mastercard Name on card: _____

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Website: www.melbourne.foe.org.au ABN: 68 918 945 471





FoE Australia News

Friends of the Earth (FoE) Australia is a federation of independent local groups.

You can join FoE by contacting your local group – see the inside back cover of Chain Reaction for contact details or visit foe.org.au/local-groups

There is a monthly FoE Australia email newsletter – subscribe via the website: www.foe.org.au

To financially support our work, please visit foe.org.au/donate

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Get off the coal train

FoE Melbourne's Quit Coal collective unfurled a giant banner at Flinders Street train station on May 6, urging the Victorian government to 'Get off the coal train and on track with renewables'. The action was reported in The Age, The Australian, ABC News, 3AW, Channel Ten and even by Australian Mining! Descending after over two hours, three Quit Coal activists were arrested and charged with trespass. They are likely to face large fines.

Quit Coal is urging the Victorian government to repeal the restrictive wind-farm policy; institute a moratorium on all new coal and unconventional gas projects; cancel plans to allocate for export an extra 13 billion tonnes of brown coal in the Latrobe Valley; and invest in and support renewables. quitcoal.org.au



NSW logging plan

A NSW Upper House Committee's call to open National Parks for logging demonstrates that Australians cannot trust State Governments to care for our unique protected areas.

Fairfax media has reported that the draft report of a NSW Upper House Committee has recommended that National Parks be opened for commercial logging and that a freeze be placed on the declaration of new protected areas. The recommendations follow a raft of proposals to open

National Parks to logging, cattle grazing, shooting and inappropriate development across Eastern Australia.

Friends of the Earth has been working to halt a perverse 'scientific logging' trial in NSW and Victorian Red Gum National Parks. The proposal was recently referred for Federal Government approval, despite the fact that logging had already been completed in parts of the forest.

foe.org.au/category/forests

Reef Walk 2013

FootPrints for Peace are walking from Cairns to Gladstone to highlight the impact that coal exports will have on the Great Barrier Reef. The walk is supported by Friends of the Earth and Lock the Gate. It began on June 1 and will arrive in Gladstone in mid-August. Follow their adventures at reefwalk2013.com

Growing opposition to onshore gas in Vic

Victoria is facing the threat of new coal mining and production of 'unconventional' gas (which includes coal seam gas (CSG), tight gas and shale gas). In 2012, FoE launched a campaign calling for a moratorium on all fossil fuel exploration and other activity until it had been proven that this would be safe for land, water and people. More than 70 organisations and seven local councils have now supported the call for a moratorium on coal and/or gas.

While the Victorian Coalition government has twice voted against the proposed inquiry into CSG impacts, public sentiment forced them to act: in August 2012, then Premier Ted Baillieu announced a ban on the use of the dangerous BTEX chemicals in gas drilling operations, and a moratorium on the process of fracking. This was the first significant environmental victory under the Coalition government.

In announcing the moratorium, the Victorian government said that once it had signed off on the National Harmonised Framework on Natural Gas from Coal Seams, the ban would be lifted. The Framework was officially adopted in late May.

The new Energy and Resources Minister, Nick Kotsiras, then announced that he would consult with the public about the future of the moratorium. But this has not happened. Until there has been meaningful consultation, FoE believes that the only reasonable action the government can take is to extend the moratorium to cover all activity around new gas operations.

Meanwhile a number of gas companies have been preparing to drill when the moratorium is lifted, and community groups are getting organised and a growing number of people are doing non-violent direct action training. If and when drilling starts, Victoria will see direct action not experienced since 2009 when farmers blockaded the construction of the North-South water pipeline.

Climate Frontlines campaign

The new Climate Frontlines project to establish links with communities facing the impacts of climate change in the Torres Strait Islands moved to the next stage when the project leader, Kate Morioka, accompanied by Brisbane-based elder Uncle Thomas Sebasio, travelled to Thursday Island in early July. On the return journey they consulted with relevant contacts in Cairns. The project aims to generate wide public awareness of the situation and to enhance the advocacy efforts of Torres Strait Leaders and communities.

Claire van Herpen, based in Melbourne, has joined the Climate Frontlines campaign, and is keen to focus on research and policy. Claire's masters thesis, "A Rising Tide: the Case for a Climate Change Displacement Convention", is now available on the FoE website at foe.org.au/forced-climate-migrants. The collective is establishing links internationally with other similar initiatives, as well as with specific programs to begin consideration of migration options.

Effective support for FoE Australia affiliate Tulele Peisa, formed for the resettlement of the Carteret Islands people on Bougainville PNG, was the focus of a visit towards the end of June by Climate Frontlines convenor Wendy Flannery. Two key areas for which Tulele Peisa's director, Ursula Rakova, is seeking support are the financial management system and a full scale review of the program since it's inception in 2005. For further information email Wendy Flannery wendy.flannery@foe.org.au.

Uranium mining in Queensland

High Risk - Low Returns: the case against uranium mining in Queensland is the NGO and civil society response to the state government's undemocratic decision to go ahead with uranium mining in Queensland. In October 2012 the government broke its clear commitment not to allow uranium mining. This commitment was the position of the Liberal National Party at the March 2012 state election and was reaffirmed after they took office. The NGO report is posted at: tinyurl.com/uran-qld

No open cut for Big Hill

Canadian gold miner Crocodile Gold is pressing ahead with the development of the Big Hill open pit project at Stawell in western Victoria. The company has started the process of getting approval from the Victorian government. Crocodile Gold took over the Big Hill Project after it bought the Stawell Gold Mine in May 2012. Community opposition forced the abandonment of plans for an open cut in the same area a decade ago. Friends of the Earth is proud to have played our part in that victory.

This new open cut proposal will remove Big Hill, the main landmark for the town, with the promise of subsequent rehabilitation of the hill. This project will have a massive impact on the town, creating years worth of dust and noise, which will bring considerable public health risks.

A paper by Dr Dora Pearce and associates at Melbourne University has established a clear statistical linkage for certain types of cancer amongst residents of the Central Victorian goldfields. This new project will bring a new set of risks to residents. The proposed open cut is in close proximity to two schools and to homes. Many residents say that they feel trapped, as no-one would want to buy properties so close to a massive open cut.

There have now been a series of meetings with residents around the proposed open cut. On April 17, around 150 people attended a public forum to express concerns about the mine. FoE is working to support the local campaign. An environmental effects statement process will shortly be announced, which will allow for public input. Please keep an eye on the FoE Melbourne website for details. www.melbourne.foe.org.au

To support or get active in the campaign, get in touch with the locals: bighill@fastmail.com.au

– Cam Walker

Protest at AusAID's mining conference

FoE Sydney held a protest outside AusAID's latest 'Mining for Development Conference' in Sydney on May 20.

The Mining for Development conference was funded by AusAID as part of its \$127 million program to promote mining in developing nations. Much of the funding under the 'Australian Mining for Development Initiative' has been used either directly or indirectly to promote Australian mining and business interests overseas. The focus on social development initiatives merely provides a veneer of credibility. Independent studies commissioned by AusAID itself have recommended that development outcomes would be better served by a spending focus on food security, water and sanitation and maternal and child health rather than mining.

If the Australian government is serious about reducing the negative impacts of mining it would do better to regulate the behaviour of Australian mining companies overseas. In 2012 the UN Committee on the Rights of the Child criticised Australian mining companies for their "participation and complicity in serious violations of human rights" in Africa, Asia and the Pacific that included instances of children becoming victims of evictions, land dispossession and killings.

Cultural Flows launch a success

Over 200 people packed the Bella Union Theatre in Melbourne on June 27 for the premiere of the Cultural Flows films: two new documentaries produced in collaboration between Traditional Owners and Friends of the Earth. There was standing room only as Traditional Owners from the Mutthi Mutthi and Wadi Wadi Nations introduced the films and conveyed their own profound and moving stories. The two films explore Indigenous people's deep connections to the rivers and waterways in their country. They also present a powerful argument for Indigenous water rights in the context of the current national debate over the future of the Murray Darling Basin. For more information about the films and upcoming screenings visit the Cultural Flows films facebook page. [facebook.com/CulturalFlowsFilms](https://www.facebook.com/CulturalFlowsFilms)

FoE's Dirt Radio

Sponsored by Friends of the Earth, Dirt Radio is the environment issues and climate justice program that digs the dirt on all eco-matters, Australian and international. On 3CR at 10:30am every Monday morning, 855 on the AM band, Dirt Radio generally features a lengthy in-depth interview with FoE campaigners who unpick and explore issues without the worry of chopping discussion down to typical mainstream media sound-bites. The show has been going full tilt since August 2012.

In the first half of this year alone, Dirt Radio reported on: forests and communities under threat in the Central Highlands of Victoria, the wind energy industry and Victorian state government policy, agriculture and the use of chemicals, lock the gate campaigning in East Gippsland, EU carbon price collapse, nano ingredients in sunscreen and lack of adequate product labelling, the depletion of bee populations globally as a result of pesticide use, environmentalism and the need for direct action protest, and the impact of dredging on fish stocks in Port Phillip Bay.

All programs can now be streamed digitally, and are available through podcast from the 3CR website:

www.3cr.org.au/dirtradio
www.facebook.com/DirtRadio
dirtradio_crew@foe.org.au

Banks urged to stop fossil fuel investments

More than 60 community leaders have signed an open letter to the big four banks, telling them – for the sake of avoiding runaway climate change – to end investments in fossil fuels. Among the signatories are musicians including Claire Bowditch, Urthboy and Mark Seymour, award-winning writers including Peter Carey and John Coetzee, religious leaders, artists, academics, scientists, health professionals, environmentalists and a two-time Olympian. Join them by signing and sharing the letter at openletter.marketforces.org.au. This campaign is being driven by FoE affiliate Market Forces.

Market Forces and 350.org Australia have released 'Financing Reef Destruction: how banks are using our money to destroy a natural icon'. The report identifies the banks that are doing the most to fund dirty coal and gas projects inside the Great Barrier Reef World Heritage Area. To read the report and take action, please visit marketforces.org.au/banks.html

Ute's Cabin

Brand new holiday accommodation on small working Bio-Dynamic farm in the rolling hills at the North West Coast of Tasmania.

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- Spacious deck
- Close distance to many natural attractions and National Parks.
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- Sleeps five
- Well equipped kitchen

For more information and bookings please email utemueller@skymesh.com.au





FoE International News

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

Friends of the Earth International Online

Web: www.foei.org

Youtube channel: www.youtube.com/user/FriendsoftheEarthInt

Action alerts: www.foei.org/en/get-involved/take-action

Subscribe to 'Voices', the bimonthly email newsletter of FoE International, at: www.foei.org/en/get-involved/voices

FoE's web radio station (in five languages): www.radiomundoreal.fm

FoE International online shop: www.foei.org/en/get-involved/shop (calendars, t-shirts, greeting cards, subscriptions to FoE publications, and more)

Pesticide restrictions victory for bees

A decision in Brussels to introduce EU-wide restrictions on neonicotinoid insecticides linked to bee decline is a significant victory. The move by the European Commission followed a report by the European Food Safety Authority earlier this year linking three neonicotinoid insecticides to bee decline.

FoE England, Wales and Northern Ireland's head of campaigns Andrew Pendleton said: "This decision is a significant victory for common sense and our beleaguered bee populations. Restricting the use of these pesticides could be an historic milestone on the road to recovery for these crucial pollinators. Ministers must now help farmers to grow and protect crops, but without relying so heavily on chemicals - especially those linked to bee decline."

Through its Bee Cause campaign, FoE England, Wales and Northern Ireland played a major role in persuading leading home and garden retailers to act on neonicotinoid insecticides. FoE Germany and FoE Austria are also campaigning to ban pesticides which harm bees.

More information:
tinyurl.com/bees-please

Glyphosate: reason for concern

Glyphosate is the world's best-selling weed killer and one of the most widely used herbicides in Europe. It is crucial for growing genetically modified (GM) crops, many of which are modified to withstand glyphosate. Concerns surround the safety of glyphosate particularly about its effect on human health, particularly on the hormone system, and its impact on the wider environment.

Now tests have shown that glyphosate is present in the human body. FoE Europe commissioned an independent laboratory in Germany to test urine samples from people in 18 countries for glyphosate. The results showed that traces of the chemical were found in samples from all countries, with 44% of samples found to contain glyphosate on average.

More information:
tinyurl.com/foe-gly

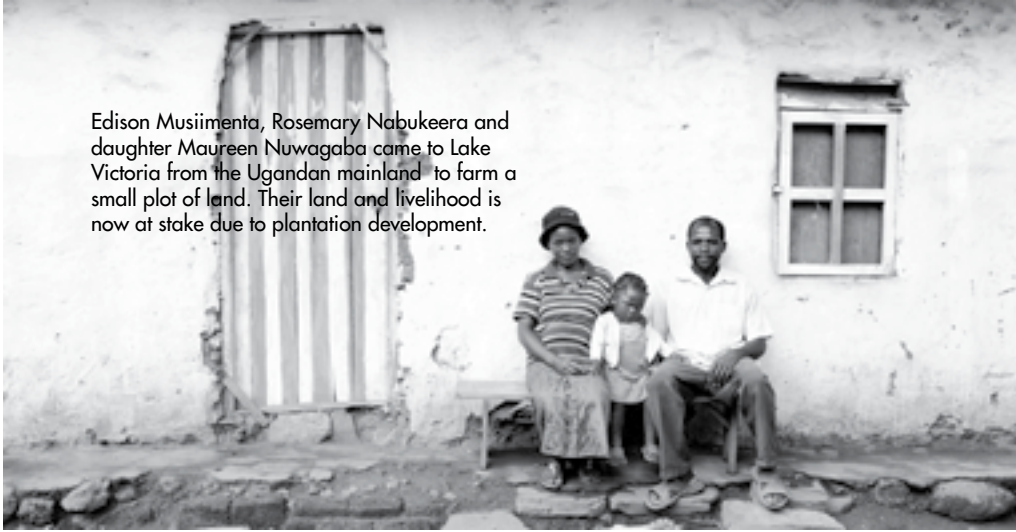
Nigerian farmers and FoE Netherlands appeal Shell case

Nigerian farmers from two villages who lost their case against Shell, together with FoE Netherlands (Milieudefensie), have submitted an appeal to the January decision by the court in The Hague. Milieudefensie is also filing an appeal in a third case. All the cases are centred around oil pollution due to spills from Shell pipelines and oil wells.

In one case, the court ruled in favour of Milieudefensie and one of the Nigerian plaintiffs, Elder Friday Akpan. Shell was ordered to pay compensation to this farmer from the village of Ikot Ada Udo, because the company did not adequately protect its oil well from vandalism, and oil from the well streamed over Akpan's land. In this case, however, the court ruled that Shell Headquarters in The Hague could not be held liable for the failures of its subsidiary, which is responsible for the daily management of Shell in Nigeria.

The lawyer for the farmers and Milieudefensie disputes in its entirety the decision taken by the court in the cases addressing damage from oil spills from Shell pipelines in the other two villages, Goi and Oruma. In those two cases, the court did not find Shell liable for the damages suffered by the farmers due to the oil spills because the cause was considered to be sabotage and the court ruled that Shell could not have reasonably prevented it.

Edison Musiimenta, Rosemary Nabukeera and daughter Maureen Nuwagaba came to Lake Victoria from the Ugandan mainland to farm a small plot of land. Their land and livelihood is now at stake due to plantation development.



Everest expedition calls for climate justice

The Climbing for Climate Justice Everest expedition – organised by the Save the Himalayas Campaign and Khangri Media, in collaboration with FoE Nepal / Pro Public – successfully climbed Mt. Everest on May 20 to demand climate justice from the top of the world. The team returned to Kathmandu and held a press conference on May 25.

Sudarshan Gautam – a Nepal-born Canadian resident – became the first person with no arms or prosthetic limbs to climb Mt Everest. He told the media that he saw how climate change is affecting the Himalayas, and stated that “Mount Everest has lost most of its glacier and now largely looks like a big black rock.” He urged the world community to reduce greenhouse gas emissions immediately.

Pemba Dorje Sherpa – who holds the world record for climbing Mount Everest in the fastest time – said that it has become easier to reach the top due to climate change as there is less and less snow. “You can get to camp 3 just using sports shoes these days,” he said.

Prakash Mani Sharma, director of FoE Nepal, congratulated expedition members and thanked them for their effort to raise awareness of climate justice.

More information:
tinyurl.com/everest-foe

Climbing for Climate Justice/ Save the World Heritage and Everest is Melting – banners held by Pemba Dorge Sherpa (left with white helmet) and Suman Shrestha (right without helmet).

Land grabbing in Uganda

Wilmar International is developing palm oil plantations in biodiverse islands off the coast of Lake Victoria, Uganda. The first phase of the project was completed in 2011 and the second phase of the project is currently going ahead. The second phase will expand palm oil plantations onto several other islands. The project is being promoted as a poverty-reducing endeavour, yet it is causing displacement, food insecurity and deforestation.

In 2011 and 2012, *Newsweek* magazine ranked Wilmar as the world’s worst company in terms of environmental performance, the worst of the 500 largest publicly traded companies in the world.

More information:
tinyurl.com/uganda-land
foei.org/landgrabbing

foei.org/wilmar-financing
Support the online action at: action.foei.org/page/speakout

Guatemalan human rights defender released!

Human rights defender Rubén Herrera has been released following a decision by a Guatemalan court. Herrera was arrested as he left his house on March 15. He has been an active community organiser working on many environmental and social justice campaigns for most of his adult life.

The flimsy reasons for his arrest – including incitement and kidnapping – were refuted by Herrera and his defense during a court hearing on March 19. However, despite requests by Guatemala’s Public Prosecutor to dismiss the case due to a lack of evidence, the judge ordered that the case continue and that Herrera return to court at the end of May. At the hearing in May, the judge decided to release him. Thousands of people around the world gave their support to a FoE International email campaign to free Herrera.

Herrera’s case is part of a disturbing cycle of criminalisation of human rights and environmental activists in his part of Guatemala (Barillas, Huehuetenango). Spanish company Hidralia SA is building a hydroelectric dam in the area, despite 90% of local community members voicing their opposition to and voting against the implementation of hydroelectric and mining projects in a 2007 consultation. Local communities have repeatedly implicated the company in political repression, intimidation and manipulation of local and national legal processes in recent years.

According to Natalia Atz Sunuc, FoE Guatemala general coordinator: “Campesinos and indigenous people are labeled as ‘terrorists’ for defending their basic human rights in a peaceful way”.

In June 2011, 40 European parliamentarians denounced the situation in Guatemala, but the European Union still refuses to take an effective stance in its trade and investment policies. A November 2012 international mission organised by FoE International verified systematic human rights violations and criminalisation of environmental activists and communities resisting mining and hydroelectric projects in Guatemala and El Salvador.

More information about controversies surrounding transnational corporations in Guatemala:
tinyurl.com/ruben-herrera

Irradiated food coming to a supermarket near you

Robin Taubenfeld

On May 24, Food Standards Australia New Zealand (FSANZ) approved the irradiation of tomatoes and capsicums. This is the first time that irradiation has been approved for foods that make up a significant part of our diet – but it won't be the last.

Irradiation is the process of exposing food or other materials to ionising radiation. It is used for shelf-life extension and for neutralising, not removing, contaminants or pests. Irradiation decreases the vitamin and nutritional content of food and disrupts its molecular structure, producing free radicals and potentially harmful chemicals such as benzene, formaldehyde and cyclobutanones.

To date, FSANZ has approved the irradiation of tomatoes, capsicums, herbs, spices, herbal teas, mangoes, mangosteens, pawpaws, carambolas, breadfruits, custard apples, lychees, longans, rambutans and persimmon. Pet food, animal feed and therapeutic goods may also be irradiated.

While acknowledging that irradiation may deplete vitamin and nutritional content, FSANZ has so far justified irradiation approvals on the basis that the approved foods make up a minimal part of the Australian and New Zealander diet. Now, they are approving some of our most commonly eaten fruits.

Recent surveys have shown that 59% of Australians purchase fresh tomatoes in their weekly shopping and the average Australian consumes an estimated 23 kgs of tomato-based products per year. The irradiation of a further 16 commonly eaten foods is in the pipeline, with irradiation being flagged for zucchinis, honey dew melons, rockmelons, nectarines, strawberries, cherries, apricots, plums, peaches, table grapes, and apples.

Proponents downplay science that exposes problems with irradiation. However, claims that irradiated food has a safe track record are misleading as no long-term study of human consumption of an irradiated diet has been carried out.

Irradiation destroys and disrupts vitamins, proteins, essential fatty acids and other nutrients in food – sometimes significantly. It can destroy up to 80% of vitamin A in eggs and 48% of beta-carotene in orange juice. It has been linked to health problems such as nutritional deficiencies, immune system disorders, and genetic damage.

Another health concern is the risk of irradiation being used to mask poor production practices. Irradiation can kill most bacteria in food, but it does not remove the faeces, urine, pus and vomit that often contaminate meat or the pests or other foreign matter that may contaminate herbs, spices, or fruit and vegetables.

In 2008, up to 100 Australian pet cats suffered neurological disease linked to eating irradiated cat food. The Australian government has since banned the irradiation of cat food. FSANZ asserts the problems were species specific and continues to expand the list of foods permitted to be irradiated for human consumption. In late 2012, however, the US Food and Drug Administration announced that it would commence investigations into the possibility that consumption of irradiated food has led to the unexplained deaths of 360 dogs and one cat and illnesses in 2,200 dogs since 2007. Numerous scientific reports have been produced questioning the safety of irradiation. The Australian cats affected by irradiation were not experimental animals, but family pets. The real life example of the potential impacts of an irradiated diet warrants an immediate cessation of all food irradiation – until it is proven safe.

Australian irradiated tomatoes will most likely soon be sold in New Zealand and the public is expressing their concern. A New Zealand Herald poll in June 2013 found that 72% of respondents were “very concerned” or a “little worried”.

With real concerns about the technology in the community, irradiation proponents are working hard to present a positive spin on irradiation as an “alternative” to pesticide use. The claim is disingenuous. As a post-harvest treatment, irradiation will not substitute for the numerous chemicals and pesticides potentially used in “conventional” agriculture. Irradiation will be used in conjunction with them, raising further concerns about the interaction of radiation and those chemicals. Irradiation for “phytosanitary control” is a prime example of an industry-driven use of bad technology instead of healthy and environmentally sustainable production practices.

In 1986, the Queensland government produced research promoting the post-harvest use of dimethoate and fenthion for controlling fruit fly on tomatoes. Thirty-five years on, this research has proven faulty. The Australian Pesticides and Veterinary Medicines Authority (AVPMA) is withdrawing this use of these chemicals because they are harmful to human health. The Queensland government has now presented its own, new, unpublished research to secure approvals to irradiate tomatoes in lieu of these chemicals.

There is no technological need for irradiation to replace these chemicals. Australia was the only country permitting dimethoate to be used for post-harvest pest control. This alone tells us that all other markets have found other options. Indeed, the taskforce phasing out this chemical

has provided growers numerous chemical alternatives to dimethoate and fenthion. Of course, non-chemical alternatives, such as organic production, exist.

Some of the alternatives currently in use include: cold storage; cold treatment; heat/steam, vapour treatment; hot water dips; atmospheric control with oxygen, carbon dioxide or nitrogen; physical disinfestation, i.e. cleaning, washing; hygienic and safe production practices; pest exclusion zones; early harvesting; and organic production

With numerous chemical-free and irradiation-free options for the production of food, the use of irradiation as a phytosanitary measure is inexcusable. Both irradiation and the pesticides, currently being phased out, may provide financially cost-effective production practices for market access, yet in doing so, they put our health and long term food security at risk.

Labelling

Irradiated tomatoes, capsicums and other produce may start to appear in our shops without labels. The tomatoes and capsicums will be irradiated in Queensland. They may be sold in Queensland but are likely to be sent interstate and overseas. Shoppers in southern states and New Zealand must keep a particular eye out for Queensland tomatoes.

Food Irradiation Watch advises shoppers wishing to avoid irradiated produce to look down at the produce to see if there is a sticker and then look up to see if there is a sign. Current laws allow shops to use a sign close to irradiated produce, rather than actual stickers or labels. There is no

mandatory wording for the irradiation statement, leaving the messaging up to marketing companies. Neither the words radiation nor irradiation are required.

Knowing that people do not want to consume irradiated food, the industry has long pushed for weak labelling laws, such as the ones we have today. Inadequate labelling already makes it difficult for consumers to know if a product has been irradiated. Now, Australia is poised to get rid of labelling all together; FSANZ will be undertaking a review of mandatory irradiation labelling in 2014.

In 2013-2014, Food Irradiation Watch will be mounting a campaign to ensure that our right to know is protected: irradiated food must be labelled.

We need your help! Refuse to eat irradiate food! Let your supermarket, greengrocer and your local politician know that you want to eat irradiation free and to do so you demand that irradiated food be labelled.

The messages are clear: good food does not need irradiating, and irradiated food does require labelling.

Robin Taubenfeld is a member of Friends of the Earth, Brisbane and Food Irradiation Watch.

To find out more:

website: www.foodirradiationwatch.org

facebook: [facebook.com/groups/212241255452651](https://www.facebook.com/groups/212241255452651)

email: foodirradiationwatch@yahoo.com.au



Protest outside Narangba irradiation plant in Queensland.

Radioactive Exposure Tour a big success

Gem Romuld and Jim Green

Friends of the Earth has been organising Radioactive Exposure Tours ('radtours') since the 1980s. In that time, the tours have exposed thousands of people first-hand to the realities of the nuclear industry. This year's radtour travelled for 10 days from Melbourne to Adelaide then into the heart of the SA nuclear industry and back.

We stopped in Port Augusta to meet with Sandra Dingamen at the site of the Gugada Tent Embassy and visited Emily Austin, one of the senior Aboriginal women of the Irati Wanti campaign that stopped the Howard government building a nuclear waste dump in SA in 2004. Mrs Austin and the other kungkas (women) beseeched the politicians to 'get their ears out of their pockets', and after a six-year campaign the politicians finally gave up on the plan.

Another highlight of this year's radtour was the participation of Maralinga nuclear bomb test veteran Avon Hudson for the whole 10-day trip. Visit the Woomera Missile Park and you'll see big chunks of metal – but Avon brings them to life with his encyclopaedic recollection of the history of missile testing in the region. Avon refuses to visit the Woomera cemetery these days – the large number of infant and childhood deaths points to the dark side of the nuclear bomb tests further west at Maralinga and Emu Field.

We drove past Roxby Downs and up Borefield Road into Arabunna Country, visiting the Mound Springs, desert oases that are very important for Arabunna people and host unique flora and fauna. These springs have suffered dramatically, some drying up almost completely, because of the water usage of the Olympic Dam uranium mine further south on Kokatha country. Small consolation that the problem would be still worse if not for the ongoing efforts of Arabunna Traditional Owners and 'greenie' groups like Friends of the Earth to hold BHP to account for its unsustainable water extraction.

We stopped for a swim at the Coward Springs on the Oodnadatta Track and camped for two nights on the edge of Lake Eyre South, witnessing two stunning sunsets and sunrises. The 'Old Lake' is different every time we visit it. It's beautiful when full of water, even more beautiful in the dry years when thick layers of salt naturally form an endless array of knee-high sculptures. This year, stretches of dry salt were interspersed with water from recent rain.

We back-tracked for a tour of the Olympic Dam mine, owned and operated by BHP Billiton. Olympic Dam is the largest uranium deposit in the world and was constructed in the early 1980s without proper consent of the Traditional Owners. BHP's monolithic expansion plans for the mine were shelved in August 2012 but the mine remains an environmental and social disaster in itself.

Back up the Borefield Road and onwards east through Marree, after a stop at the Marree Cultural Centre to meet with Reg Dodd, brother of Kevin Buzzacott. We visited the spectacular ochre cliffs and ate quandong pies in Copley before making camp for two nights in the Gammon Ranges on Adnyamathanha country. Visiting the Beverley in-situ leach uranium mine provided the opportunity to see how the mine works and grill staff on many topics.

We were privileged to hear from Marg Sprigg at the Arkaroola Wilderness Sanctuary – land that is 1.8 billion years old. The Spriggs – descendants of famous rock star (geologist) Reg Sprigg – are celebrating a successful campaign to prevent Marathon Resources from establishing a uranium mine inside the precious sanctuary. Marathon did itself no favours by illegally disposing of hundreds of low-level radioactive drill samples inside the Sanctuary; the company was caught out by brilliant detective work by Marg and Doug Sprigg.



After a camp-fire debrief and a good sleep we ventured south to camp in Brachina Gorge in the Flinders Ranges. After farewelling the desert we spent our last night in Adelaide watching anti-nuclear films.

On the trip we also heard about many other related campaigns including the battle to protect Walmadan at James Price Point (which has recently been won!) and the ongoing fight to protect Muckaty from a radioactive waste dump. The radtour group included visitors from Vietnam, India and Germany. Bhargavi Dilipkumar joined us from India before travelling to Sydney and Canberra for meetings regarding massive campaigns in her home country against poorly-managed nuclear power reactors – a problem exacerbated by the Australian Government's decision to permit uranium sales to India.

We organised in affinity groups, practiced consensus decision-making, experienced desert camping and vegetarian, communal cooking while amongst some of the most beautiful and ecologically significant environments in Australia.

Stay tuned for the Radioactive Exposure Tour 2014!

Gem Romuld and Jim Green are members of FoE's Anti-nuclear & Clean Energy campaign.



More info:

web: www.acecollective.org and
foe.org.au/anti-nuclear/issues/oz/radtour

email: radexposuretour@gmail.com or ace@foe.org.au

Opposite: Lake Eyre at sunset.
Above: Beverley uranium mine.



Plantations and Forest Stewardship Council Audits

Anthony Amis

Friends of the Earth (FoE) has been concerned about the questionable practices of logging operations for many years. FoE, unlike most forest protection groups, has also questioned the sustainability of the plantation sector. As a member of the Forest Stewardship Council, FoE has been closely involved in observing the activities of FSC certified companies, particularly in Victoria. Contentious issues have included the clearing of native forest remnants to establish plantations and the use of herbicides to kill regenerating native forest inside plantations. The clearance of native vegetation and destruction of koala habitat continues to be a major focus of FoE's work in Gippsland.

However these are not the only issues of concern. Hancock Victorian Plantations have been certified by FSC since 2004. FoE initially supported this certification as a means of protecting large swathes of native forest in Gippsland and also to minimise the use of pesticides. Each year the FSC conducts an audit of certified companies and each year this process supposedly gives the community an opportunity to have input and to air grievances. It is questionable what this input actually achieves, because the certifying body carrying out the audit is paid by the company and will be reluctant to remove a company's certification because ultimately this will mean less business for them.

A number of issues have been raised over the past year which again highlight the unsustainability of FSC certified plantation companies.

Hancock Victorian Plantations

In August 2012, FoE learnt that Hancock Victorian Plantations pledged \$305,000 to the recovery and rehabilitation of grasslands in Victoria's western district after contractors working for the company cleared 0.7 hectares of critically endangered natural temperate grassland of the Victorian Volcanic Plain near Mannibadar (south-west of Ballarat) between March and May 2011. This issue raised again the ongoing issue of contractors working for Hancock being unaware of the ecological attributes of the areas that they are working in. Surely it is not difficult for a manager to provide contractors with maps highlighting areas of high conservation significance. This breakdown of communication has been observed in the Strzeleckis for most of the past decade with Hancock managers again failing to properly inform logging contractors about the ecological attributes of key conservation areas. Further details on how the \$305,000 will be allocated is posted at environment.gov.au/epbc/compliance/judgements.html

In September 2012, a contractor aerially spraying over Hancock pine plantations in central Victoria was fined \$10,000 for spray drift which spread over 200 hectares of neighbouring King Lake National Park and Black Ranges State Forest. The spray event occurred over a 10 day period in April 2010 over lands adjoining several plantations. The vegetation that suffered from the spray drift was recovering from the 2009 bushfires which devastated much of the region. It has since been determined that eucalypts that regenerate after bushfires are far more sensitive to the herbicide glyphosate than previously realised.

Who is ultimately accountable for a spray incident that goes wrong in an FSC certified operation? Hancock themselves were not fined but the contractor working for them was. What implications does this have in other fire damaged regions, where Hancock plantations border or contain significant amounts of regenerating native bush? There are many regions across Victoria where this scenario occurs.

If a spray contractor follows current label rates for glyphosate, this may be far more toxic in fire damaged landscapes than previously realised. Will glyphosate labels now have to be amended to incorporate this new possibility? Most sprayed plantations lead to pesticide pollution of neighbouring streams. Is the plantation owner accountable for this pollution, or is the spraying contractor or the pesticide manufacturer responsible?

Also of interest in regards to both incidents was that Hancock's auditor Smartwood appears to have been kept in the dark as there was no mention of them in its published 2012 audit.

Water pollution

The issue of pesticides reared its head again in April 2013 when the Victorian EPA published results of water testing in two subcatchments of the Latrobe River – Middle Creek and Narracan Creek. Narracan Creek is dominated by potato cropping and the EPA recorded 23 detections of 10 different pesticides in December 2011 and March 2012. Middle Creek is dominated by Hancock hardwood plantations, mainly Eucalyptus Nitens which have been planted on former Eucalyptus Regnans sites.

The EPA detected the herbicide simazine in Middle Creek. Hancock have apparently not used simazine in the catchment since 2003. If this is true, then the EPA is theorising that simazine has polluted groundwater which has been slowly leaching its way into Middle Creek for almost a decade. Is this occurring elsewhere across Australia where simazine is used?

Friends of Gippsland Bush campaigner Susie Zent checking out a Forest Stewardship Council certified logging road, at College Creek in the Middle Creek catchment. Hancock Victorian Plantations maintains the "road".



The EPA also found levels of oxychlordane in the sediments of Middle Creek. Oxychlordane is a metabolite of chlordane, an organochlorine insecticide which has not been used in Australia since the 1990s. FoE believes that the high levels of oxychlordane could be the result of eucalypt seed treatments which occurred in other regions of the state in the 1970s and '80s. Eucalyptus seeds may have been treated with chlordane as an ant repellent. Middle Creek is also known to have been sprayed heavily with the herbicide 2,4,5-T in the 1970s, however the recent EPA testing did not extend to dioxins. FSC fails to take into account past unsustainable practices.

Mining and coal seam gas

Another issue that FSC is failing to come to grips with is mining operations on Hancock land. Many Hancock pine plantations were planted on old gold mine tailings and tin mine tailings. A number of mining exploration licences also exist on land owned by Hancock. One Hancock pine plantation at Ballarat is now the site of a large gold mine and another nearby site was scalped for mining exploration in 2005. There is no evidence of tree planting to remediate this site. Is this now classified by FSC as a mining site and exempt from FSC or is it still a forestry site where FSC criteria still apply?

Plantation logging on former mining sites also raises the issue of stirring up heavy metals such as mercury which often contaminate old gold mine sites. These heavy metals can be remobilised and washed down creeks during and after a logging operation. At least 21 Hancock plantations lie on top of old gold mine sites or gold mine tailings. FSC remains mute about these matters. (For more information see hancockwatch.nfshost.com/docs/mining.htm)

Hancock operations in Gippsland also overlay coal seam gas (CSG) exploration licences. Perhaps two of the most controversial lie in the Merrimans Creek Catchment, owned by Lakes Oil. Australia's richest person Gina Reinhart has recently invested in Lakes Oil. All over Gippsland people are 'Locking The Gate' and refusing CSG exploration on their properties.

A concern in Gippsland is that a lot of the work of the community may be undermined if Hancock allows CSG exploration on its lands. CSG extraction, if it goes ahead, could contaminate regional groundwater and local waterways as it has in other regions of Australia. If CSG extraction does eventuate on Hancock lands, will it be covered by FSC and if pollution of waterways occurs, who is responsible? Is this an FSC responsibility? What social obligations under FSC does Hancock have to communities impacted by CSG exploration or extraction on Hancock land?

Fire

Another grey area with certification of plantations concerns fire. In January 2013, FoE produced an introductory assessment of fires and plantations in Victoria. This assessment made it clear that the risks associated with bushfires and plantations have increased significantly over the past decade. It also appears that FSC is not adequately dealing with the profound implications of greater bushfire frequency and greater risk now associated with large plantation landholders. In former state owned plantations, there is a 690% higher chance of a plantation fire than there was 15 years ago.

As global warming intensifies, so does the risk associated with fires. As the risk increases regarding native forest fires, plantations located in close proximity to native forest must also be placed at a greater risk. Over 35,000 hectares of plantations have been burnt in Victoria since 2002. In the preceding 70 years, 7,760 hectares of plantation were burnt. Ninety percent of the largest plantation fires in Victoria have occurred in the past decade.

One fire with profound implications occurred in January 2013, known as the Kentbruck fire. Apparently this fire originated in a Hancock plantation. The ABC reported: "The fire first started in pine plantations near the Portland Nelson road and it ran into the Kentbruck state forest heading in a northerly direction."

This fire, the largest ever in South East Victorian plantations, eventually burnt out 1200 hectares of plantations as well as thousands of hectares of national park. It would be interesting to determine how this fire started. Was it caused by a plantation logging operation? If so, then an FSC certified plantation is linked with a fire that caused untold damage to a National Park and nearby native forest.

How does FSC deal with the issue of cause and effect of bushfires? What responsibility does FSC take for the increased fire risk associated with plantations? What responsibility do FSC certified companies have in mitigating for the amount of carbon released both through the burning of plantations and nearby native vegetation? How does FSC deal with the issue of plantation fires destroying high conservation value forests? (For more information see hancockwatch.nfshost.com/docs/fire.htm)

Anthony Amis is the pesticides spokesperson for Friends of the Earth, Australia.

Quitting coal in Gippsland



A CSG-free meeting in Poowong.

Livia Cullen

For over 18 months Quit Coal has been supporting communities across Gippsland – helping them build resilient community groups and a regional alliance ready to Lock the Gate against the coal and unconventional gas industries.

Gippsland is an agricultural hub for Victoria, producing \$2 billion worth of food each year and housing many thriving regional communities. It is also an area rich in natural beauty and biodiversity and with pristine beaches, lakes and mountains, it is a popular tourist destination.

Despite all this, the Victorian government has granted mining exploration licences to the coal and unconventional gas industries that cover over 80% of the region and are likely, with lax regulation, to allow these industries to start operations across Gippsland before the year's end.

In the last month we've seen the Victorian government endorse the National Harmonised Framework, a regulatory framework developed by the government as a superficial response to community concern about the impacts of unconventional gas extraction ('fracking').

Although the government claims to have consulted communities, the large number of submissions from community groups and organisations have been ignored and the endorsed framework remains identical to the draft prepared at the end of last year.

With the framework now in place the state government is preparing to lift the current moratorium on fracking. As soon as it is lifted, the coal and unconventional gas industries intend to turn Gippsland into a coal and gas field.

Local farmers, landowners, and residents are extremely concerned about the impacts this will have on their health and the future of their communities.

An explosion of coal and gas mining in Gippsland means mass industrialisation, huge risks to human and animal health, the chance of surface waterways becoming polluted, groundwater being contaminated and a lowering of the water table.

But most of all it poses a great threat to their livelihoods – their farms, their businesses and their communities.

With the lifting of the moratorium drawing ever closer, the unconventional gas industry is pulling out the big guns with the Australian Petroleum Production and Exploration Association hard at work touring MPs around their sites in an attempt to win them over and even rolling out former Howard government minister Peter Reith at an anti-CSG community meeting in Mirboo North.

Seaspray
Gasfield Free Day
&
Human Sign

Seaspray & surrounds have spoken
with 98% of residents wanting
Seaspray to remain gasfield free

Come help us celebrate & declare
Seaspray Gasfield Free by creating
a HUGE human sign on the beach

When: 12 Noon, Sunday 28th July
Where: Seaspray Beach / Merrimans Creek

Family Friendly Event
B.B.Q.
Live Music

LOCK
THE GATE

For more information
call Kerrin on 0400 155 476
or email us at:
csgfree@seaspray@hotmail.com

Gasfield Free Seaspray

Community opposition

But Gippsland communities are not having a bar of it. No matter how strong the gas industries marketing campaigns, nothing can change the fact that communities across Gippsland and a huge number of Victorians are strongly opposed to unconventional gas mining in Victoria.

Since Quit Coal began organising in Gippsland over 18 months ago, we've seen the town of Poowong declare itself Victoria's first 'coal seam gas free community'.

We've seen the Mirboo North community collect almost 10,000 signatures calling for a moratorium on all coal and unconventional gas mining until it can be scientifically proven safe.

And we've seen the Seaspray community organise into a force to be reckoned with since Gina Rinehart's Lakes Oil began testing their gas wells in May, ready to declare the town 'gasfield free' by the end of the month.

Huge numbers of other Gippsland communities including Inverloch, Leongatha, Kongwak, Wattle Bank, Yarragon South, Allambee, Newry, Maffra, Sale, Longford, The Honeysuckles, Harmers Haven, Boolarra, Koo Wee Rup, Bayles, Drouin, Darnum, Toongabbie, Foster and Bena are also joining the fight against coal and gas.

We've seen the damage these industries can wreak on the environment, on ecosystems, on animals and on humans both internationally and on our own shores in New South Wales and Queensland.

We've also seen how effective the Lock the Gate community movement can be, with both Dart Energy and Metgasco, two huge mining companies, suspending their operations in the Hunter Valley and the Northern Rivers region of NSW after a prolonged, organised and intense community backlash and the resulting changes to government regulation.

It's more important now than ever that we show these destructive industries that they have no social licence



to operate in Gippsland – that while the government might grant them a licence to dig up Gippsland, local communities are strongly opposed to what they are doing.

Gippsland residents with a huge number of Victorians in support are prepared to do whatever it takes to protect their communities and their livelihoods from the devastating effects of unconventional gas mining. The Victorian Government and the gas industry had better prepare for a big fight ahead.

*Livia Cullen is a campaigner with the Quit Coal collective of Friends of the Earth, Melbourne.
liviambcullen@gmail.com*

More Information

quitcoal.org.au

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Concerned residents 'shocked' by state of gas wells

Ursula Alquier

On May 25 an alliance of groups from across Gippsland came together to survey several tight gas wells in the Seaspray area. Some of the wells had been fracked in the past, and the effluent water had been left to sit in 'evaporation ponds' for years, vulnerable to leakage and flooding. In a show of support for Seaspray residents alliance members travelled from as far as Warragul, Poowong, Foster, Inverloch and Mirboo North to attend the meeting and view these "fracked" test wells near the township.

The residents were shocked by what they found. "What we saw was horrifying. We are continually told that evaporation ponds are safe and secure and won't allow contaminated waste water to soak into the surrounding environment. Instead what we found were ponds lined with flimsy and torn builder's plastic. The terrible state of the ponds and wells shows these companies have a total disregard for surrounding land owners, our water and local environment" said Ursula Alquier from Lock the Gate Victoria.

The group also viewed broken concrete casing surrounding an abandoned well, sparking further concerns amongst attendees that the operation is not being carried out professionally or with any care.

The Lakes Oil company told nearby residents and landowners that their gas-mining operations would have "no impact on their lives" but this was not the case. "The noise-pollution which Lakes Oil have been inflicting on residents for the last week with their gas-flaring operations is just a small taste of the network of wells and pipelines

they are planning to lay across this landscape in order to turn Seaspray into a viable gas field," Alquier said.

"We are very worried about this industry expanding in Gippsland" said local Kerrin Schelfhout. "We've heard the warnings from farmers in Queensland whose lives have been devastated by water and land contamination. We don't think these companies act in the interests of local people. If this is the care they take with their toxic ponds, we can't risk them operating near our farms and Merriman's creek which supplies drinking water to Seaspray and is used for irrigation by our farmers."

"Some of these wells go down as far as 2.5 kms. At this kind of depth, considering the seismic activity in Gippsland, how could you possibly guarantee a concrete pipe casing will keep our water aquifers safe?" said Ray Boys, Strzelecki beef farmer.

Concern about the unconventional and coal seam gas industries is spreading across Gippsland, with dozens of coal seam and other unconventional gas groups becoming active this year. Groups are active in many areas including Drouin, Poowong, Kongwak, Wattle Bank, Inverloch, Mirboo North, Boolarra, Bayles, Koo Wee Rup, Newry/Maffra, Longford, Seaspray, The Honeysuckles, Sale, Toongabbie, Foster, Yarragon, Allambee, Yarragon South, and Leongatha.

Ursula Alquier is a Community Campaigner with Friends of the Earth, Melbourne.





More Information

Web: www.lockthegate.org.au,
www.quitcoal.org.au/helplockthegate
Email: csgfreepoowong@hotmail.com or
ursula.alquier@foe.org.au

Coal trains in suburban Brisbane

In South East Queensland there has been mounting concern over the health impacts residents are facing from increased coal mining and transport. Coal is transported from Acland in the Darling Downs through Toowoomba and Ipswich then through 21 residential suburbs of Brisbane, passing along the fence line or within 100 metres of many of these properties.

In 2005/2006, 4.1 million tonnes of coal was transported by rail to the Port of Brisbane. The figure ballooned to 8.85 million tonnes in 2011/2012. New Hope Coal is considering expanding this to 14 million tonnes, and Queensland Rail's long-term plan is to increase this to 20 million tonnes by 2020. http://sixdegrees.org.au/sites/sixdegrees.org.au/files/Brisbane_Suburbs_Map.png At the current rate, residents of Toowoomba, Ipswich and Brisbane are exposed to 7,400 uncovered coal wagons a year.

Coal wagons are known to release fine dust particulates during transit. People most susceptible to the health effects of fine dust particles are infants, children, adolescents, the elderly and those with pre-existing respiratory conditions like asthma.

Friends of the Earth Brisbane is calling on the coal industry to immediately cover all train wagons; rule out the expansion of the Brisbane coal port and the construction of a new port at Pinkenba; and halt the expansion of the New Acland and OGL mines.

On June 26, 20 concerned residents protested at the Aurizon offices in Brisbane's CBD. "It's cheap to put proper lids on the wagons, less than \$10 per wagon per trip,"

said FoE spokesperson Bradley Smith. "The coal industry's own study in Tennyson found that coal dust in suburban Brisbane has tripled in the past 15 years and the World Health Organisation confirms that even small amounts of coal dust will have health consequences."

FoE Brisbane hosted a community forum on the health impacts of coal dust in Yeronga in May. As a result of that meeting, FoE Brisbane is surveying residents in the Tennyson to Fairfield area and planning further community meetings. If you'd like to assist with the surveys or organising community meetings, or help with the data entry and analysis, please contact: sixdegrees@foe.org.au, (07) 3171 2255.

More information on coal trains in Brisbane: sixdegrees.org.au/content/coal-trains-suburbs-brisbane

Coal train dust in NSW

An independent review of a report into coal train dust in the Hunter region of NSW has found a major error with its statistical analysis. An air quality expert was commissioned by the Environment Protection Authority to look over the report by the Australian Rail Track Corporation after claims the draft was altered before publication.

The report found that coal trains do not create any more dust than regular trains. University of Queensland air quality expert Doctor Luke Knibbs was commissioned to review the report and found problems. "The major finding of that review was an error in the statistical analysis which was used which calls into question a number of the findings," he said.

The EPA agrees with Dr Knibbs' findings. The government has now asked the state's chief scientist to recommend an appropriate expert to review ARTC's monitoring data.

But Coal Terminal Action Group spokeswoman Fee Mozeley says more needs to be done. "When the doctoring of this report became public knowledge we wrote to the Premier asking for a Special Commission of Inquiry to get to the bottom of this matter," she said. "Since then more than 500 Newcastle residents have sent similar letters and we haven't had any response from the Premier."

— ABC, 'Major statistical error found in dust report', 3 July 2013



Action in Brisbane on June 26.

Photo by Graham Ernst.

Nanomaterials in the environment: an unknown risk

Louise Sales

Scientists are only just beginning to understand the potential risks associated with releasing nanomaterials into the environment. These include potentially harmful effects on soil and water organisms. Despite growing evidence of potential harm, a new study suggests that globally hundreds of thousands of tonnes of nanomaterials are already being released into our soils, water and atmosphere.

In May, a group of US scientists published the first global assessment of the likely emissions of engineered nanomaterials (ENMs) into the environment and landfills. [1] It was estimated that in 2010, 260,000–309,000 tonnes of global ENM production ended up in landfills (63–91%), soils (8–28%), water bodies (0.4–7%), and the atmosphere (0.1–1.5%). According to the authors, more accurate estimates of ENM emissions were hampered by the lack of available data on use.

This demonstrates the need for a mandatory register of nanomaterial use – to help regulators determine the quantities and types of nanomaterials currently being produced. This is vital to not only characterise the risk associated with nanomaterial pollution, but also to develop successful strategies to prevent it.

Potential impacts on soil organisms

According to the study, emissions to soils represent up to about a quarter of the material flows, mostly from the disposal of biosolids (i.e. materials from waste water treatment plants) onto agricultural land. This is concerning, since laboratory experiments have indicated that nanomaterials could potentially harm beneficial soil microbes and the digestive systems of earthworms – essential engineers in maintaining soil.

In Australia, we currently produce approximately 300,000 dry tonnes of biosolids annually. Approximately 55% is applied to agricultural land and around 30% is disposed of in landfill or stockpiled. The remaining 15% is used in composting, forestry, land rehabilitation or incinerated.

A recent study by Dutch research institute Alterra found that exposure to certain nanoparticles damaged the health of earthworms. [2] The doctorate study by Merel van der Ploeg found that exposure to soil laced with carbon nanoparticles showed a “significant” effect, including slower population growth, increased mortality and tissue damage.

“The same characteristics which make nanoparticles useful in many products, such as chemical reactivity and persistence, cause concern about their potential adverse health effects,” stated Van der Ploeg.

However, since this experiment was conducted in the lab its results can't be reliably extrapolated to field conditions. Further research is needed to determine what impact nanoparticles in biosolids might have on earthworms under more realistic exposure scenarios.

Another recent study by Colman *et al.* found an adverse impact on plants and microorganisms in a long-term field experiment following the application of sewage biosolids containing a low dose of nano-silver. [3] The nano-silver treatment led to changes in microbial community composition, biomass, and extracellular enzyme activity, as well as affecting some of the above ground plant species. It also led to an increase in nitrous oxide (N₂O) fluxes. This is significant – since nitrous oxide is a notorious greenhouse gas, with 296 times the global warming potential of carbon dioxide. It is also the dominant stratospheric ozone depleting substance. The results also suggest that while nano-silver may be transformed in biosolids through oxidation and sulfidation, it may still have an impact on plants and microbes.

A recent review looking at the environmental factors that affect the biological activity of silver, copper oxide and zinc oxide nanoparticles concluded that the anti-microbial activity of certain nanomaterials can damage beneficial microbes and “modify important aspects of metabolism of microbes and plants at sub-lethal levels”. [4] The scientists observed that the bioreactivity of nanomaterials is likely to vary significantly depending on the soil type. Therefore predicting the potential toxicity and evaluating the risks associated with nanoparticles in soil will be difficult to achieve – even with the most sophisticated equipment. Soil microorganisms are at the foundation of our entire food chain. Funding research to understand the ways in which nanomaterials affect these organisms, and taking steps to avoid the contamination of agricultural land with nanomaterials, should be urgent priorities for the government.

Nanoparticles in the food chain

Another disturbing finding from the Colman study was that several plant species were able to take up silver from nano-silver in soils. This suggests a potential route for nano-silver from sewage waste to get into the food chain.

The impact that soils contaminated with nano zinc oxide (ZnO) and cerium oxide (CeO₂) had on soybean crops was the focus of another recent study. According to the authors: “The results provide a clear, but unfortunate, view of what could arise over the long term: (i) for nano-ZnO,



component metal was taken up and distributed throughout edible plant tissues; (ii) for nano-CeO₂, plant growth and yield diminished, but also (iii) nitrogen fixation — a major ecosystem service of leguminous crops — was shut down at high nano-CeO₂ concentration. Juxtaposed against widespread land application of wastewater treatment biosolids to food crops, these findings forewarn of agriculturally associated human and environmental risks from the accelerating use of MNMs [Manufactured Nanomaterials].”[5]

The scientists emphasised the need to make nanomaterials sparingly bioavailable by design and to manage waste streams to prevent the crop-damaging soil buildup of toxic nanomaterials.

More evidence of the uptake of nanomaterials by plants was revealed in a study published earlier this year by Hernandez-Viezcas et al. This tracked the uptake of zinc oxide and cerium oxide (CeO₂) nanoparticles by soybeans. The scientists found nano cerium oxide – used in internal combustion processes, sunscreens, gas sensors and cosmetic creams – in the edible part of the soybean. They concluded that their data suggests that cerium oxide nanoparticles “can reach the food chain and the next soybean plant generation.”[6]

Effects on aquatic organisms

The fact that as much as 7% of nanomaterial emissions end up in water bodies is also of concern given their potential toxicity to aquatic organisms. A recent review of the toxicity of silver, copper oxide and zinc oxide nanoparticles on aquatic organisms found that they were toxic to fish, algae and crustaceans. The study concluded that “the discharge or leaching of biocidal nanomaterials

to surface waters may pose threat to aquatic species” and that “this aspect of life cycle of nanomaterials could be controlled either at the level of ‘safe by design’ or, if applicable, by regulated discharge / disposal.”[7]

Urgent regulatory action is needed

In 2004 the United Kingdom’s Royal Society recommended that given the evidence of serious nanotoxicity risks, nanomaterials should be treated as new chemicals and subject to new safety assessments before being allowed in consumer products. It also recommended that releases of nanomaterials to the environment should be avoided as far as possible until it could be demonstrated that the benefits outweighed the risks. [8]

From reading the government’s literature on nanotechnology safety and regulations you’d be forgiven for thinking the government was already effectively regulating these risks. In a 2011 publication, the then Department of Innovation, Industry, Science and Research stated “to keep us safe, regulators adapt their methods of analysis or risk assessment to take account of the specific challenges posed by the qualities of the material or product being assessed. This gives regulators enough flexibility in their current risk assessment approaches to consider issues that are specifically relevant to nanotechnology and nanomaterials.”[9]

However, despite the rhetoric, the overwhelming majority of nanomaterials remain effectively unregulated. While our national chemicals regulator NICNAS (the National Industrial Chemicals Notification and Assessment Scheme) has introduced regulation for nano forms of new chemicals, nano forms of existing forms still remain unregulated. Although many nanomaterials now in commercial use

'Scientists are only just beginning to understand the potential risks associated with releasing nanomaterials into the environment.'

pose greater toxicity risks than the same materials in larger particle form, if a substance has been approved in bulkform, it remains legal to sell it in nano form.

There is no requirement for new safety testing; product labelling to inform consumers, workers or employers; or new occupational exposure standards or mitigation measures to protect workers or to ensure environmental safety. Incredibly, there is not even a requirement for manufacturers to notify regulators that they are using nanomaterials.

Despite, and perhaps because of this regulatory vacuum, nanomaterials are already being used in thousands of consumer products and are making their way into waste streams and the environment. Yet scientists are only just beginning to understand what the potential implications of this could be.

The US based Institute for Agriculture and Trade Policy recently produced a report calling for an immediate moratorium on fertilising with biosolids from sewage treatment plants near nanomaterial fabrication facilities. [10] The Institute argues that a moratorium would give researchers time to determine whether nanomaterials in soil can be made safe and to research alternatives to building soil health, rather than depending on fertilisation with biosolids.

Regulators also need to be able to properly quantify the scale of the problem. A mandatory register of nanomaterial use would help regulators determine the quantities and types of nanomaterials currently being produced. This is vital both to characterise the risk associated with nanomaterial pollution, and to develop successful strategies to prevent it.

This year the European Commission announced that it will conduct an impact assessment on a EU-wide nanomaterials registry. Meanwhile, our federal government has refused to take similar action here. A recent study [11] commissioned by the government concluded that the feasibility of implementing a similar system here was "questionable", despite the fact that other countries such as France are in the process of doing it.

Louise Sales is the Nanotechnology Project Coordinator with Friends of the Earth, Australia.

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Rudd's plans to float carbon price a sham

Beck Pearse and Julia Dehm

Almost immediately after the reappointment of Kevin Rudd as Prime Minister he was asked about the vexed issue of carbon pricing. In response he mooted the possibility of moving from a fixed price on carbon to an emission trading scheme one year earlier than anticipated. The proposal was met by support from business groups and condemnation from the Greens. But what does it all mean?

Gillard's *Clean Energy Future* package (like Rudd's *Carbon Pollution Reduction Scheme* before it) established an emission trading scheme for carbon in Australia (measured in equivalent tonnes of carbon dioxide CO₂e) with an initial fixed price or 'tax' on carbon as a transitional measure. A price on carbon of \$23 per tonne CO₂e was introduced one year ago on 1 July 2012, and was to remain in place for the first three years (increasing by 2.5% per year).

It was anticipated that on 1 July 2015 the scheme would shift to having a market-determined fluctuating price and be linked to the European Union emission trading scheme. What Rudd is proposing is to accelerate this shift from the fixed price to a internationally linked market-determined fluctuating price by one year.

Why is this a problem?

Accelerating this shift to an internationally linked market-determined price is a problem for climate action because the current international carbon price, trading at between

\$4–6 tonne CO₂e, is much lower than the current fixed price on carbon. When the Clean Energy Future package was initially passed it was recognised that there were foreseeable risks that the market price of carbon might be either low or extremely volatile. Therefore a 'floor' and a 'ceiling' on the price of carbon was included for at least the first three years (1 July 2015 – 1 July 2018) to make sure market-set prices would not drop below A\$15 per tonne CO₂e (increasingly by 4% annually) and therefore not be too low to be environmentally effective.

On 28 August 2012, the Australian government and the European Commission announced their intention to link the Australian emissions trading scheme (ETS) with the European Emissions trading scheme (EU ETS) by 2015. In order to facilitate the link two significant changes were made to the Australian ETS. The first of these was scrapping the legislative guarantee of a minimum or 'floor' carbon price. The second change was further restriction on the use of international offsets in the scheme so that between 2015 and 2020, only 12.5% of emission reductions can come from Kyoto offsets units from the Clean Development Mechanism and Joint Implementation. However, 37.5% of each company's obligations can come from EU Allowance units. There is a huge glut of EU Allowance units in the EU ETS market system currently. Australian firms will be buying the free permits allocated to polluters in the EU.

Multiple reasons to scrap rather than speed up a move to an internationally linked emission trading scheme

There are good reasons to oppose the plans to link two fundamentally flawed schemes, and even more reasons to oppose accelerating this link as Kevin Rudd proposes.

If the scheme transitions to a market-determined carbon price linked to the EU scheme, the price on carbon in Australia will be determined by wider trends in international carbon markets. International carbon prices have been continuously unstable and declining since 2008, reaching a historically low price of 4.15 euros per tonne CO₂e in January.

According to market analysts, there is no prospect of prices reaching levels that would encourage any changes in energy-generating capacity.[1] Carbon analysts RepuTex expect that the price of EU Allowance units will be trading at around A\$11.50 per tonne CO₂e between 2015 and 2020, much lower than our current fixed price. Even if predictable high prices could somehow be engineered – which is the opposite of what the ETS is designed to deliver – they would be insufficient to drive the structural changes needed to address climate change in the absence of other measures. As it stands, accelerating the shift to an internationally linked market-based scheme will allow businesses to meet their liabilities at a much cheaper rate.

More generally there are serious problems with relying on market-based models to address the serious social, economic and moral challenges climate change presents. The solution is not to expand and complicate the ETS by linking it to more countries, but rather to scrap the schemes in favour of progressive and more effective regulation to reduce emissions and transition away from fossil fuel dependence.

1. The EU ETS has not reduced emissions.

The EU ETS has not reduced emissions across its first two phases (2005-2007; 2008-2012). Due to over-allocation of free permits (EU Allowance units) to firms participating in the EU ETS in phase I, carbon prices dropped to nearly zero in December 2007. Prices have stayed incredibly low in the phase II. Since 2008, any emissions reductions that occurred are attributable to the financial crisis, not the carbon price mechanism.[2]

The EU ETS relied on international offsets from the Kyoto Protocol's Joint Implementation and Clean Development Mechanisms. The offset projects have resulted in an increase of emissions worldwide: even conservative sources estimate that between one-third and two-thirds of carbon credits bought into the ETS 'do not represent real carbon reductions'.[3] At May 2012, industrial gas projects made up 84% of Clean Development Mechanism offset credits in the EU ETS.[4] The EU Climate Change Commissioner Connie Hedegaard said: "There are too many examples of projects with industrial gases, primarily HFC-23, where if you dig into it you can find there is a total lack of environmental integrity." Whilst industrial gas offsets have been discredited, the European Commission has been incredibly slow to remove these offsets from the scheme.

2. The EU ETS is characterized by volatile and declining carbon prices.

3. The EU ETS is a subsidy for polluters.

Whilst companies with obligations to participate in the EU ETS have been allocated more free permits than they need, almost all of the costs were passed on to consumers. Heavily compensated energy-intensive industries (iron and steel, refineries and (petro-)chemical utilities) enjoyed windfall profits of 14 billion euros between 2005 and 2008.[5] Electricity producers, too, are free to pass on to consumers the full 'opportunity cost' of compliance by increasing electricity prices, resulting in windfall profits of anywhere between 23–71 billion euros in the second phase.[6]

4. Linking to the EU ETS means linking to an accumulated glut of excess emissions currently causing regulatory headaches in the EU.

Analysts from Barclays have estimated that there is currently a 1.68 gigatonnes oversupply of emissions in the EU ETS, an oversupply almost equivalent to Europe's predicted emissions for 2012 (1.95 gigatonnes). The European Parliament has just voted to address this problem by 'back-loading' excess emissions; that is, postponing the auction of 900 million tonnes of extra allowances from 2013–2015 until 2016–2020. Even the European Commission recognises 'back-loading' is only a short term fix.[7] This problem simply defers rather than addresses the crisis of excess permits.

5. The Australian ETS repeats the EU ETS flaws.

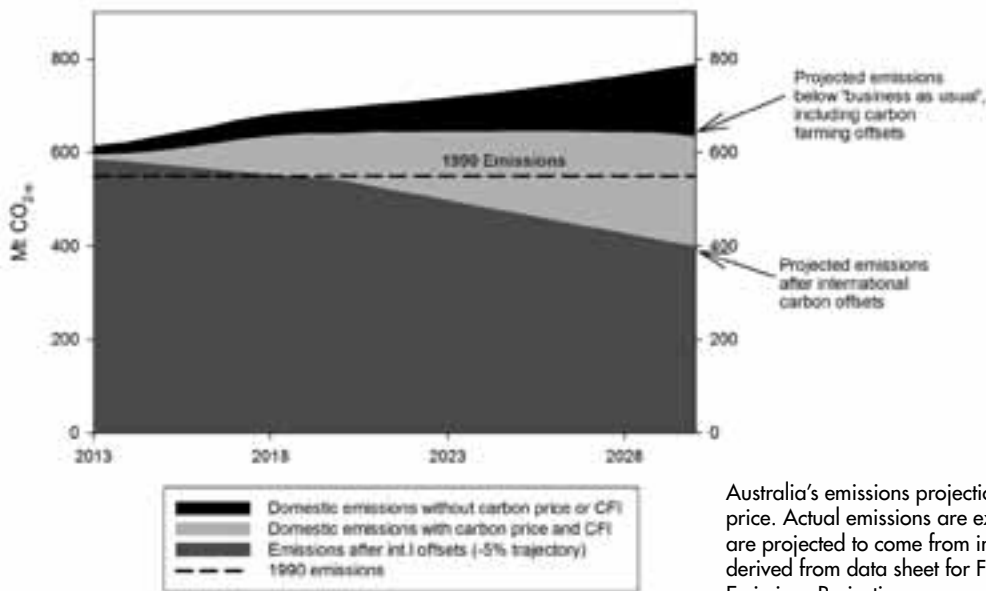
The Australian ETS has repeated, rather than learned from, the failures of the EU ETS, particularly in regard to compensation and carbon offset rules.

Compensation: Generous compensation in the form of free permits has been extended to the most polluting firms in Australia. The most polluting power stations stand to receive windfall profits of approximately A\$2.3–5.4 billion, whilst passing on the costs to households nonetheless.

Offsets: The Australian ETS rules effectively put no limits on the amount of emissions reductions that can be replaced by carbon offsets. There is a 50% limit on international offsets and under the EU-Australia ETS linking agreement, 37.5% of international offsets will be EU Allowance units – the same free permits that were heavily over-allocated to polluters in Europe in the first and second phases of the EU ETS! There are no limits on the number of offset credits from controversial land-based and forestry programs under the Carbon Farming Initiative offsets. Land carbon should not be used to compensate for burning fossil carbon – carbon embedded in land-water-atmosphere ecosystems are much more dynamic than fossil carbon contained within effectively inert fossil fuels underground.

6. The Australian ETS locks-in a fossil-fuel economy.

A reliance on international offsets is promoted based on the assumption that it is 'inefficient to meet the whole abatement task through domestic action'.[8] The Treasury modeling assuming international offsets (434 Mt CO₂e) will account for 94% of recorded emissions reductions by 2050. The 2012 Energy White Paper has the same assumption that emissions reductions will be outsourced overseas and coal and gas industries expanded domestically.



Australia's emissions projections illustrate the minimal impact of the carbon price. Actual emissions are expected to rise to 2030 while 'reductions' are projected to come from international carbon offsets. Source: Graph derived from data sheet for Figure 10 in DCCEE (2012) Australia's Emissions Projections.

7. The ETS closes the door to other, genuinely effective climate policies.

Carbon markets cannot address the challenge of climate change in an effective or a just way. If we are serious about tackling climate change we need to take action to transform our energy infrastructure and to shift away from fossil fuels, especially coal.

We need direct regulation on climate change

There are effective and progressive policy options available now.

- Supporting the roll out of 100% renewable energy, especially government-funded, community-run renewable energy projects
- Transitions toward zero carbon in stationary energy, building, land use and transport.
- Hypothecated carbon income and corporate taxes could be imposed to fund renewables, to finance just transitions in coal-dependent communities, and to meet international obligations. These taxes would have a progressive effect on income distribution.
- Stop using taxpayers' money to provide handouts to big coal and gas corporations and make the miners pay their fair share in taxes.
- Reject current development proposals for coal ports, mega-mines, dams and unconventional gas wells in significant areas.
- Put in place an urgent moratorium on coal seam gas and other unconventional gas mining.
- Full phase out the Australian coal export industry
- Decommissioning coal-fired power stations
- Create no-go zones to protect productive agricultural land, national tourism icons and all residential dwellings from coal and gas mining.
- Strengthen federal environment laws to exclude coal and gas mining from important water sources, cultural heritage sites and sensitive environment areas.
- Put in place national standards on coal and gas pollution and enforce compliance.

Given the urgency of a just transition away from fossil fuel dependence, we are calling for the Australian and EU governments to scrap their carbon markets in order to make way for progressive climate policy. The struggle against emissions trading is the struggle for social, environmental and climate justice. It is a struggle for transforming our energy, transport, agricultural, production, consumption, distribution, disposal and financing systems. We call on civil society organisations and movements to endorse this call and join the fight to abolish the ETS.

Beck Pearse and Julia Dehm work on the FoE Australia Climate Justice campaign focused on forest carbon offsets and carbon trading. beck.pearse@foe.org.au, juliadehm@yahoo.com

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Think again, minister, on uranium deal with Emirates

Dave Sweeney

It might surprise many Australians to know that Foreign Minister Bob Carr is moving forward with a deal to sell Australian uranium to the United Arab Emirates – a country with an illiberal government situated in one of the most volatile and insecure regions in the world.

In Abu Dhabi last August, Carr talked up the deal which would see the UAE become Australia's first Middle Eastern uranium market as “underpinning jobs and investment in Australian uranium mines”. A Department of Foreign Affairs briefing makes it clear that there is “strong commercial interest in the long term amongst Australian uranium producers in supplying uranium to the UAE”.

The commercial interests of uranium producers have been prioritised over the wider national interest before but it is now time to test the claims of Australia's uranium sector. The value of the employment and economic contribution made by the Australian uranium sector is consistently exaggerated while its risks and liabilities are routinely played down. When it comes to jobs and dollars uranium is a small contributor to Australian export revenue and employment, but when it comes to global impact and risk Australian uranium is a major player.

From 2002 to 2011, uranium sales averaged \$627 million annually and accounted for only 0.29 per cent of all national export revenue. The industry's contribution to employment in Australia is also underwhelming – even using the highest estimate, it accounts for just 0.015 per cent of the jobs in Australia. While small industrial sectors can play an important economic role, the unique properties and risks of uranium mining relative to its meagre employment and economic benefits means it requires particular scrutiny.

Supporters of the sale deal have equally failed to address other key concerns, including the poor democratic record of the UAE or to voice any criticism about crackdowns on democracy activists making modest calls for political reform in a country where the “Arab Spring” has not yet sprung. The UAE is a collection of seven emirates including Abu Dhabi and Dubai and has one of the least participatory political systems in the world. In the most recent national election in 2006, only 6889 people – less than 1% of the population were entitled to vote, and they were hand-picked by the national rulers.

Last year, over 50 human rights activists in the UAE were rounded up and detained without charge following calls for political reform. Several pro-democracy NGO's including the US-funded National Democratic Institute and the German-funded Konrad Adenauer Foundation were forced out of the country and Amnesty International expressed concerns over torture.

The uranium sale treaty currently before the Federal Parliament's joint standing committee on treaties, states that the agreement “shall remain in force for an initial period of thirty years and upon expiry of this initial period shall be renewed automatically for successive thirty year periods”.

The treaty would lock us in to supply uranium to the UAE irrespective of political changes or upheavals in the region. Because of military and commercial deals, including the Qantas-Emirates alliance, the UAE is portrayed as an island of democracy and stability in the Middle East. However the evidence and recent crackdowns on even modest voices of reform suggest a different story.

Australia's plan to sell uranium to UAE is ill-considered. It essentially requires us to turn a blind eye to the UAE's poor democratic form, and strikes a blow to the goal of achieving a nuclear-free Middle East.

Despite the federal government's repeated insistence that the uranium must and will only be used for peaceful purposes, there is clear evidence that international nuclear safeguards are stressed, under-resourced and effectively impossible to police. To simply state that Australian uranium will not be misused in the UAE because it is not in the UAE's interests to misuse it is naïve and lacks credibility.

In the shadow of Fukushima – an ongoing crisis directly fuelled by Australian uranium – nuclear energy's place in the global energy mix is literally under a cloud. The commercial interest of a small, high risk-low return industrial sector should not be confused with Australia's long term national interest. Instead of fast-tracking increasingly irresponsible uranium sales we urgently need a mature and independent assessment of the domestic and international impacts of this contested and contaminating trade.

Dave Sweeney is nuclear-free campaigner for the Australian Conservation Foundation

Green light for King Island wind farm feasibility study

Leigh Ewbank

In 2012, King Islanders were trusted to determine the fate of a proposed wind farm. Despite an aggressive scare campaign backed by wealthy NIMBYs [1] and big PR [2], a clear majority of the community recently voted for a feasibility study into a 600 MW wind farm proposed by HydroTasmania. The result shows that King Islanders won't be fooled by anti-wind energy spin.

The two-year feasibility study will examine the economic, technical and environmental aspects of the wind farm proposal. The community will now be able to get all the information needed to make an informed choice.

With the closure of its abattoir in late 2012, a shrinking population and increased shipping costs, the Island desperately needs a new economic lifeline. That hope may come in the form of the proposed TasWind wind farm. If the 200-turbine project proves viable, the investment, income and employment it would generate can rejuvenate the economy.

Early estimates from TasWind suggest the wind farm would create 500 jobs during construction and up to 60 ongoing jobs. In terms of ongoing economic benefit, the wind farm could pump between \$7–8.9 million into the economy each year for the life of the project. Then there's the lasting benefits of an upgraded Port of Grassy.

What other economic opportunities are there for Islanders if the wind farm goes ahead? Located in the middle of the Bass Strait, between Tasmania and mainland Australia, the Island is not only buffeted by strong winds. It is exposed to the strong currents of the Southern Ocean.

According to one local entrepreneur, the National Electricity Market (NEM) connection would allow King Island to become a renewable energy powerhouse. David Kerr believes ocean energy has excellent potential to complement the proposed wind farm [3,4]. The combination of wind and ocean energy, Kerr argues, will allow for the high-voltage undersea cable to be fully utilised while increasing the reliability of the NEM. Given the urgent need to address climate change and renewable energy valued at a premium, Kerr's ideas have weight.

A future King Island equipped with an operational wind farm and connected to the National Broadband Network will open up unexpected economic opportunities. New economy giants Google [5] and Apple [6] are committed to 100% renewable energy. Both have a history of locating data centres near renewable energy installations. A data centre based on King Island powered by the wind and cooled by the Southern Ocean is plausible.

The idea has parallels with Google's Hamina data centre in Finland.[7] In 2009 Google obtained a decommissioned paper mill with the aim of repurposing it as a server farm powered by renewables. The company entered an agreement with the Swedish-based O2 to purchase the output of the 72 MW Maevara wind farm.[8] The server farm's use of arctic seawater to keep the servers cool is an additional sustainability feature worth noting.

King Island's closed abattoir could be a candidate for such a project. If it were to come to fruition, the Island would secure its economic future by tapping into the two high-growth sectors of the 21 Century – renewable energy and information and communications technology.

Of course, these visions for a stronger and more resilient King Island rest on political leadership. Wind farm opponents fought a feasibility study tooth and nail and nearly scuttled the proposal before the community had reliable information about the wind farm's potential benefits. King Island Mayor Greg Barratt should be applauded his efforts throughout the first phase of community consultation. Under his leadership, Council issued a statement of support for the feasibility study.

Over the next two years the viability of the King Island wind farm will become clear. And with it, the future of King Island's economy.

Leigh Ewbank is Friends of the Earth's <http://yes2renewables.org> Yes 2 Renewables community coordinator. He has visited King Island on several occasions to observe the community consultation process. One of these trips resulted in him becoming known to Islanders as the Vegemite Man.[9]

yes2renewables.org

leigh.ewbank@foe.org.au

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The tale of two rallies: Canberra demonstrates strong support for wind energy

Odile Gotts and Leigh Ewbank

Yes 2 Renewables campaign

Politicians, policy makers, and media commentators, take note: people want wind energy. The verdict came on Tuesday June 18, when renewable energy supporters went head-to-head with anti-wind energy campaigners in the nation's capital.

Led by right-wing shock jock Alan Jones, an anti-wind farm rally at Parliament House failed to draw a crowd. A meagre 100 people showed up to rant and rave about wind energy. Their complaints ranged from absurd claims of wind farms affecting health to inaccurate claims about the economics of wind farms and the Renewable Energy Target. According to a Nine MSN report: "Alan Jones has lost a battle of the 'wind wars', with a rally against wind farms headlined by the radio shock jock failing to draw large crowds to Parliament House. The lacklustre attendance at Tuesday's protest was seized upon by supporters of clean energy, who claimed victory in the "wind wars" by staging a much larger counter rally in Canberra's city centre."

"Much larger crowd" is an understatement. In the heart of Canberra, at Garema Place, up to 1,000 people joined Friends of the Earth and GetUp's Rally 4 Renewables. Speakers included Greens Leader Christine Milne, Labor Parliamentary Secretary for Climate Change Yvette D'ath, and independent MP Tony Windsor.

Senator Milne questioned why only English speakers suffer from the so-called "wind turbine sickness" and referred to research conducted by Professor Simon Chapman and Fiona Crichton which identifies anti-wind farm campaigning as the cause of health complaints. Yvette D'ath stressed the need to protect Australia's climate change and renewable energy policies from a hostile Coalition.

Long serving Councillor and five-time mayor of Ararat Regional City, Gwenda Allgood, outlined the unanimous community support for the Chalicum Hills wind farm. The Howard government's Renewable Energy Target delivered a wind farm for Ararat. And the wind farm delivered jobs, investment and an icon the community is proud of. Pacific Hydro has operated for 10 years without complaint.

From Waubra, wind farmer Karen Molloy shattered the myths propagated by the Waubra Foundation - the organisation behind claims of a wind farm noise disease. Molloy explained how Waubra wind farm can power 143,000 households - more than enough for a city the size of Ballarat - and offsets a massive 635,000 tonnes of carbon emissions which would have been generated by burning coal in the LaTrobe Valley.

Charlie Prell is a sheep farmer and prospective wind farmer from Crookwell, NSW. Representing the emerging Regional Renewables Alliance, Prell argued that wind farming can make communities stronger and more resilient. *The Guardian* recently reported that Maurice Newman, business adviser to Tony Abbott, has threatened Mr Prell with legal action in relation to the Crookwell 2 project. Newman is anti-wind energy and a strident opponent of the Renewable Energy Target.



ANTI-WIND

PRO-WIND

Where were the Coalition MPs? Shadow Minister for Climate Change Greg Hunt and Shadow Parliamentary Secretary for Climate Change Simon Birmingham declined invitations to speak at the event. Given that 64% of Coalition voters support the Renewable Energy Target and 71% want more wind energy, Mr Hunt and Senator Birmingham missed an opportunity to speak to their pro-renewables supporters.

Meanwhile, on the other side of the capital, a handful of rogue Coalition politicians spoke at the "Wind Power Fraud" rally. Senator Chris Back admitted claims Victoria's wind farms had contravened planning laws were unsubstantiated. Ron Boswell gave his usual vitriol, calling renewable energy a fraud. Liberal MP Craig Kelly; candidate for Hume, Angus Taylor; and renegade Victorian Senator John Madigan were also in attendance. Retiring Liberal MP Alby Schultz, who had promised to attend, failed to make it. Sources tell Yes 2 Renewables that shadow energy minister Ian Macfarlane implored Coalition MP not to appear at the anti-wind event. Renewable energy supporters may have won this round, but the fight continues.

Take Action

Yes 2 Renewables and our partners GetUp! are proud to have put a stop to the anti-wind farm lobby's gathering momentum. Yes 2 Renewables are determined to build on this success and help drive Australia towards a renewable energy future. To do this we need your help:

Consider making a donation to the campaign.
givenow.com.au/foeyes2renewables

Follow Yes 2 Renewables on social media. facebook.com/Yes2Renewables / @FoEAustralia

Volunteer with the campaign by contacting leigh.ewbank@foe.org.au

twitter.com/NoDeepSeaMining

youtube.com/StopDeepSeaMining

Zero emissions power is possible, and we know what it will cost

Roger Dargaville

The Australian Energy Market Operator's latest report lays out what it will cost to switch on to renewable power. To avoid 2 degrees of climate change, global carbon emissions will need to be reduced by at least 50% by 2050. For developed countries such as Australia with higher carbon emissions this will mean cuts closer to 80%: it essentially implies decarbonising the stationary energy sector in Australia.

Several studies have now tackled the question of how to achieve this, and despite different approaches and different assumptions they've come up with rather similar results. Current wholesale electrical energy costs are around \$60 per megawatt hour (MWh). Previous studies from Beyond Zero Emissions and the Centre for Energy and Environmental Markets / UNSW Institute of Environmental Studies report a range of between \$100 and \$173/MWh, depending on a range of technology-cost assumptions. The Australian Energy Market Operator (AEMO) has released their draft 100% Renewables Report, costing the system at between \$111 and \$133/MWh across four scenarios with different timelines and cost projections (tinyurl.com/aemo2013).

Each of the above studies has its own drawbacks and none can claim to be all-inclusive, but they all cost their 100% renewable systems at between \$100 and \$170/MWh. Current wholesale prices are around \$60/MWh so this represents an increase of between \$40 and \$110/MWh.

For retail customers this is the same as an increase of between 4 and 11c/kWh. As most customers currently pay around 25c/kWh this would be an increase of roughly 16 to 45%, a modest number when we consider that retail energy prices have gone up by around 30% since 2008, due mainly to increased transmission and distribution costs.

There are two ways of presenting this result. First that the cost of producing energy will increase by up to a factor of three. Or second that the increase is in line with the recent increases, which while unpleasant did not result in the end of the world for most of us.

How did they come up with that price? The AEMO 100% Renewables Report identified the cheapest combination of technologies and locations needed to meet demand while taking into account transmission costs for linking it all together.

AEMO considered a broader range of technologies than the other studies and only outright rejects off-shore wind as too expensive compared to the alternatives. On-shore wind, solar photovoltaics and concentrating solar power with storage are all significant contributors, but wave power, hydro, biomass and biogas also play important roles.

Most interestingly the study comes out in favour of significant amounts of geothermal power), at least in the scenario with large and rapid global uptake of renewable technologies (and therefore larger decreases in costs). The previous studies only considered technologies that are already commercially available somewhere in the world; hot sedimentary aquifer technology is still very much in the developmental stage. This means there is large uncertainty on the future costs and whether or not this is truly a viable option.

But regardless of the uncertainty, the benefits of geothermal energy are significant – a zero emissions electricity source that can provide base load power. For this reason, despite the relatively high cost, the AEMO model finds cost worth the benefit of being able to manage additional variable renewables on the grid.

Another key factor in the AEMO study is that it includes demand-side participation, where users of electricity have some incentive to shift their use to different times of the day to better suit when power is available. The model estimates that 10% of electrical energy use is flexible and can be shifted to other times of the day.

A shift of the peak demand from the late afternoon to the middle of the day, coinciding with the peak in rooftop solar output, would mean that what we currently think of as off-peak would occur in the middle of the day rather than overnight. Using power overnight would in fact be discouraged by time of use pricing.

There are of course a range of caveats that come with the study. Increases in the cost of distribution resulting from lots of rooftop solar are not included. Nor are the costs of acquiring the land required. Also, importantly it assumes all the generation is built in the future when costs have come down rather than gradually from now which would incur larger costs.

There is still much work to be done to refine the modeling work. The AEMO study doesn't do everything. It doesn't do the transition from the current infrastructure and it doesn't consider the likely scenario that some fossil fuel will persist, especially if carbon capture and storage becomes viable. But one message is clear – going to a very high penetration of renewables is certainly not technically impossible, and will not be as expensive as we may have thought.

Roger Dargaville is a Research Fellow with the Energy Research Institute at Melbourne University. This article was originally published by The Conversation. (theconversation.com)

100% renewables for Australia - not so costly after all

This is an excerpt of Giles Parkinson's comments on the Australian Energy Market Operator's report. Parkinson's article is posted at:

<http://reneweconomy.com.au/2013/100-renewables-for-australia-not-so-costly-after-all-50218>

An exploratory study into 100% renewable energy scenarios for Australia has concluded that its impact on consumer electricity prices over the next few decades may be no more than the increases in the last few years to support much criticised network upgrades and the introduction of the carbon price.

The report by the Australian Energy Market Operator (AEMO) canvasses the potential costs and practicality of transforming Australia's coal-dependent electricity system to 100 per cent renewables, by either 2030 or 2050. It creates two scenarios - depending on the pace of falls in the cost of renewable and storage technologies - but both are considered conservative.

It concludes that the cost could range between \$219 and \$338 billion and would require wholesale electricity prices of \$111-\$133/MWh (more than double the current price). Unfortunately, and somewhat controversially, AEMO was not asked to compare these forecasts with "business as usual" (BAU), but it does provide one interesting set of data that does put it into some perspective.

The first is the impact on retail prices. It shows that the impact on consumer electricity costs from a 100% renewables scenario could be as little as 6.6c/kWh, assuming a reasonably optimistic view of technology costs. That compares to the forecast national average increases in retail costs made by the Australian Energy Market Commission from 2011/12 to 2014/15 of 5.4c/kWh. Taking in the two earlier years of increases, the jump in retail prices has been higher. ...

The second thing is to consider wholesale prices. A recent "government Policy" scenario from Treasury has a wholesale price of \$110/MWh in 2030 (compared with \$111 to \$133/MWh for 100% renewables). That includes a carbon price of around \$52/tCO₂ in 2030. (Hands up who thinks there will be no carbon price in 2030. Yes, you too, Greg and Tony).

Apart from the lack of comparison with BAU, the AEMO report was hamstrung by a number of other factors, most notably its forced reliance on the technology costs produced last year by the Bureau of Resource Economics. RenewEconomy has on many occasions questioned those forecasts, which even for 2035 are above current market prices for technologies such as concentrated solar thermal,

and assumes, quite bizarrely, no fall in solar PV costs for nearly a whole decade through much of the 2020s.

Still, the AEMO report - although "exploratory" and "limited" in its own words - does come to some useful conclusions. The first is that it says "it is valuable to note that this operational review has uncovered no fundamental limits to 100 per cent renewables." In other words, it is not a question of can, but how much. ...

AEMO noted that its cost estimates did not include any allowance for the costs of any modifications required to the distribution networks, the cost of acquiring the required land for generation, or the costs of stranded assets (coal and gas fired generators). As for land, it estimates that would require between 2,400 sq kms (50kms by 50kms), and 5,000sq kms.

But it also notes that its modelling results are "highly sensitive" to the assumed technology cost reductions, and any changes to these would see corresponding changes to the modelling outputs. Given the electricity industry's propensity to grossly overestimate the cost of renewable technologies, that means there is scope for greatly reduced costs.

And it should be kept in mind, most of Australia's existing coal and gas fired generation needs to be replaced by 2045 - and as Bloomberg New Energy Finance have pointed out - the cheapest new build generation capacity is already wind, and will soon be joined by solar. That needs to be a critical equation is any assessment of the future, particularly when incorporating environmental costs ...

And there is another missing piece to this assessment - and that is energy efficiency. The modelling is based on AEMO own long term demand forecasts, which have been shown to be pretty hopeless even in recent 12-month forecasts. It does not take into account the sort of energy efficiency gains that could, and should, be contemplated in coming decades.

The IEA, and just about every other major study, suggests energy efficiency should account for at least one third of future scenarios. It points out that it is the energy we don't use that will be the cheapest and most effective. But that also means a greater diversion from business as usual.

An analysis of the AEMO report by Dr Jenny Riesz from the Centre for Energy and Environmental Markets, 'Putting 100% renewables in perspective', 30 May 2013, is posted at <http://tinyurl.com/riesz>

Baseload power is a myth: even intermittent renewables will work

Mark Diesendorf

The future of civilisation and much biodiversity hangs to a large degree on whether we can replace fossil fuels – coal, oil and gas – with clean, safe and affordable energy within several decades. The good news is that renewable energy technologies and energy efficiency measures have advanced with extraordinary speed over the past decade.

Energy efficient buildings and appliances, solar hot water, on-shore wind, solar photovoltaic (PV) modules, concentrated solar thermal (CST) power with thermal storage and gas turbines burning a wide range of renewable liquid and gaseous fuels are commercially available on a large scale.

The costs of these technologies have declined substantially, especially those of solar PV. In 2012, despite the global financial crisis, global investment in these clean, safe and healthy technologies amounted to US \$269 billion. Denmark, Scotland and Germany and several states/provinces around the world have official targets of around 100% renewable electricity and are implementing policies to achieve them.

The principal barrier is resistance from vested interests and their supporters in the big greenhouse gas polluting industries and from an unsafe, expensive, polluting, would-be competitor to a renewable energy future, nuclear power. These powerful interests are running a campaign of renewable energy denial that is almost as fierce as the long-running campaign of climate change denial. Both campaigns are particularly noisy in the Murdoch press. So far the anti-renewables campaign, with its misinformation and gross exaggerations, has received little critical examination in the mainstream media.

The renewable energy deniers rehash, among others, the old myth that renewable energy is unreliable in supplying base-load demand. In a previous article I reported on the initial results of computer simulations by a research team at the University of New South Wales that busted the myth that renewable energy cannot supply base-load demand. However at the time of the article I was still under the misconception that some base-load renewable energy supply may be needed to be part of the renewable energy mix.

Since then Ben Elliston, Iain MacGill and I have performed thousands of computer simulations of 100% renewable electricity in the National Electricity Market (NEM), using actual hourly data on electricity demand, wind and solar power for 2010. Our latest research finds that generating systems comprising a mix of different commercially available renewable energy technologies, located on geographically dispersed sites, do not need base-load power stations to achieve the same reliability as fossil-fuelled systems (tinyurl.com/ies-unsw).

The old myth was based on the incorrect assumption that base-load demand can only be supplied by base-

load power stations; for example, coal in Australia and nuclear in France. However, the mix of renewable energy technologies in our computer model, which has no base-load power stations, easily supplies base-load demand. Our optimal mix comprises wind 50-60%; solar PV 15-20%; concentrated solar thermal with 15 hours of thermal storage 15-20%; and the small remainder supplied by existing hydro and gas turbines burning renewable gases or liquids. (Contrary to some claims, concentrated solar with thermal storage does not behave as base-load in winter; however, that doesn't matter.)

The real challenge is to supply peaks in demand on calm winter evenings following overcast days. That's when the peak-load power stations, that is, hydro and gas turbines, make vital contributions by filling gaps in wind and solar generation.

Our latest peer-reviewed paper, currently in press in Energy Policy journal, compares the economics of two new alternative hypothetical generation systems for 2030: 100% renewable electricity versus an "efficient" fossil-fuelled system. Both systems have commercially available technologies and both satisfy the NEM reliability criterion. However, the renewable energy system has zero greenhouse gas emissions while the efficient fossil scenario has high emissions and water use and so would be unacceptable in environmental terms.

We used the technology costs projected to 2030 in the conservative 2012 study by the Bureau of Resources and Energy Economics (BREE). (In my personal view, future solar PV and wind costs are likely to be lower than the BREE projections, and future fossil fuel and nuclear costs are likely to be higher.) Then, we did thousands of hourly simulations of supply and demand over 2010, until we found the mix of renewable energy sources that gave the minimum annual cost.

Under transparent assumptions, we found that the total annualised cost (including capital, operation, maintenance and fuel where relevant) of the least-cost renewable energy system is \$7-10 billion per year higher than that of the "efficient" fossil scenario. For comparison, the subsidies to the production and use of all fossil fuels in Australia are at least \$10 billion per year. So, if governments shifted the fossil subsidies to renewable electricity, we could easily pay for the latter's additional costs.

Thus 100% renewable electricity would be affordable under sensible government policy, busting another myth. All we need are effective policies to drive the transition.

Dr Mark Diesendorf is Associate Professor and Deputy Director, Institute of Environmental Studies at University of New South Wales.

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Nuclear doom, renewables boom

Nuclear power generation suffered its biggest ever one-year fall in 2012. International Atomic Energy Agency (IAEA) data shows that nuclear power plants around the world produced a total of 2,346 terrawatt-hours in 2012 – 7% less than in 2011, and the lowest figure since 1999. Compared to the last full year before the Fukushima accident, 2010, the nuclear industry produced 11% less electricity in 2012. The main reasons were that almost all reactors in Japan were off-line for the full calendar year, and the permanent shut-down of eight reactors in Germany.[1]

Global nuclear power capacity has not increased over the past decade despite all the hype about a nuclear renaissance. Nuclear power generated 12.3% of world electricity in 2011 – well down from the historical peak of 17% in 1993. The IAEA estimates that nuclear will account for just 4.7% to 6.2% of electricity generation in 2030.[2]

At the end of 2012, total world capacity of solar photovoltaic generation reached 100 gigawatts (GW), with 30.5 GW installed in 2012 alone. Solar PV capacity far exceeds the 2.55 GW capacity of concentrating solar power capacity worldwide, three quarters of which is in Spain.[3]

Wind power soared in 2012 with a new record for installations – 44 GW of new capacity worldwide. Total capacity exceeds 280 GW, with plants operating in more than 80 countries. China leads the world with 75 GW of wind power capacity.[4]

The International Energy Agency (IEA) predicts power generation from renewable sources will exceed natural gas and be twice the contribution from nuclear energy globally by 2016.[5] The IEA's second annual Medium-Term Renewable Energy Market Report forecasts renewable generation will grow 40% in the next five years. Renewable energy is now the fastest-growing sector of the global power market, and will represent 25% of all generation worldwide by 2018, up from 20% in 2011.

The IEA cites two main drivers for its outlook: accelerating investment and deployment, and growing cost competitiveness versus fossil fuels. However, the IEA warns renewables still face a challenging future. Global investment fell in 2012, and policy uncertainties loom over clean energy technology in several important markets. In addition, grid integration challenges have arisen in some regions as renewables penetration has hit new levels.

“Policy uncertainty is public enemy number one,” said Maria van der Hoeven from the IEA. Van der Hoeven. “Many renewables no longer require high economic incentives, but they do still need long-term policies that provide a predictable and reliable market and regulatory framework.”

A record 13.1% of Australia's electricity was supplied by renewable energy in 2012, according to the Clean Energy Council's '2012 Clean Energy Australia Report'. The dominant renewable energy source in Australia remains hydro (58% of renewables) but wind (26%) and solar (8%) are increasing their share.

Clean Energy Council chief executive David Green said: “The clean energy industry contributed \$4.2 billion in investment and approximately 24,300 jobs to the Australian economy in 2012. The cost of fossil fuels such as gas has been going up, while clean energy has been getting cheaper – fast. Earlier this year the millionth solar power system was installed, while last year was a record one for Australia's wind power businesses, with the country's 62 wind farms powering the equivalent of more than one million homes for the first time.” [6]

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Yellowcake Fever:

The economic myths of the uranium export industry

Jim Green

In the mid-2000s, uranium was the ‘new black’ as The Bulletin put it and investors could take their pick in this “radioactive heaven”. The number of listed uranium juniors doubled and doubled again ... and again and again. A company sent radioactive drill samples for assay and quickly became the most traded stock on the ASX (leading to a suspension of share trading).

Residents of the small Pacific Island Niue were surprised to learn from an Australian company that they might be sitting on 10% of the world’s uranium, and surprised again when the project was abandoned two months later – easy come, easy go. The uranium spot price increased ten-fold and more, peaking at US\$138/lb in June 2007.

Michael Angwin, the Australian Uranium Association’s Executive Director, said in 2008 that Australia “has enough reserves to be to uranium what Saudi Arabia is to oil”. Only a pedant would note that Saudi oil generates 466 times as much revenue as Australian uranium (and that most of ‘our’ uranium revenue never comes anywhere near Australia because of the high level of foreign ownership). Politicians from the major parties have been only too happy to regurgitate uranium industry propaganda – for example former SA politicians Mike Rann and Kevin Foley have made the comparison with Saudi oil.

The Australian Securities and Investments Commission could hold uranium miners and wannabes to account for peddling misinformation – but it doesn’t. Business journalists could hold the uranium industry to account – but they usually don’t. Claims that nuclear power growth in China, India and Russia will drive huge increases in uranium exports are routinely and uncritically regurgitated yet they don’t withstand the simplest calculations. For example it is routinely claimed that uranium sales to Russia will generate \$1 billion annually – but Australia would need to supply entire Russian demand twice over to generate that amount of export revenue.

Milk and cream generate almost twice as much revenue as uranium – so where are the newspaper puff-pieces with pithy headlines about corporate moovers and shakers; where the ponderous weekend think-pieces about how the nation that once rode on a sheep’s back is now attached to a cow’s udder? Why isn’t milk the ‘new black’?

Nincompoops in academia and journalism

We could turn to academia for some common sense. There we find Prof. George Dracoulis – a member of the 2006 Switkowski Panel – wondering aloud whether uranium will “make or break Australia as an exporter”. Hardly – Australia could supply entire world demand and uranium would

account for just 3% of national export revenue and it would still fall short of iron ore export revenue by a factor of 6.5. There we find Prof. Barry Brook insisting that there was no credible risk of a serious accident at Fukushima even as nuclear meltdown was in full swing – his follow-up act is a prediction of a four-fold expansion of uranium exports. And there we find Ian Plimer and Haydon Manning drawing comparisons between Australian uranium and Saudi oil.

Even with the uranium price tanking in the wake of the Fukushima disaster, the Global Financial Crisis, and the failure of the nuclear ‘renaissance’ to materialise, journalists are still reading from the same script. Significant, protracted price falls are met with predictions that the market will soon turn. A November 2012 article in The Australian, titled ‘Yellowcake starts to glow again’, speculated that the uranium price may be close to bottoming.

A March 2012 report by the federal government’s Bureau of Resources and Energy Economics predicted a near three-fold increase in uranium exports by 2016/17 and The Australian responded with an article titled ‘Global uranium demand expected to skyrocket’.

So how has the media responded to the further decline in the uranium sector over the past year? The short answer is that the media hasn’t responded at all. In March 2013, Bureau of Resources and Energy Economics reduced its mid-term forecast for uranium revenue by nearly half, and the media was silent.

The Australian Conservation Foundation released a detailed, factual report on April 26 exposing the uranium industry’s economic misinformation, and the media was silent. The ACF report finds that uranium accounted for just 0.29 per cent of Australia’s export revenue in the 10 years from 2002–2011. In the 2011/12 financial year, uranium revenue of \$607 million was four times lower than Australia’s 20th biggest export earner, eight times lower than Australia’s 10th biggest export earner and 103 times lower than the biggest earner, iron ore.

By the highest estimate, uranium mining and exploration accounts for 1,760 jobs in Australia – just 0.015 per cent of all jobs. The Australian Uranium Association claims the industry is a “significant employer of First Australians” but in fact it provides just one job for every 3,000 Indigenous Australians.

The bottom line is that when the industry has some ‘good’ news to spruik, it will surely be amplified by dullard politicians, academics, industry ‘analysts’ and Paul Howes, and it will surely be regurgitated by sections of the media. But if you’ve got a story about industry stagnation and decline, forget it. If it’s not good news, it’s not news.

'Potential'

Simple facts are easily dismissed by talking up the 'potential' of the industry. But as Richard Leaver from Flinders University notes: "Potential' is one of the most powerful chemicals available to the political alchemist. Any individual, firm, or sector deemed to have potential is relieved of a massive and perpetual burden – the need to account for past and present achievements (or, more probably, the lack of them). ... The history of Australian involvement in the civil uranium industry offers an excellent example of this alchemy at work."

There are real-world consequences to yellowcake fever – many 'mum and dad' investors have been burnt. That problem was most acute during the speculative price bubble in the mid-2000s when small investors were spending big on penny dreadfuls while at least three major utilities were selling shares in Rio Tinto-controlled Energy Resources of Australia. As Tim Treadgold wrote in the West Australian in 2005, "smart money" was selling "while less clued-up people continue to buy uranium penny dreadfuls rather than do something sensible, like bet the house (the wife and the kids) on the horse carrying the jockey wearing pink polka dots in the fourth at Ascot next Saturday."

There is another problem associated with yellowcake fever. A sober assessment of the economics benefits and the problems and risks associated with the uranium industry is required, but there's precious little chance of that when the economic benefits are grossly overstated (and amplified and regurgitated) and contrary facts are ignored.

Perhaps the worm will turn after a few more years of industry stagnation. Already there's plenty for a contrarian journalist to hang a story on. BHP Billiton, for example, has not only cancelled the planned expansion of Olympic Dam but has also disbanded its Uranium Division and sold the Yeelirrie uranium lease in Western Australia for just 11% of the nominal value of the resource.

Also indicative of the state of the industry was Cameco's announcement in February of a \$162.5 million write-down on the Kintyre project in Western Australia. Just months after first production at the Honeymoon mine in north-east SA in September 2011, project partner Mitsui announced its decision to withdraw as it "could not foresee sufficient economic return from the project."

Jim Green is the national nuclear campaigner with Friends of the Earth and co-author of the ACF report, 'Yellowcake Fever: Exposing the Uranium Industry's Economic Myths', posted at www.acfonline.org.au

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James Price Point/Walmadan – A huge win



Locals, locked to each other with arm pipes, blocking road.

Photo by Julia Rau

Nicola Paris

The people of Broome have won a significant campaign against a proposed \$45 billion project – in April they stopped the development of a gas plant and port at iconic James Price Point (Walmadan). They had substantial political and corporate interests arrayed against them – the world's largest multinational oil and gas companies, a determined state government as proponent who deployed police, and changed laws to suit, and a federal government unwilling to intervene.

In extensive interviews and discussions with community members the strengths of the campaign were repeatedly stated as:

- The sense of community which encouraged broad participation, an ethic of a mutual support and created a strong commitment to achieving the campaign outcome;
- The diversity of the campaign – both in the range of people who participated, and in the tactics used;
- including a variety of stakeholders (national, local and international NGOs, traditional owners, local residents, community members across Australia); and
- using a variety of different tactics and strategies such as nonviolent direct action for delay, media leverage and community building, political and corporate lobbying, targeting the project's investors and legal interventions.

Traditional owners stood with local nurses and tradies. Environmentalists from around the country, and across the world came to stand with local business owners. The campaign was supported across the country by the Australian Conservation Foundation, Sea Shepherd, The Wilderness Society and Save the Kimberley, to name a few. However, it was strongly led by local people – both in town in the Broome community's No Gas campaign, with Environs Kimberley, and out 'on country' from the base camp Walmadan.

The campaign operated in an extremely hostile political environment – certainly the WA state government was the subject of several court cases. The campaign was not

"Before my arrest, I had never even had so much as a parking fine, yet I would certainly do this again for the Kimberley, she is worth the fight and deserves the attention."

– long-time Broome resident and business owner.

won by political pressure, but through corporate pressure relating to direct actions, legal tactics and investor lobbying that cost the company money, time and social license.

Whilst Woodside is on record as stating that they pulled out for 'economic reasons', they also admitted that the delays and obstructions of the campaign cost them significant time and money. Whilst we may never know the extent of the impact of the campaign, it would be fair to say it was substantial in pressuring investors to exit, delayed approval for years – bringing us into the changed economic climate for LNG cited as the reason for exit, but it also threatened ongoing issues of 'social license' and threats of continual costs and delays.

Features of the campaign included:

- A consistent direct action component which 'blockaded' and delayed works over many months, involving high profile local community members;
- Citizen science projects that highlighted the flaws in Woodside and state government surveys in relation to whales, bilbies, turtles and dinosaur tracks – that was subsequently reported in mainstream media;
- Coordinated legal support to both challenge various internal state processes (breaches under the Aboriginal heritage act for example) but also extensive pro bono assistance in challenging the government's compulsory acquisition of land for the project in the Supreme Court, amongst other things;
- High profile support of musicians, and large scale concerts and rallies organised by the Wilderness Society to galvanise city supporters, and raise awareness and media; and
- A committed, widespread and locally driven campaign of petitions, letter writing, social media shares and active physical presence at protests and blockades.

Images of local community members putting their bodies on the line – although picked up slowly at first, were ultimately shared extensively throughout the country and

internationally – gaining widespread coverage through beautiful photography, video, clever social media, and mainstream media.

This had the impact of pressuring the company, bringing new supporters to the campaign, and reaching out to those already connected; those who had been touched by visits to Broome or walking on country – people all over the world became champions for the campaign, sharing social media and building public momentum.

And later in the campaign, as the *West Australian* newspaper published a photo of over 100 taxpayer funded police jogging as armed corporate guards through the red dirt, to ease passage for drilling equipment, for many this demonstrated the extent to which state government was prioritising the wealth of big business over the wishes of the majority of residents.

After the win, even conservative mainstream media summed up the sentiments that seemed to be shared by many in the public. Graham Lloyd wrote in *The Australian*: “It has shown the success of hardball environmentalism that is prepared to leverage community outrage, target potential financiers and fight in court. It has once again exposed the desperate lengths which politicians are prepared to go to in the name of development.”

There were many aspects to this campaign – significant legal support in a range of areas, and in the last year or two a growing level of support from major non-government organisations in large awareness raising events and lobbying investors. There was a cheeky Kimberley DIY ethic that saw actions take on a life of their own, a commitment to nonviolence and inspiring civil resistance, leadership from traditional owners and a genuine community solidarity from a long history of multiculturalism in Broome.

Keys to success:

- Strong leadership from traditional owners and locals, and a well networked community able to rapidly respond to campaign situations
- A sense of fun and creativity, and community
- Strategic planning, a culture of training and skill sharing
- A strong belief that the campaign is winnable and ‘we can do it’
- Diversity of supporters and stakeholders, both locally and nationally, individually and organisations
- Diversity of campaign tactics, e.g. targeting the project’s financial partners, legal action, nonviolent direct action, citizen science and political lobbying
- Effective use of campaign tactics to generate social and mainstream media

Most importantly, the community genuinely believed that they could win. And they did!

“I now feel the government only cares for development and pretends to care about community and culture. I am more cynical in my attitude towards government.”

– local tradesperson, Broome

Nicola Paris went to Broome in 2011 to run community trainings in nonviolent direct action. She has supported the campaign since and most recently spent nearly six months there volunteering over the wet season. She established CounterAct to provide training to grassroots campaigners, and support civil disobedience action, after being inspired by her time working with the Broome community. Check out www.counteract.org.au for more information and interviews with the Broome community.



Goolarabooloo mob gather to celebrate the win.

Photo by Damian Kelly

Reflections on winning – from Camp Walmadan



Walmadan (James Price Point).
Photo by Tegan Mossop

As campaigners we are sometimes not very good at celebrating success. Some people at Camp Walmadan talked about what it meant to them to stop Woodside ...

Tegan Mossop:

There was a feeling around camp Walmadan of cautiousness to trust emotions or to get too excited. Actually the feeling was quite empty as I guess no-one knew how they should feel. Even so, we didn't sleep much in anticipation for an announcement from Woodside.

The next morning the whole mob of us crowded around a crackly car radio as Woodside made their announcement to the world that they will not be building a gas precinct at Walmadan (James Price Point). This is when the bugs and the tears came in their plenty. Followed by Phil arriving back at Walmadan after being in at the Woodside office. He got out of the car with the biggest smile on his face and wrapped us all up in a hug and he cried, bringing me to tears again.

The evening of the announcement was one of the most special moments of my whole life. As the sun was setting over the ocean a big mob of us all sat in the dunes, arms around each other, our big Walmadan family. The birds seemed louder and more excited than I had ever heard them on the dunes before, the colours of the sunset

seemed even more spectacular than usual. Country seemed to know.

As the colours slid down behind the ocean, Phil sat behind us, under the Aboriginal flag, which had lately been referred to as the battle flag - but not on this day. Phil, the Song Man, with his boomerang clapping sticks started singing the old Walmadan song in language. He sang many songs – old songs of the Song Cycle – and I felt the sounds. This is one of my most precious memories.

Fergus:

It's important to show that people can make a difference ... people can look to this and say 'wow, those guys did that, well we can do it too' ... it proves that you don't have to let the state and big business get their way, and trample over the wishes of the people. You can make a difference. If you know you are right, don't give up.

Martin Pritchard:

First disbelief that slowly turned into a huge sense of relief, we were going hard right up until Woodside announced its withdrawal. Then there was anger that we'd been dragged through all this pain and they walked away after just one sentence to the stock exchange. They won't be back.

It felt like the Broome community was against the world – the Local Government, State Government, Federal Government, some of the largest multinational fossil fuel companies on the planet. We joked that all we needed to make it complete was the Chinese and they did. Petrochina bought into the deal. Broome's sense of humour kept us going in our darkest hours.

We won with good planning, strategy and tactics, trust, camaraderie, non-violent direct action from baking a cake to locking on for 27 hours, communications – email, text and facebook, research, Traditional Owner support, understanding of the media and support, support, support from a wide cross section of the community.

Philip Roe:

The fight is not over but we are very relieved. We will continue to uphold my grandfather Paddy Roe's legacy – as we've been taught to do for future generations. We won't give up until the country is safe. We won't give up 'til the government protects our Song Cycle Path.

Tessa Mossop:

It's inspiring when you have a win like this... and it reminds you that you can't give up ... There was a lot of people from all over Broome, across Australia, from all over the world, who were willing to stand there with Goolarabooloo and support them in any way they could ... to protect this place. It was incredible, I think we really were in a bit of shock, like it didn't really feel real ... one of the most powerful emotions I ever felt in my life.

Sooty:

When you do get a win, you've got to savour it ... and use it to bash your head against a brick wall, for however many years till you get the next one.



Local Jane Lawton arrested on 'Black Tuesday'.
Photo by Julia Rau

Nicola Paris:

I first heard the rumours the night before – calls and frantic emails and web searches, seeking the elusive confirmation of rumour. On Friday 15th April I sat by myself, transfixed, refreshing the webpage for the expected ASX announcement. And then suddenly it was there. A simple line saying that Woodside would not be going ahead with the project at James Price Point. I burst into tears. And the tears and laughter alternated throughout the next few days. But it didn't feel real until I went back on country a few weeks later. I felt it in my gut a couple of kilometres from camp. And seeing the beautiful faces of people who have put their everything on the line this last year or two ... and then the beach ... floating into an orange fire of sunset with the most wonderful, ragged sense of relief, that this place was safe. Even if just for now.



Rainbow over Camp Walmadan.
Photo by Tegan Mossop

People at Camp Walmadan celebrating the news that Woodside had pulled out of James Price Point.

Photo by Damian Kelly



James Price Point Victory

Martin Pritchard

In a single-sentence to the Australian Stock Exchange on Friday, April 12, Woodside and its joint venture partners announced that they would not be building gas refineries at James Price Point on WA's Kimberley coast.

Eight years after proposing the site, 50 kms north of Broome on the Dampier Peninsula, and following a lengthy campaign against them, Woodside claimed that onshore refineries were not economically feasible. Had the gas refineries been built at James Price Point, they would have been the thin end of the wedge in industrialising the Kimberley. With all his threats, pleas and lobbying, the WA Premier, Colin Barnett, could not convince the Browse Joint Venturers or the Broome community that the site he had chosen was the best site for processing offshore gas. While Mr Barnett has left the door open for development at James Price Point, Woodside has made it clear they have no interest in the site.

This was a historic decision for the Kimberley. The region has been in industry's sights for decades. In 2005 a report, 'Developing the West Kimberley's Resources', was published by the WA Department of Industry and Resources as a mining blueprint for the region. A key element of the blueprint was a gas hub on the Kimberley coast to power mining and mineral processing industries.

Mr Barnett, a previous Minister for Resources Development and Energy, said in 2010, "Just as the Pilbara was critically important to the development of WA from the '60s, over the next 50 years the Kimberley will play a similar role." This mindset, and the blueprint, set the WA Government and industry on a collision course with the community. It was like the quest to protect the Franklin River from damming 30 years earlier.

Wrong place, wrong people, wrong community

Mr. Barnett picked a fight with the wrong community. The campaign to protect James Price Point was driven

by Broome people, an eclectic mix of black and white, workers, tradies, doctors, teachers, lawyers, artists, writers, retirees, small business owners, social workers, nurses, labourers – people from all walks of life.

When residents learnt what was being proposed, they realised what they were about to lose and joined the campaign. As awareness of the plan spread, supporters from across the country mobilised. Groups of people at concerts and meetings eventually grew to 6,000 at a gathering in Melbourne, and 20,000 in Fremantle.

Dozens of arrests in Broome galvanised the community; the police's Operation Archon spent over \$1 million on the James Price Point protests, and actions escalated. Woodside's private security firms could not operate covertly in Broome; protesters saw every move, then documented and publicised them through text messages and social media.

Delaying tactics by the community included blockades (including a month at 'Black Tank'), mass submissions and actions in the courts. These actions cost millions but shook shareholder and investor confidence. James Price Point was seen by multinational miners as a benchmark for proposals in the Kimberley, a case study in project failure through lack of social licence.

This was a multifaceted, organic campaign, fuelled by creativity, ingenuity and a fierce sense of independence and justice. It was driven locally, with national and international support. The significance of what has happened has yet to resonate across the nation, but you can be sure it is resonating in boardrooms across Australia and overseas. When a community stands up to protect itself against a bad proposal, it can win.

Martin Pritchard is the Director of Broome-based environment group Environs Kimberley. [facebook.com/environs.kimberley](https://www.facebook.com/environs.kimberley)

Algal blooms and toxins in Oceania

Mark Skinner

It should be of great concern that as Oceania countries consider different forms of mining (e.g. deep sea mining) and the Australian mining industry expands, ports are built in vulnerable ecosystems.

A large number of ships travelling from Asia will change their boat ballast and cause harmful algal blooms (HABs) to spread, impacting habitats that may have no natural predators to these toxic bio-invasives. For example *Pyrodinium*, a microalgae which produces paralytic shellfish toxin, has killed over 150 people in the Philippines and is responsible for marine fauna kills in the Solomon Islands.

The most well-known of the HABs are red tides. One example was recently witnessed on Sydney's beaches – *Noctulica*, impacting sea life biodiversity with high concentrations of ammonia. On the east coast of Tasmania, and in Botany Bay, *Alexandrium*, which produces the shellfish poisoning toxin saxitoxin, has closed the shellfish beds. There are also HABs related to seafood poisonings of humans, including many types of shellfish poisoning, and ciguatera fish poisoning.

The impact of toxic HABs on marine tropical ecosystem health remains understudied. There have been marine fauna (including fish, turtles, seabirds, seals, cetaceans) kills from the temperate coasts of North America to lagoons of the tropical Solomon Islands, which have been directly and indirectly attributed to HABs.

A danger overlooked by the coral reef scientists are benthic toxic microalgae which cause fish to be poisonous, known as ciguatera [1]. For example *Gambierdiscus* produces Ciguatoxin, a very potent biotoxin that has produced an epidemic in the Pacific Island nations. Some of these microalgae are already upon the Great Barrier Reef – for example *Ostreopsis* produces a palytoxin, possibly responsible for killing sea turtles.

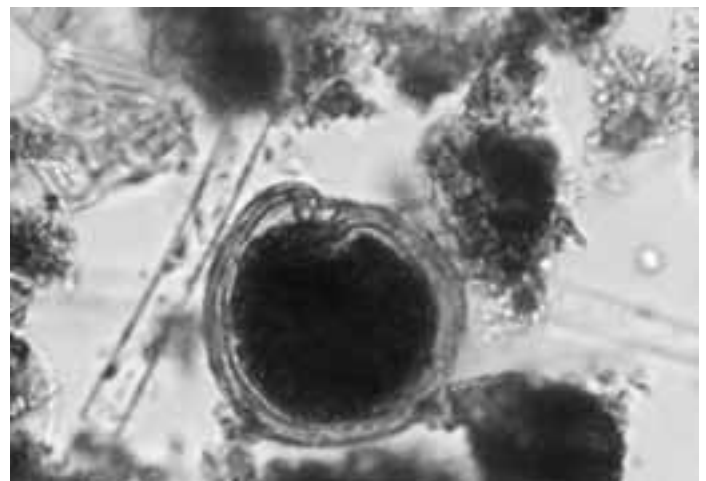
Seventeen nations of the Pacific have reported being impacted with ciguatera fish poisoning, due to coral reef degradation and consequential benthic HABs, including toxic cyanobacteria, to the extent that one in four islanders have been poisoned in recent times (approx. 500,000 in 30 years) and also capable of travelling in the ballast water from their points of origin. The sub-lethal ciguatera impacts upon

humans, due to the benthic HAB toxins, includes oxadaic acid – a tumor promoter that has barely been studied.

Even the dredging of estuaries can provide more habitats capable of supporting HABs, through suspension of bacteria, minerals and nutrients. The impact of exotic HABs arriving in boat ballast and their ability to move further afield, spreading via currents and storms alongside coastlines, should be seen as an unforeseen danger which could lead to the ruination of our natural marine biota heritage, not accustomed to such HABs.

Of major concern in this scenario, the Boat Ballast Convention of 2004 as created by the International Maritime Organisation has not been ratified; so what safeguards are in place to prevent toxic HABs travelling between oceans in the boat ballast of mining cargo vessels? The use of proven safeguards to stop HABs surviving in boat ballast and the ratification of the 2004 Boat Ballast Convention also needs to be addressed. An eco-catastrophe of the tropical coral reef environment, due to HABs, is on the verge of occurring, with ciguatera as a bio-indicator.

Dr Mark Skinner has been studying ciguatera since 1993 and after completing a M.Sc.(Hons) in Ecotoxicology from UTS, has completed his PhD in this field at the UQ.



References

- [1] See Mark P. Skinner et al., 2011, 'Ciguatera Fish Poisoning in the Pacific Islands (1998 to 2008)', *PLoS Negl Trop Dis*, 5(12) www.plosntds.org/article/info%3Adoi%2F10.1371%2Fjournal.pntd.0001416



Talisman Saber 2013 – bringing war to our door

Talisman Saber, 2007.

Robin Taubenfeld

At a time when Australia and the US are actively engaged in wars on foreign soil, military recruitment is accepted in our schools, fighter jet fly-overs and tanks are part of family fun days.

And warfare is going green. The world's largest manufacturer of military aircraft is developing an 'eco-plane'. The US military is 'Enlisting the Sun' – with plans to increase its solar power use. Every two years the Australian military publishes an Environmental Management Plan for the Talisman Saber joint US-Australian military exercises that take place primarily in Queensland.

War is anathema to the environment and yet peace is rarely discussed as a necessity for sustainability – or global survival. While the superficial reasons for wars are varied and complex, war represents our failure to make and defend systems based on cooperation and ecological and social justice. In the environment movement, for example, we often spend energy on protecting a habitat or stopping a destructive practice, without addressing or deconstructing the systemic conditions that cause these threats. One result is that we always seem to be 'putting out fires' rather than changing the conditions that start the fires. There can be no real sustainability without peace and ultimately no peace without sustainability. Peace, social justice and ecological sustainability go hand in hand.

Australia and the US were built on the spilling of first people's blood, and the occupation and desecration of their lands. Australia shares a legacy of colonisation, militarisation and nuclearisation with her neighbours in the Pacific. As environmental campaigners/activists or advocates, it is our responsibility to challenge this status quo.

We need to re-integrate peace and social justice in our calls for environmental sanity – and *vice versa*. For instance, it doesn't make sense to talk about protecting the Great Barrier Reef without addressing the fact that parts of the Reef are used for bombing practice and military exercises. Nor can we distance ourselves when refugees are being turned away from our shores, when we know that environmental crises or inequitable access to resources are a major cause of wars that create refugees.

While working on our areas of specific concern we need to chip away at the system that perpetuates these crises. Military industrial capitalism cannot save the planet – but people can.

Say NO to US war games in Australia

From July 15 to August 5, Australia hosted the US-Australia military exercises Talisman Saber 2013 (TS13). Up to 23,000 US and Australian military personnel engaged in combined land, sea and air training in Queensland (Shoalwater Bay and in the Great Barrier Reef), the NT (Darwin and at Delamere Range and Bradshaw), and in the Coral, Timor and Arafura Seas. Talisman Saber also used military and civilian facilities in other parts of Australia, including Brisbane and Townsville.

The biennial Talisman Saber exercises involve live firing, the use of explosives, urban warfare practice, the use of high power sonar and active sonobuoys, amphibious assaults, parachuting and land force manoeuvres.

Talisman Saber exercises threaten our security by further entrenching Australia's complicity in US global military expansion. The list of weapons and equipment that the

Defence force claims "may be utilised during TS13" (2013 Public Environment Report p.13) leaves no doubt that Talisman Saber will put Australia at risk of being perceived as provocatively "saber rattling" in the Pacific.

The long list includes Ohio Class nuclear-powered submarines (capable of delivering nuclear weapons), Los Angeles Class nuclear-powered submarines, and Nimitz-class nuclear-powered aircraft carriers.

Talisman Saber is one facet of an expanding US military presence in our region, and Australia's support for it. Australia already hosts Pine Gap (US satellite base), allows US bombing fly-overs, will station US troops in Darwin, hosts nuclear-powered and nuclear-weapons capable war ships, and opens both its civilian and military infrastructure to the US.

The US is repositioning its global force and Australia is playing a vital role in acting as a launching pad for US military activity, as an ally in the field, and as the face of the US nuclear umbrella in the Asia-Pacific region. To our neighbours, Talisman Saber is an expression of US/Australia joint posturing – a show of force.

Environmental threats

Talisman Saber threatens our environment. The Shoalwater Bay Military Training Facility encompasses some of Queensland's (and Australia's) most pristine coastal regions. Rather than being earmarked for complete protection, it is valued as the Australian Defence Force's most important area for the conduct of amphibious and combined arms exercises due to its accessible coastline.

The Public Environment Report states: "The Shoalwater Bay Training Area (SWBTA) is a critical asset for Defence training due to the capacity to integrate training of naval, air and sea units, as well as the capacity to conduct large scale live fire training exercises. The majority of the TS13 exercise activities will be undertaken in this training area. The continuous and relatively undisturbed nature of SWBTA is the key to both a high value for conservation and Defence training capability."

Waters included in the military zone, or used and traversed during military operations, include areas of the Great Barrier Reef Marine Park, and RAMSAR listed wetlands. Talisman Saber also uses other locations of environmental significance such as Saumarez Reef, the Timor, Arafura and Coral Seas, Cowley Beach (located within the Wet Tropics World Heritage Area), and habitat for endangered species such as the Northern Quoll and Gouldian Finch (Bradshaw, Delamere Range, Mt Bundy, NT) and vulnerable and/or endangered species such as turtles, dugongs and migrating whales.

Being a combined exercise, Talisman Saber includes army, navy and air force practice. The military, in particular the US military, are known to be some of the world's worst polluters and producers of toxic chemicals. It is inappropriate to expose some of our last coastal wilderness areas, threatened and endangered species and heritage sites, to bombing, on-shore landing practise, the use of sonar, and potential radiological contamination from the use of nuclear-powered ships for these military operations.

Military exercises are the face of ongoing colonisation. War games and bases in Australia and the Pacific deny First People's Sovereignty. Shoalwater Bay, for example,

is the ancestral lands of the Darambal people who have only restricted access to their significant sites within the Training Area.

The Pacific island country Guam, or Gua'han, the traditional lands of the Chamorro people, is now one-third occupied by the US military. Australia permits the US military to conduct bombing practice in the form of bombing fly-overs on Australia's Northern Territory from Guam. Pine Gap, in the NT, is used to support US missile defense. The US military continues to conduct ballistic missile test launches from the mainland to the Marshall Islands, where the US conducted 67 nuclear tests in the 1950s. Some atolls were completely destroyed, many Marshallese displaced. The legacy of nuclear testing in Australia and the Pacific is ongoing.

Continuation of the system that colonises these lands and waters and uses them as tools for further militarism is unacceptable. Instead, compensation, restitution and ongoing support for affected people should be guaranteed, rehabilitation of sites and guardianship of sites beyond rehabilitation should be ensured, and control of all land and seas used for military activity throughout Australia and in the Pacific should be returned to Traditional Owners.

It is time to stop preparing for war and to start practicing peace. By refusing to fuel the global nuclear cycle through exports of uranium and refusing to collude with US global military expansion by hosting bases, troops, nuclear ship visits and military exercises, Australia could take a leading role in pushing a dialogue based on peace and cooperation rather than imperialism and competition.

Robin Taubenfeld is a member of Friends of the Earth, Brisbane.

Peace Convergence

As part of our ongoing work to de-nuclearise, de-militarise and de-colonise the planet, Friends of the Earth Brisbane supported a Peace Convergence in the Shoalwater region at the time that the Talisman Saber war games took place. This year, US Veteran for Peace Vince Emanuele voiced his concerns on the east coast, Darwin and Rockhampton. Chamorro activist Vicky Leon and Bruce Gagnon, coordinator of the Global Network Against Weapons & Nuclear Power in Space, spoke in various locations during the war games.

Creative actions and events were held in Rockhampton, Yeppoon, Brisbane, Sydney, Darwin and Melbourne. On August 19, friend and comrade Graeme Dunstan will be facing trial in Rockhampton for the Tiger Ploughshares action that took place during Talisman Saber 2011.

More Information

More information about specific events and the Rockhampton Peace Convergence can be found:

<http://peaceconvergence.wordpress.com>

[facebook.com/events/657571074258328](https://www.facebook.com/events/657571074258328)

Phone: 04 1111 8737



People displaced by Bakun dam – hundreds are living in so-called floating homes. Photo from www.vanessaontheroad.com

In the name of sustainability: Deforestation in Malaysia and Indonesia

Tully McIntyre

Recently I visited Malaysia and Indonesia, countries which host breathtaking 130 million year old rainforests, some of the oldest in the world. For the past three decades the forests have been disappearing at an alarming rate. This has mostly been due to the growing of rubber, cocoa and palm oil plantations – commonly coined "cash crops".

Palm oil plantations are the number one cash crop these days, as they have a high yield of oil which is exported globally and used in the manufacturing of products including foods, cooking oil, cosmetics, and biofuels. It is generally broken down to three different types – crude palm oil, palm kernel oil and palm kernel meal.

In both Malaysia and Indonesia, plantation owners and mining companies are scrambling to log customary land. This development is welcomed by governments in both countries, and multinationals are seizing the opportunities presented by relaxed environmental laws and government corruption.

For local indigenous people there is a resemblance to the displacement of Australia's Indigenous people, who have been forced from land due to industry. Some sign over land in return for necessities like fresh water, power, schools, roads and small numbers of jobs.

More than 10 million hectares of forest have been converted to plantations in Indonesia in the past decade, with thousands of people displaced as a result. Many move to cities, exacerbating problems of overcrowding and poverty. The Indonesian government is forcing landless people from densely populated areas to areas of less

population on other islands, and this 'transmigration' and is causing major conflicts with local indigenous groups in the provinces such as in Papua and Sulawesi.

Local indigenous people and their allies are increasingly fighting to protect customary lands. The resistance is strong and fearless, and the severity of militant action taken against demonstrators is extremely harsh with many environmental defenders being beaten, threatened, murdered or thrown in prison.

At a demonstration on January 29, Indonesian police responded to the peaceful demonstration organised by environmental activists and farmers in Palembang, South Sumatera, by beating and brutalising Anwar Sadat, director of the South Sumatera chapter of WALHI (Friends of the Earth Indonesia). They then arrested him, along with 25 others from the office of WALHI and the Sriwijaya Farmers Union, and charged them with assault.

Anwar was charged with violating Article 170 of the Criminal Code for assault against police, although this was never proven. He was sentenced to seven months in prison and is still in prison today (early July). This is only one instance of hundreds of cases over the past couple of years.

The Indonesian government would like to be seen to be acting in a positive way on forest protection – in May 2010 it signed an agreement to protect 65 million hectares of primary forest from developers. The moratorium to cease felling of primary forest for development has been extended for another two years from May 2013. However forest destruction continues within and beyond the moratorium area.

Forest fires

In June, fire fighters in the Riau regency of central Sumatra struggled to contain more than 16,500 hectares of peat swamp forest fires that have been blamed on shifting cultivating farmers and palm oil companies.

According to Greenpeace forest campaigner Yuyu Indradi: "We found 50% of the fires to be inside the moratorium area, mostly in the peatlands." He also said: "In the moratorium area it is clearly the government's responsibility to protect the forest. This is industrial scale burning. It is easy to find out who is behind it."

Burning areas in Riau overlap concession areas of primary forest. So far eight farmers have been arrested and 14 palm oil companies are being investigated over the fire. Smoke pollution from the fires has been shifting to the east of Sumatra, smothering Singapore and southern areas of Malaysia, with cities reaching record levels of pollution since 2007. The situation is forcing schools to close and local residents to stay in their homes.

The governments of Singapore, Indonesia and Malaysia have been exchanging blame over the fires. Malaysian companies, with head offices in Singapore, may be responsible for the fires. Malaysian owned company Sime Darby Berhad is one of the largest palm oil companies and is currently being investigated over the fires; it operates large areas of plantations in Sumatra. Wilmar International is another Malaysian company which is being accused of responsibility for the fires.

These devastating forest fires occur annually in the dry season from June to September, and are generally believed to be deliberately lit to drain and clear peat forests to make way for plantations. Peat fires of this scale haven't been seen in Sumatra since 2007. In that year, Indonesia was tagged the third largest producer of global greenhouse emissions, after the US and China, with deforestation and the burning of peat forests responsible for a significant fraction of total national emissions.

Irhash Ahmady of WALHI said "unfortunately once again the issue of the environment is used for the benefit of

foreign monopoly with millions of hectares of oil palm development depriving the people". Irhash, who is also manager of Knowledge and Networks, says the state has set a target of 20 million hectares of oil palm plantations to be developed by 2020. This will threaten food sovereignty.

Today Indonesia is the largest producer of palm oil and Malaysia is not far behind, with China being the largest importer of the final product.

Greenwash

The common 'greenwash' terms of sustainability and renewable energy are used in both Indonesia and Malaysia by companies and governments. Sarawak, a state of Borneo that has well over 100,000 hectares of palm oil plantations, is also facing questionable development via a program called SCORE – Sarawak Corridor of Renewable Energy. SCORE is a US\$105 billion state government initiative to produce large-scale energy to lure energy-intensive industries such as aluminum smelters.

Native customary rights are once again being forgotten, as large areas of land are being logged or inundated to make way for new projects. One SCORE program is focussed on the development of mega hydroelectric dams. The now completed 2,500 megawatt Bukan dam project near Belaga is the second largest hydro project in the world after the Three Gorges dam in China. The Bukan dam project forced the migration of close to 10,000 indigenous Dayak people out of the area in 1999.

On visiting the Iban tribe of the Rajang river and speaking to the head man of the tribe, he spoke about the government proposing to build a road and supply power if they would lease their land to a palm oil company for plantations. The head man, who sits on a committee of local men of the area, was seeking legal advice on the proposal. Twelve more dams are under the development or planning phase across the state and the states minister Taib Mahmud is being investigated on corruption issues.

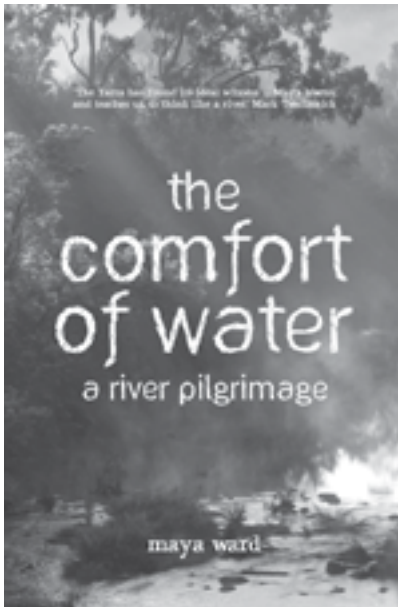
Tully McIntyre is an International Liaison Officer with Friends of the Earth, Australia.



Peat fire.



Book Review



A River Pilgrimage

The Comfort of Water: A River Pilgrimage

Maya Ward

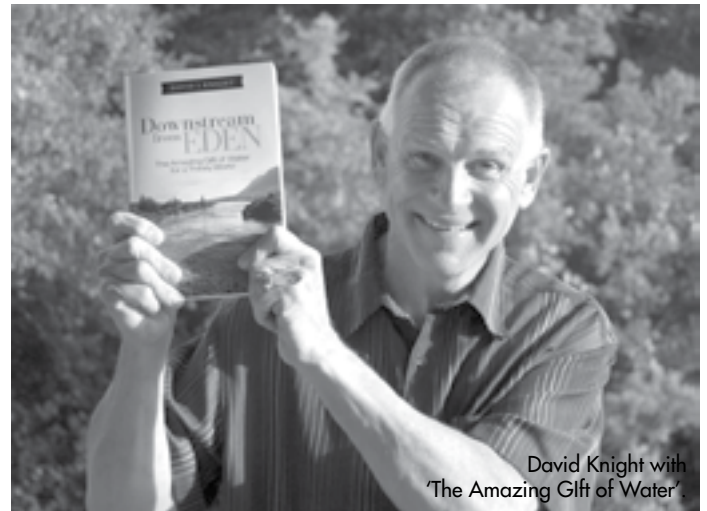
2011

\$28

Transit Lounge Publishing – transitlounge.com.au

This is the true story of four friends who walk a 21-day pilgrimage from the sea to the source of Melbourne's Yarra River. There is no path for most of the way, but offers of campsites and boats, and free access to private lands, illustrates the generosity shown to pilgrims. Maya Ward weaves the telling of the journey with ecological and cultural history.

A review in the Fairfax press said "this is an important book simply because no one appears to have done this trip and written about it for more than 100 years. Ward's description of the closure of the Yarra's headwaters is a reminder that the simple joy of following a river from the mouth to the source is no longer easy and is often a heartbreaking disappointment."



David Knight with 'The Amazing Gift of Water'

Downstream from Eden: The Gift of Water

Downstream from Eden:

The Amazing Gift of Water for a Thirsty World

David Knight

2012

Westbow Press

426 pages

ISBN: 9781449745653

Having lived in the developing nation of Belize and experienced life first-hand in other majority-world nations, Pastor David Knight understands water as a vital resource in human ecology and spirituality.

Knight draws connections between the global water crisis and spiritual teachings in *Downstream from Eden*, and calls for a united front against water scarcity. Divided into three parts, *Downstream from Eden* explores water as a "gift" of nature in the environment, as a "story" in the way that it is used in narratives throughout the Judeo-Christian Bible, and as a "way" in that lessons learned from these stories of water in the Bible can be applied to life.

Knight offers a call to action at the conclusion of his book: ten disciplines for living ethically and effectively in terms of water.

"Water scarcity illustrates the need for tribal/community, regional and inter-national cooperation, compassion and justice," Knight says. "This book tells stories of the joy of sharing water – 'those who refresh others themselves will be refreshed.'"

More information: davidknightwrites.blogspot.com.au and downstreamfromeden.com

Mullahs Without Mercy: Human Rights and Nuclear Weapons

*Mullahs Without Mercy: Human Rights and
Nuclear Weapons*

Geoffrey Robertson

Vintage Australia / Random House

2012

\$34.95

400 pages

ISBN: 9781742758213



Review by Jim Green

Mullahs Without Mercy can be read as a primer for what Robertson anticipates will be the first war of 2013, to be initiated by Israeli attacks on Iranian nuclear facilities.

While deeply alarmed at the prospect of Iran's leaders possessing nuclear weapons, Robertson argues that it would be illegal under international law for Israel to attempt to destroy nuclear facilities believed to be involved in weapons production. Such attacks, he believes, would likely kill many more people than the 11 who died when Israel destroyed a 'research reactor' under construction in Iraq in 1981.

Should Iran develop nuclear weapons, Robertson doesn't envisage them being used: "The Mullahs are at least as rational as a gang of serial killers and are well aware that Israel itself has 200 nukes, some on submarines stooing the eastern Mediterranean, which would be shot at Tehran in immediate reprisal for any attack."

He argues that the "real danger of Iran's acquisition of nuclear weapons is that the ruling Mullahs will be invincible and proliferation will follow throughout the Middle East".

Some of his claims might be a bit speculative: "Saudi Arabia is already negotiating "off the peg" atom bombs from Pakistan and the Muslim Brotherhood has long had a policy to obtain nuclear weapons for Egypt." Nevertheless there is clearly a major problem unfolding in the Middle East – the US State Department has warned of the possibility of a nuclear arms race in the Middle East and noted that a number of states in the region "are already thinking about developing or acquiring nuclear technology useful for development of nuclear weaponry."

Robertson proposes that nations make the acquisition of nuclear weapons a crime against humanity by amending the Treaty of the International Criminal Court at its review conference in 2016. He writes: "That would entitle the Security Council to authorise an attack on Iran or any other country outside the nine that already possess nuclear

weapons to stop it from assembling a bomb. But this will have to be accompanied by a binding agreement between the nuclear-armed states gradually to reduce the number of nukes in their arsenals to zero and by the establishment of a powerful UN inspection agency to replace the toothless International Atomic Energy Agency, which cannot inspect suspicious facilities, in Iran or elsewhere, without the permission of the suspect state."

The book has attracted some criticism, mainly because of the heavy emphasis on international law. A review in progressonline.org.uk states: "Despite the intriguing arguments and anecdotes, Robertson's plan remains unpersuasive. He spends little time on the political implications of disarmament for nuclear power. Given the complexity of the Trident debate in the UK, the assumption that nuclear states will simply give up their weapons freely feels a little far-fetched. The book fails to give international efforts on Iran a fair hearing, and assumes diplomacy is doomed to fail."

Another reviewer states: "As a fellow former (if rather less august!) lawyer, I have noticed a tendency amongst legal types to assume that legal architecture is in some sense "real", that it is solid. The reality is that international law in particular is contested and rather surreal. ... Mr Robertson seems to be using the arcane paraphernalia of his profession to give his subjective political opinions a cloak of objective solidity. Quite improper really."

Perhaps Robertson gives too much emphasis to international law, and understates the problem that international laws banning nuclear weapons won't be adopted or enforced in the absence of a sustained heave from the global citizenry. Nevertheless it would still be welcome if Robertson and like-minded lawyers pursue such initiatives.

<http://www.progressonline.org.uk/2012/12/18/mullahs-without-mercy/>

A good chunk of the book can be read online for free at tiny.cc/iozoqw (click the orange 'Free Sample' button).

Character before knowledge

Brighter than a Thousand Suns – A Personal History of the Atomic Scientists

Robert Jungk

First published in 1956

Review by Noel Wauchope

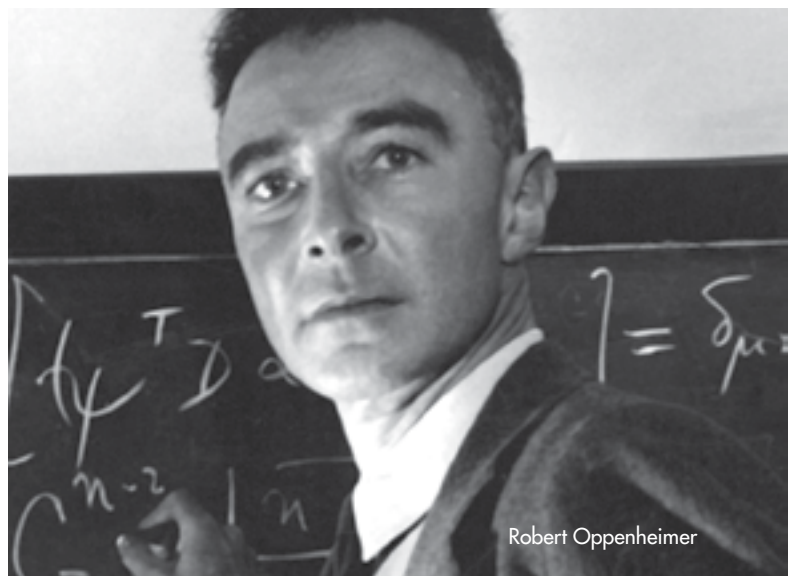
“Why are we interested only in what scientists do, and not in what they are?” This opening question informs Jungk’s entire book. Jungk conversed with many of the scientists of the early days of atomic research, and through until 1954. With the earliest conversations, Jungk was struck by “the arbitrary and unnatural separation of scientific research from the reality of the individual personality”. To Jungk, it was this division that “allowed the creation of such monstrosities as the atomic bomb and the hydrogen bomb”.

To this day, many nuclear scientists think of their work as purely mathematical and technical. The human results of nuclear weapons are none of their business. Others, especially after Hiroshima, suffered “their great crisis of conscience”.

To today’s readers, Jungk’s detailed personal histories of so many scientists might prove tedious. Yet these form the source, the explanation, of the differing attitudes they held towards the projects that culminated in the atomic bombing of Hiroshima and Nagasaki.

The earliest scientists in Germany were deeply affected by the traumas of World War 1, and the developing horror of the Nazi regime. Many were Jewish, and emigrated. The fear of Hitler acquiring and using the atomic bomb was in their minds. Those who stayed in Germany concentrated on uranium energy research, and were in fact relieved that Hitler dismissed the idea of developing the bomb.

Atomic research, along with the scientists, moved to Norway, France, Russia, Italy. It became an international collaboration then, in England. At Cambridge there was an atmosphere of youthful enthusiasm, as “Rutherford’s boys” (and girls) worked on the technical complexity of atom, discovering the neutron in 1932. Jungk attributes the



discovery of atomic fission to Enrico Fermi, in Italy 1934. Those were what Jungk calls “the beautiful years” – 1932–39.

In 1939, with the clouds of war hanging over them, the international scientists now faced the reality of what could be done with their research. Their colleagues in Germany were known to be on bad terms with Hitler – but no discussions could now be held between the two groups.

This was a turning point, a time when the scientists could have turned away from developing the bomb. Leo Szilard and Albert Einstein, who both later fought against the bomb project, called on the USA to forward it, believing that USA would never actually use the bomb.

It was also a turning point in that the more light-hearted, youthful co-operation of scientists, gradually changed, in America, under the secretive and authoritarian regime of Manhattan Project in 1942. From here, Jungk’s book becomes something of a suspense thriller. The military authorities “erected invisible walls round every branch of research, so that no department ever knew what any other was doing.”

Only a few of the 150,000 people employed on the Manhattan Project knew that they were working on a bomb at all. In the secret cities at Oak Ridge, Hanford and Los Alamos, scientists worked under rigid surveillance, and were encouraged to spy on each other. Colonel Leslie Groves was given the rank of General and put in charge of the project.

Most revealing is Jungk’s study of the charismatic but flawed character of Robert Oppenheimer, Director at Los Alamos. He was later most unfairly treated by USA, but Jungk outlines his behaviour as driven by ambition, and a willingness to kow-tow to the military establishment.



The first atomic bomb test, in New Mexico, USA, 16 July 1945, a fraction of a second after detonation.

General Groves' zeal for using the bomb in war was a factor in the schism that now developed among the scientists. From 1943-44, the scientists advised a demonstration bomb test, on unpopulated land. Szilard and Einstein now wrote to President Roosevelt urging against the atomic bombing of Japanese cities. But Roosevelt died suddenly. The new President Truman wasn't interested - setting up scientific panels, and an "Interim Committee" who would "play ball" with the military. The scientific panel was not called upon to decide whether the bomb should be used, but only how it should be used.

In spite of seven of the scientists writing to the Secretary of War, opposing use of the bomb, the Interim Committee (Oppenheimer, Fermi, Compton and Lawrence) recommended the bombing.

From then on, it was a rush to test the bomb, and then use it, before the Japanese surrendered. Three atomic bombs were built. The first - tested: if the test was a failure - it would be reported as a "girl" - if successful a "boy".

For the second and third bombs, 67 scientists petitioned the government to warn the Japanese first - a petition that was prevented by General Groves from reaching the White House. Enrico Fermi commented: "Don't bother me with your conscientious scruples! After all, the thing is superb physics!"

The \$2 billion Manhattan Project would be seen as a senseless waste of money if Japan surrendered. Truman authorised the bombing of Hiroshima and Nagasaki. Oppenheimer explained later that his Interim Committee's recommendation was "a technical opinion".

The reactions of the scientists were conflicted. "Shouts of joy" at the success of the bombing. Simultaneous pride

and shame. As the radiation effects were learned, General Groves reassured a Congressional hearing that he'd heard that death from radiation was "very pleasant".

Oppenheimer knew that the bombing was not the end of the nuclear project, but the start of a nuclear arms race between USA and Russia. Now nuclear science came fully under military influence, Edward Teller now came into the picture, and the race for the hydrogen bomb was on. Still there were some that rebelled, but by 1947, these had lost out. They set up the Bulletin of the Atomic Scientists to awaken the world to the danger. Einstein said: "In the end, there beckons, more and more clearly, general annihilation."

Robert Jungk's account of the men, and some women, too, who developed atomic weapons is set against the background of the big events of the time, with a sympathetic attitude to the pressures and problems that surrounded these people.

From 1951 to 1955 the general attitude of atomic scientists was one of enthusiasm for the hydrogen bomb (1000 times more powerful than the first atomic bomb). Jungk muses on this: "How is one to explain such macabre enthusiasm which had swept away all the earlier scruples and objections to the Super monster?"

He finds his answer in a statement by Oppenheimer: - "When you see something that is technically sweet, you go ahead and do it." Jungk comments that Oppenheimer here reveals a dangerous tendency in the modern research scientist.

Robert Jungk wrote that in 1955. Nearly 60 years later - has anything changed?

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Album Review

Roger Knox and the Pine Valley Cosmonauts

Stranger in My Land

2013

Bloodshot Records

bloodshotrecords.com/artist/roger-knox

Review by Anthony Amis

"This land is like a store-bought pie and lots of people come

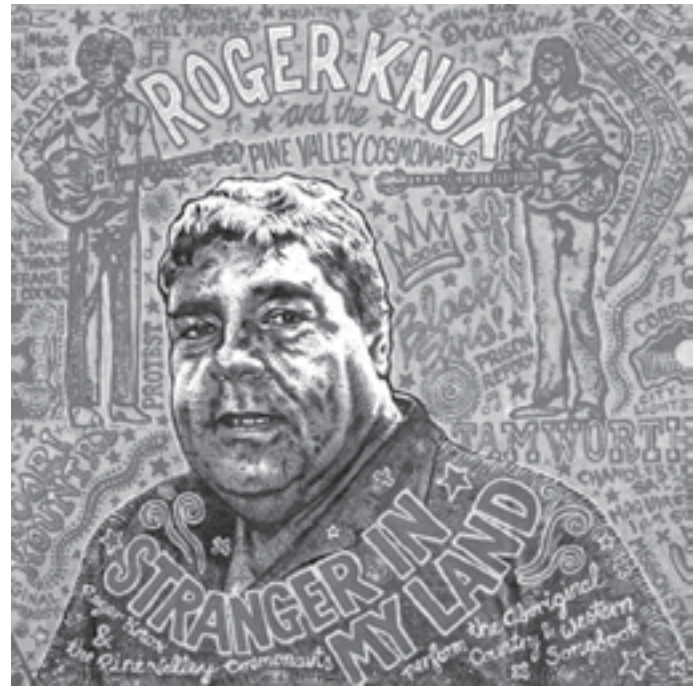
All to get themselves a slice and I can't get a crumb"

The older I get, the more I like country music. I've often thought it's a crying shame that country music is almost universally disdained amongst progressive types. Perhaps there's an elitism apparent, that theorises that country music is enjoyed mainly by rednecks and therefore is politically unsound. I'm not sure, but when I'm travelling country miles, the only music that makes sense out there is country.

In many regions of Australia, country music is one of the only means possible to communicate feelings for the country (and loss of country) in song. Sung around countless fires, many people, including Aboriginal singers, crafted country music into heartfelt, mournful and sometimes hilarious interpretations of their struggles and day-to-day life. Many of the best examples of Aboriginal country songs were collated by Clinton Walker in his famous book and very hard to find double-CD, released in 2000, called 'Buried Country'.

Roger Knox's fourth album, 'Stranger in My Land', is another stellar release in his impressive catalogue. It features some of Aboriginal Australia's best known country songs, delivered in Roger's own unique style, with vocals as smooth as silk. Some of the best songs made famous in 'Buried Country' that get Roger's unique treatment on 'Stranger in My Land' include songs originally recorded by Vic Simms, Mop and The Dropouts, Bobby McLeod, Dougie Young and Jimmy Ridegway. It's all good.

Roger grew up on the Toomelah Mission near Moree. In June 1981, he was seriously burnt in one of two plane crashes that he survived. This meant six months in hospital and two years in bed convalescing from very serious burns. His first album, 'Give It A Go', was released almost 30 years ago in 1984 and received positive reviews not only in the country



music capital, Tamworth, but also Sydney and Melbourne. 'Stranger In My Land' has been released by US label Bloodshot, and it must make Roger very satisfied to know that these great songs are now being listened to by an increasingly aware global audience.

Roger Knox, *aka* the Koori King of Country or Black Elvis (as he's known in his homeland), and survivor of TWO plane crashes in ONE day (holy sh*t, now THAT'S a country song!), is an Aboriginal Australian Country & Western singer with a honeyed bear hug of a voice.

Back in the 1980s Roger Knox and the Euraba Band (named after the Euraba bush – which supplied him with traditional medicines made by his Aunt to soothe his crash-related injuries) were the hottest act in Australian Country music, black or white.

These days you're more likely to find him out of cell phone range in some far flung bush community singing his heart out, counseling the youth and leading by example.

Bloodshot artist Jon Langford (Mekons, Waco Brothers) met Knox on a visit to Australia several years ago. When he heard of Roger and the potentially-soon-to-be-lost subculture of the utterly unique cultural collision that is Koori country, Langford knew he had to be involved. *Stranger In My Land* is a collection of songs originally written by Aboriginal artists who were Knox's peers and predecessors; some tunes previously recorded but difficult to find as well as several unrecorded, handed-down folk songs (which without this recording, could have been lost forever).

– Bloodshot Records

LOCAL GROUPS

FoE Adelaide

address: c/- Conservation SA,
Level 1, 157 Franklin Street,
Adelaide, SA 5000
email: adelaide.office@foe.org.au
website: www.adelaide.foe.org.au

FoE Brisbane

address: 20 Burke St, Woolloongabba
(above Reverse Garbage).
postal: PO Box 8227,
Woolloongabba, Qld, 4102.
phone: (07) 3171 2255
email: office.brisbane@foe.org.au
website: www.brisbane.foe.org.au

Six Degrees Coal and Climate Campaign
email: sixdegrees@foe.org.au
website: www.sixdegrees.org.au

Phone, fax, street and postal addresses –
shared with FoE Brisbane (see above).

Pacific & Torres Strait Islands Solidarity

phone: 0439 771 692 (Wendy Flannery)
email: wendy.flannery@foe.org.au

Bridgetown Greenbushes Friends of the Forest

address: PO Box 461,
Bridgetown, WA, 6255
email: president@bgff.org.au
website: www.bgff.org.au

FoE Southwest WA

address: PO Box 6177, South Bunbury, WA, 6230
phone: Joan Jenkins (08) 9791 6621,
0428 389 087
email: foeswa@gmail.com

FoE Melbourne

address: 312 Smith St, Collingwood.
postal: PO Box 222, Fitzroy, 3065.
phone: (03) 9419 8700,
1300 852081 (freecall)
fax: (03) 9416 2081
email: foe@foe.org.au
website: www.melbourne.foe.org.au

Barmah-Millewa Collective

Sam Cossar-Gilbert, Collective Coordinator
email: sam.cossargilbert@foe.org.au

Will Mooney, Community Campaigner
email: will.mooney@foe.org.au
phone: 0404 163 700

Anti-nuclear & Clean Energy (ACE) Collective
email: ace@foe.org.au
phone: 0421 955 066 (Gem Romuld)

Food co-op

phone: (03) 9417 4382

Yes 2 Renewables

email: leigh.ewbank@foe.org.au
phone: 0406 316 176 (Leigh Ewbank (Melb))
email: cam.walker@foe.org.au
phone: 0419 338047 (Cam Walker (Melb))

Quit Coal

Chloe Aldenhoven, Coal and Gas Campaigner
email: chloe.aldenhoven@foe.org.au
phone: 0432 328 107
email: UrsulaAlquier.ursula.alquier@foe.org.au

Dirt Radio

www.3cr.org.au/dirtradio Mondays 10:30am on 3CR

FoE Kuranda

address: PO Box 795, Kuranda, Qld, 4881
email: info@foekuranda.org
phone: (07) 4093 8509 (Pat Daly)
website: www.foekuranda.org

FoE Sydney

postal: 19 Eve St, Erskineville, NSW, 2043
contact: Beck Pearse
email: sydney@foe.org.au
phone: 0405 105 101
website: www.sydney.foe.org.au

Climate Justice (REDD/carbon trading)
email: beck.pearse@foe.org.au,
nick.mcclean@foe.org.au

Friends of the Earth Australia contacts

National Liaison Officers

National Liaison Office
phone: (03) 9419 8700.
address: PO Box 222, Fitzroy, Vic, 3065.

Cam Walker (Melbourne)
email: cam.walker@foe.org.au
phone: 0419 338047

Kim Stewart (Brisbane)
email: kim.Stewart@foe.org.au
phone: 0413 397839

Beck Pearse (Sydney)
email: beck.pearse@foe.org.au
phone: 0405 105 101

National campaigns, active issues, projects and spokespeople

Anti-Nuclear and Clean Energy (ACE):

Jim Green (Melbourne)
email: jim.green@foe.org.au
phone: 0417 318368

Robin Taubenfeld (Brisbane)
email: robin.taubenfeld@hotmail.com
phone: 0411 118737

Tully McIntyre (Melbourne)
email: tully.mcintyre@foe.org.au
phone: 0410 388187

Climate Justice:

Cam Walker (Melbourne)
email: cam.walker@foe.org.au
phone: 0419 338047

Coal & Coal Seam Gas:

Cam Walker (Melbourne)
email: cam.walker@foe.org.au
phone: 0419 338047

Drew Hutton (Brisbane)
email: drew.hutton@foe.org.au
phone: 0428 487110

Shaun Murray (Queensland)
email: shaun.murray@foe.org.au
phone: 0402 337 077

Carbon trading

Ellen Roberts
email: ellen.roberts@foe.org.au

Beck Pearse
email: beck.pearse@foe.org.au
phone: 0405 105 101

Indigenous Communities in Latin America Campaign (mining, hydro and forestry):

Marisol Salinas (Melbourne)
email: marisol.salinas@foe.org.au

Australian Indigenous Issues:
phone: 0404 163 700 (Will Mooney)
email: will.mooney@foe.org.au

Murray-Darling Basin Plan:
phone: 0404 163 700 (Will Mooney)
email: will.mooney@foe.org.au

Food:
phone: 0435 589579 (Louise Sales)
email: louise.sales@foe.org.au

Pacific Solidarity:
phone: 0439 771692 (Wendy Flannery)
email: wendy.flannery@foe.org.au

Pesticides:
Anthony Amis (Melbourne)
email: anthonyamis@hotmail.com

Nanotechnology:
phone: 0435 589579 (Louise Sales)
email: louise.sales@foe.org.au

South Melbourne Commons:
address: 217–239 Montague St,
South Melbourne (cnr Bank St).
email: smc.operations@foe.org.au
phone: 03 9682 5282,
website: www.commonsof.org.au

Lynas Rare Earth Plant:
Tully McIntyre (Melbourne)
email: tully.mcintyre@foe.org.au
phone: 0410 388187

International Liaison Officers

Tully McIntyre (Melbourne)
email: tully.mcintyre@foe.org.au
phone: 0410 388187

Derec Davies
email: derec.davies@foe.org.au
phone: 0421 835 587

Ellen Roberts
email: ellen.roberts@foe.org.au

Membership issues/ financial contributions

Miko Thomas
email: miko.thomas@foe.org.au
phone: Freecall 1300 852 081,
(03) 9418 8700 (Tues–Thurs)

AFFILIATE MEMBERS

Food Irradiation Watch

postal: PO Box 5829,
West End, Qld, 4101
email: foodirradiationwatch@yahoo.com.au
website: www.foodirradiationinfo.org

Tulele Peisa (PNG)

'sailing the waves on our own'
website: www.tulelepeisa.org

Mukwano Australia

Supporting health care in organic farming communities in Uganda.
email: Sam Le Gassick, sam_neal13@hotmail.com
email: Kristen Lyons, kristen.lyons@uq.edu.au
web: www.mukwano-australia.org

Katoomba-Leura Climate Action Now

email: climateactionnow.kl@gmail.com
website: www.climateactionnow.org.au/groups/katoomba-leura-climate-action-now

Sustainable Energy Now (WA)

address: Perth. PO Box 341,
West Perth WA 6872
phone: Steve Gates 0400 870 887
email: contact@sen.asn.au
website: www.sen.asn.au

Reverse Garbage Co-op (Brisbane)

address: 20 Burke St, Woolloongabba.
postal: PO Box 8087,
Woolloongabba, Qld 4102.
phone: (07) 3891 9744
email: info@reversegarbage.com.au,
website: www.reversegarbage.com.au
Office days: Monday to Friday.

In Our Nature

Working on the Kitobo Colobus Project in southern Kenya.
Julian Brown
email: julian.brown20@yahoo.com

West Mallee Protection (SA)

email: westmallee@gmail.com

Nature: Not Negotiable

Stop the Commonwealth handing over environmental approvals powers to neanderthal state governments.
web: foe.org.au/nature-not-negotiable
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twitter: @NatureNotNeg

Market Forces

web: www.marketforces.org.au
email: Julien Vincent contact@marketforces.org.au
twitter: @market_forces
facebook: [facebook.com/MarketForces](https://www.facebook.com/MarketForces)

CounterAct

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email: Nicola Paris, nicola@counteract.org.au
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