

# chain. reaction

Issue #122 | November 2014

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The National Magazine of Friends of the Earth Australia

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



## ATTACKS ON NGOS THREATEN OUR DEMOCRACY

- Malaysian eco-activists combat repression
- Nanomaterials in food
- Water justice in the Murray-Darling Basin
- Pesticide monitoring of Vic waterways
- Maules Creek: front-line action on coal
- Irradiated food labelling
- Farmlands Not Gaslands
- Maralinga: a chilling exposé
- Why renewable energy matters
- Small-is-beautiful nuclear rhetoric exposed

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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, Tessa Sellar,  
Franklin Bruinstroop, Claire Nettle

**Layout & Design**

Tessa Sellar

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**Front cover:**

February 1994 protest outside the Department of  
Conservation and Natural Resources, organised by  
the East Gippsland Forest Alliance and supported by  
Friends of the Earth. Photo by Trevor Coon.

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# Support Friends of the Earth

1

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

Give your support by:

- Becoming an **Active Friend** by giving monthly tax-deductible donations
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- Renewing** your membership
- Giving a one off **Donation**

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2

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I'd like to make a **monthly** donation of:

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The donation will be by (please fill out appropriate card details below):

- Direct Debit** from my bank account (the least admin fees!)
- Credit card**

A Service Agreement will be sent to you upon receipt of this form. All contributions are tax deductible with the exception of \$20 per year to cover a membership fee.

## Membership

Become a FoE member with a yearly membership payment:

- \$165 **Supporting Member** (\$100 tax deductible)
- \$95 **Organisation**    \$90 **Household**
- \$65 **Waged Person**    \$45 **Concession**
- One year**    **Ongoing** (Credit Card or Direct Debit only)

## Donations

Make a one-off donation (over \$2.00 is tax-deductible):

Donation \$ \_\_\_\_\_ (thank you!)

3

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Financial Institution: \_\_\_\_\_ Branch address: \_\_\_\_\_

BSB#: \_\_\_\_\_ Account#: \_\_\_\_\_

Name on Account: \_\_\_\_\_ Signature: \_\_\_\_\_

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Card no: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_   Expiry Date: \_\_\_\_/\_\_\_\_   CCV no: \_\_\_\_\_ (last 3 digits on back of card)

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Ph: 03 9419 8700   Fax: 03 9416 2081   Email: [membership@foe.org.au](mailto:membership@foe.org.au)  
Website: [www.melbourne.foe.org.au](http://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](http://foe.org.au/local-groups)*

*There is a monthly FoE Australia email newsletter – subscribe via the website: [www.foe.org.au](http://www.foe.org.au)*

*To financially support our work, please visit [foe.org.au/donate](http://foe.org.au/donate)*

## Friends of the Earth Online

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

[youtube.com/user/FriendsOfTheEarthAUS](https://youtube.com/user/FriendsOfTheEarthAUS)

[twitter.com/FoEAustralia](https://twitter.com/FoEAustralia)

[facebook.com/pages/Friends-of-the-Earth-Australia/16744315982](https://facebook.com/pages/Friends-of-the-Earth-Australia/16744315982)

[flickr.com/photos/foeaustralia](https://flickr.com/photos/foeaustralia)

## Tasmanian government attacking right to protest

Friends of the Earth has joined a coalition of community groups opposing the draconian *Workplaces (Protection from Protesters) Bill* proposed by the Tasmanian government. If passed, the legislation could result in peaceful protesters receiving mandatory on the spot fines of \$2,000 (rising to \$5,000 if they go to court) or a minimum three months in jail for a second offence.

*To find out more and take action visit <http://yes2democracy.org>*

## Plantation logging in western Vic and Strzelecki Ranges

In July, Friends of the Earth (FoE) campaigner Anthony Amis completed a report on the impacts of logging by plantation companies in western Victoria and the Strzelecki Ranges. The report raises concerns about the Forest Stewardship Council and its complete lack of interest in working towards protection of Victoria's only endemic koala population in Gippsland. The report highlights the role of Hancock Victorian Plantations in the logging of 7,000 hectares of koala habitat since 1998.

*'Victorian Koala Issues, Plantations and Forest Stewardship Council Certification 2000 – 2014'*

[www.foe.org.au/sites/default/files/Strzelecki%20Koala%20Issues%20and%20Forest%20Stewardship%20Council%20Certification.pdf](http://www.foe.org.au/sites/default/files/Strzelecki%20Koala%20Issues%20and%20Forest%20Stewardship%20Council%20Certification.pdf)



Beth Cameron and Cam Walker.

## Yarra Sustainability Awards

Congratulations to Beth Cameron and Cam Walker who were acknowledged at the recent Yarra Sustainability Awards.

Beth, who has been with FoE for the past 25 years, received the Yarra Sustainability Business Award. The award citation states: "For almost 40 years, Friends of the Earth Food Co-op and Café has been a strong advocate for sustainable living. Friends of the Earth promotes minimally-packaged, ethical, organic and local products that benefit people's health and the planet. Bringing people together to collaborate and celebrate environmental and social justice, Friends of the Earth is a community hub."

Cam, who has also worked at FoE for the past 25 years, was awarded the Frank Fisher Award in recognition of being a national leader for environmental justice. The award citation states: "Cam Walker's work at Friends of the Earth over the last twenty-five years has seen him become nationally recognised as a leader on the environment. He has provided sustained and continuous service to Friends of the Earth and our community for decades – an incredible achievement in the high stress, high turnover world of community advocacy."

[www.yarracity.vic.gov.au/environment/Sustainability-Awards/yarra-sustainability-awards--2014/](http://www.yarracity.vic.gov.au/environment/Sustainability-Awards/yarra-sustainability-awards--2014/)

## FoE Australia turns 40!

According to legend passed down through generations of activists, the FoE Australia network was created at a gathering of local FoE groups on French Island in Western Port Bay, Victoria, in early 1974. At that point, French Island had been selected as a possible location for a nuclear power reactor.

Forty years on, we have been too busy campaigning to celebrate our first four decades. So instead, we're going to have a party in early 2015. We are also going to have a photo exhibition, and we want to compile stories, memorabilia and campaign resources from people who have been involved in FoE at any point in its history. We will also be doing a feature in the next edition of *Chain Reaction*.

*If you have memories or memorabilia to contribute, please contact Cam Walker, [cam.walker@foe.org.au](mailto:cam.walker@foe.org.au), 0419 338047.*

*Nicola Paris from FoE affiliate CounterAct:*

In October 2014, we gathered together at FoE Melbourne to “celebrate movement support”. Along with friends and colleagues from across a range of campaigns, three co-convenors of the Melbourne Campaigners Network – myself, Holly Hammond and Naomi Blackburn – wanted to celebrate our shared achievements and some individual milestones: for Holly it was three years of “Plan to win”, for Naomi it was the launch of her new project “Power in numbers”, and for me, a celebration of the first year milestone for CounterAct.

All of us are working in various ways to support, train and develop capacity in social justice and environmental movements, and as we look to the challenges ahead in this hostile political climate, it seemed to be an opportune time to celebrate the resilience and strength of our growing sector in Melbourne and beyond, and to ask: how do we do this better?

For CounterAct, it has been a big first year. We worked with FoE, Quit Coal, Australian Youth Climate Coalition, The Wilderness Society, the Leard Forest Alliance, Lock the Gate, the East West tunnel picket, 350.org, Save Bastion Point, No Macca’s in Tecoma, the Australian Student Environment Network, grassroots forest and peace activists, and many others. We have also been collaborating with the Melbourne Activist Legal Support group, and the Melbourne Street Medics as well as co-convening the Melbourne Campaigners Network.

In the past year we have supported and mobilised campaigners for the Leard Forest blockade against coal mining expansion in NSW, where over 250 people have put themselves on the line with peaceful civil disobedience actions. We worked with Quit Coal and Lock the Gate to help keep the unconventional gas industry at bay in Seaspray, Victoria, and prepared farmers for action. We have trained over 815 activists. We have spoken at public events and forums across the country, and shared resources directly with over 1 000 people as well as published articles accessed by

tens of thousands. And we coordinated the successful solidarity campaign, ‘We stand with Jonathan Moylan’.

We spoke at the Human Rights Film Festival, Powershift and were invited to provide the keynote speaker at Darwin’s first environment conference, “Ochre Green”. We were patron of the Environmental Film Festival in 2014, sharing stories about inspiring grassroots nonviolent direct action with hundreds of people.

And, in conjunction with FoE, we launched the inaugural ‘Change Course’, a six-week series of workshops to equip participants with a range of advocacy and campaign skills.

We have gratefully received support from the Melbourne Social Forum, Patagonia and individual sponsors, which has enabled us to run trainings in nearly every state in Australia.

So where to next? That is what we are working out. There is a huge demand for accessible grassroots training and skills development for communities that are increasingly finding

themselves on the frontline... and our challenge next is how to resource that and build on this momentum.

Get in touch if you have ideas or would like to support our work:

[info@counteract.org.au](mailto:info@counteract.org.au)  
[www.counteract.org.au](http://www.counteract.org.au)

## Art exhibition launched at FoE Melbourne

“Irrational Emotions” is the culmination of Melbourne artist Sophia Flo Dacy-Cole’s six-month residency at FoE (see pp.24-25) The work is somewhere between a love-letter to FoE, and a contemporary art practice. The installation includes sculptural works, videos and simple architectural considerations. The show pivots around embodied activism, activist places, materials and their constitution, and how to speak to the history of a place that you love. The exhibition will be over by the time *Chain Reaction* goes to press but more information can be found at [sophiadacycole.com](http://sophiadacycole.com)

[www.facebook.com/events/1537288013158785](http://www.facebook.com/events/1537288013158785)

## Market Forces

This time last year, the Commonwealth Bank loaned Adani \$600 million to help the company continue operating a coal export terminal at Abbot Point, in the Great Barrier Reef World Heritage Area. It was the latest in a string of loans to dirty fossil fuel projects.

When our political leaders turn their backs on climate action, it’s time for us to let our money do the talking! If you’re with one of the ‘big four’ banks, put them on notice. Warn them that unless they stop funding climate change-causing fossil fuels, you’ll find another bank.

More information is posted on the website of FoE affiliate Market Forces, including a list of over 120 banks and where they stand on the issue of fossil fuel investment, and a guide on how to switch banks and make it count:

[www.marketforces.org.au/campaigns/banks/](http://www.marketforces.org.au/campaigns/banks/)



[www.marketforces.org.au/divestmentday](http://www.marketforces.org.au/divestmentday)

[www.facebook.com/MarketForces/](http://www.facebook.com/MarketForces/)

Market Forces has also produced a new online tool that helps people see if their super fund is supporting the fossil fuel industry and to take steps to move super out of this polluting sector:

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

## Green groups' funding cut by Abbott government

As part of its cost cutting measures, the federal government has slashed the Grants to Voluntary Environment, Sustainability and Heritage Organisations Programme (GVESHO). The GVESHO enjoyed bipartisan support from the 1980s, and even the Howard government kept the program alive. It provided essential support for the core budgets of many groups, and especially the regional conservation councils like the Arid Lands Environment Centre (ALEC) in Alice Springs.

The Environment Department said the cut was "part of [the government's] commitment to fiscal responsibility" and that "abolishing this programme aligns with the recommendations of the National Commission of Audit". However, it is clearly part of the federal government's ideological attack on green groups.

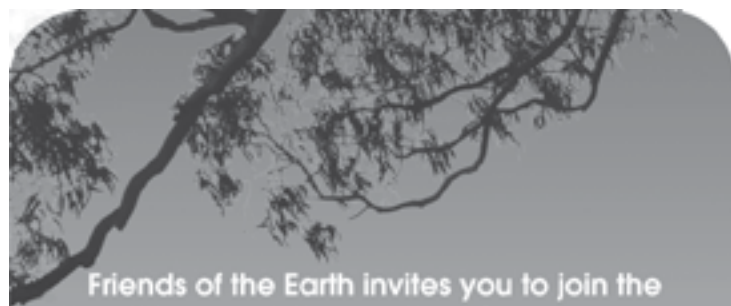
The loss of the program will directly affect Friends of the Earth as we have lost our annual grant of \$4,000. If you can provide a donation to support our work, you can do so here: [www.givenow.com.au/friendsoftheearthaustralia](http://www.givenow.com.au/friendsoftheearthaustralia)

## ACEing the Territory

Activists from FoE's Anti-nuclear & Clean Energy (ACE) campaign have made numerous visits to the NT this year: working trips to support the campaign to prevent the imposition of a nuclear waste dump on the land of Muckaty Traditional Owners and a follow-up trip to celebrate the wonderful victory of the Muckaty campaign; the Radioactive Exposure Tour visited Alice Springs, Tennant Creek and Muckaty; and most recently, we participated in the annual meeting of the Australian Nuclear Free Alliance in Alice Springs.

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

Muckaty Traditional Owner Marlene Bennett celebrating a famous victory with Nat Wasley from the Beyond Nuclear Initiative, June 2014.



## Friends of the Earth invites you to join the Active Friends Program

### What is the Active Friends Program?

The Active Friends Program is one of the best means to support current and future work of Friends of the Earth. It involves a regular monthly donation of a self-nominated amount.

### Where will Active Friends donations go?

Friends of the Earth is renowned for making a little money go a long way. Because our administration costs are always kept to a bare minimum, practically all Active Friends contributions directly support campaign work, publications and community engagement. Active Friends donations support

- a moratorium on coal and coal seam gas mining through our 'Quit Coal' campaign
- renewable energy through our 'yes2renewables' campaign
- our work to safeguard water for the rivers, wetlands and forests of over 14% of Australia's landscapes through the 'ourdarlingmurray.org' campaign
- FoE's Anti Nuclear & Clean Energy (ACE) campaign, which continues to highlight the dangers of nuclear power and uranium mining and to promote safe alternatives.

### Why is the Active Friends Program vital to FoE?

To remain a radical and credible voice for social and environmental justice, we need a stable financial base.

### How can you join the Active Friends Program?

To join the Active Friends program, please see the 'Support Friends of the Earth' page in this edition of Chain Reaction, or go to [www.foe.org.au](http://www.foe.org.au) and click on the donate button.. All Active Friends donations are fully tax deductible.





# FoE International News

*Friends of the Earth International (FoEI) is a federation of autonomous organisations from all over the world. Our members, in over 70 countries, campaign on the most urgent environmental and social issues, while working towards sustainable societies. FoEI currently has five international programs: Climate Justice and Energy; Economic Justice, Resisting Neoliberalism; Food Sovereignty; Forests and Biodiversity; and Resisting Mining, Oil and Gas.*

## 100 years of FoE Norway

For 100 years FoE Norway/ Naturvernforbundet has been the country's leading environmental organisation. FoE Norway celebrated its first 100 years with a festival in the woods where more than 100 participants experienced Norwegian nature at its best and a grand celebration in the centre of Oslo.

In its early years, Naturvernforbundet's work was focused on nature conservation. In the 1960s, the organisation's membership rose from 1 000 to 30 000. Membership continued to grow in the 1970s and work broadened to encompass issues such as oil spills, hydroelectric development and acid rain. From the mid-1980s, the Chernobyl disaster increased awareness of the dangers of the nuclear industry. Ozone holes scared the world to international action, climate problems came onto the agenda, and Naturvernforbundet joined the FoE network.

From 2000, the fight against the oil industry to preserve nature and climate really took off. FoE Norway and Young Friends of the Earth Norway have worked with others to ensure that there is no oil drilling in the beautiful areas of Lofoten, Vesterålen and Senja. [www.foei.org/news/100-years-of-friends-of-the-earth-norway](http://www.foei.org/news/100-years-of-friends-of-the-earth-norway)

*FoE Norway / Naturvernforbundet:*  
[www.foei.org/member-groups/europe/norway](http://www.foei.org/member-groups/europe/norway)

## Friends of the Earth International Online

**Web:** [www.foei.org](http://www.foei.org)

**Social media:**

[www.facebook.com/foeint](http://www.facebook.com/foeint)

[www.twitter.com/FoEint](http://www.twitter.com/FoEint)

[www.youtube.com/user/friendsoftheearthint](http://www.youtube.com/user/friendsoftheearthint)

<http://vimeo.com/channels/foei>

[www.flickr.com/photos/foei](http://www.flickr.com/photos/foei)

**Action alerts:**

<http://action.foei.org/page/speakout>

[www.foei.org/take-action](http://www.foei.org/take-action)

**FoE International's web radio station (in five languages):**

[www.radiomundoreal.fm](http://www.radiomundoreal.fm)

## FoE Czech Republic receives EuroNatur Award

On 8 October, nature conservation foundation EuroNatur presented the EuroNatur Award for 2014 to the Czech environmental and nature conservation organisation FoE Czech Republic/Hnutí Duha.

EuroNatur President Christel Schroeder said: "Over the last two decades Hnutí Duha has shown outstanding commitment to the protection of the Bohemian Forest National Park. Their contributions to the conservation of natural resources along the European Green Belt with their international understanding of civil society involvement are a shining example to us all."

The Bohemian Forest is a low mountain range along the German-Czech-Austrian border. Today this mosaic of ancient mountain spruce forests, moorland and wild flower meadows offers a habitat for endangered species such as the lynx, elk, Eurasian three-toed woodpecker and Western Capercaillie. FoE Czech Republic works closely on its conservation work with German nature conservationists in Bavaria, such as FoE Germany/BUND Naturschutz.

The natural treasures of the Bohemian Forest are under threat – the core zone of the National Park has gradually been further split up and reduced in size over the years to accommodate logging, hunting and other activities, backed up by violent police interventions.

*More information:*

EuroNatur:

[www.euronatur.org/EuroNatur-News.english.0.html](http://www.euronatur.org/EuroNatur-News.english.0.html)

FoE Czech Republic / Hnutí Duha:  
[www.foei.org/member-groups/europe/czech-republic](http://www.foei.org/member-groups/europe/czech-republic)

European Green Belt Initiative:  
[www.euronatur.org/Green-Belt-Europe.1358.0.html](http://www.euronatur.org/Green-Belt-Europe.1358.0.html)

## Defending the environment, defending human rights

A new report presents a snapshot of FoE International's efforts over a two-year period to respond to and disseminate testimonies and information about attacks on environmental defenders. It is an alarming picture that calls for urgent action to stop the sources of institutional violence against communities and against the defenders of human rights.

*FoE International, 2014, We defend the environment, we defend human rights: Denouncing violence against environmental defenders from the experience of Friends of the Earth International, [www.foei.org/wp-content/uploads/2014/06/We-defend-the-environment-we-defend-human-rights.pdf](http://www.foei.org/wp-content/uploads/2014/06/We-defend-the-environment-we-defend-human-rights.pdf)*





## FoE International Biennial General Meeting and environmental democracy conference in Sri Lanka

From 30 September to 6 October, FoE Sri Lanka hosted a conference on environmental democracy and also the FoE International Biennial General Meeting.

More than 100 delegates from Sri Lankan non-governmental organisations joined FoE delegates from 64 countries at the environmental democracy conference. The keynote address was delivered by Vedda chieftain Vannila Attho, leader of the indigenous peoples' group in Sri Lanka.

One of the major problems identified by FoE groups across the world was the expansion of the fossil fuel industry and its land grabbing. Globally, around 50 million acres of land sold as 'unused' or 'undeveloped' have been taken away from local communities. These communities lose not only their land but also their livelihood and culture. Participants at the conference developed a number of strategies and principles to improve environmental decision-making and address these global trends. Firstly, people who live in close proximity to natural resources should have the right to access information when resource extraction on their lands is proposed. Secondly, local communities should also be consulted about questions of resource management and have the right to veto unwanted development without fear of persecution. At the meeting, FoE International created an emergency fund to respond to urgent cases where community rights defenders are at risk.

The conference heard of inspiring cases in which communities had been able to challenge development plans

affecting their lands. To fight against oil extraction in Niger Delta, FoE Nigeria couldn't expect support from their government. Therefore, they worked closely with FoE Netherlands to take Shell to the Dutch national court. FoE won the case and affected communities are starting to see tangible benefits.

Among other decisions, delegates at the FoE International Biennial General Meeting voted to welcome a new member to the federation, the Bulgarian non-governmental organisation Za Zemiata (from now on also known as Friends of the Earth Bulgaria) after two years of associate membership, and welcomed the addition of two new associate members – Centar za životnu sredinu (Bosnia and Herzegovina) and the Russian Socio-ecological Union (Russian Federation).

– Audrey Arjoune,  
*Friends of the Earth*

*More information:*

*Biennial General Meeting:*

[www.foei.org/news/friends-of-earth-sri-lanka-hosts-the-friends-of-the-earth-international-biennial-general-meeting-october-3-6-2014](http://www.foei.org/news/friends-of-earth-sri-lanka-hosts-the-friends-of-the-earth-international-biennial-general-meeting-october-3-6-2014)

*The role of communities in environmental decision making conference:*

[www.foei.org/news/the-role-of-communities-in-environmental-decision-making-conference/](http://www.foei.org/news/the-role-of-communities-in-environmental-decision-making-conference/)

*Nilgala environmental protection society 'tree ordination' campaign:*

[www.foei.org/news/the-story-of-tree-ordination-in-sri-lanka](http://www.foei.org/news/the-story-of-tree-ordination-in-sri-lanka)

## Report: The dash for shale gas in Argentina

In a new frontier for shale gas, big energy companies such as Chevron, Shell and Total are heading south to drill in Argentina, including in protected natural areas. Argentina is host to the second largest number of unconventional gas reserves and fourth largest number of unconventional oil reserves in the world.

This dash for unconventional fossil fuels is taking place at the expense of the interests of local communities, workers and the environment. A report by FoE Europe documents how the companies are pressing for weaker rules to make it easier and more profitable for them to exploit unconventional fossil fuels. Field visits in Argentina and thorough investigations found that secrecy surrounds the drilling operations, public consultation is limited and violations of environmental and indigenous communities' rights are occurring.

*FoE Europe, 2014, Heading South: The dash for unconventional fossil fuels in Argentina, www.foeurope.org/heading-south-190614*

## Preventing Ebola in Liberia

FoE Liberia/SDI is working to turn back the Ebola epidemic through its work with the Community Awareness and Support Team (CAST). Ebola has killed thousands in Liberia and continues to cripple daily life and push the already fragile Liberian health service to the brink of collapse. FoE Liberia and the CAST team have been distributing Ebola prevention kits and information. To date, the distribution has reached the population of 37 villages in Grand Bassa and Rivercess Counties. The initiative is currently funded by individual donations and contributions from other members of the FoE International network.

If you can donate to support the Ebola prevention work of FoE Liberia and CAST, please visit:

[www.foei.org/?page=CiviCRM&q=civicrm/contribute/transact&reset=1&id=9](http://www.foei.org/?page=CiviCRM&q=civicrm/contribute/transact&reset=1&id=9)

*More information:*

[www.foei.org/news/blogs/inside-the-fight-against-ebola/](http://www.foei.org/news/blogs/inside-the-fight-against-ebola/)

[www.foei.org/news/update-from-liberia-cast-initiative-delivers-500-ebola-prevention-kits/](http://www.foei.org/news/update-from-liberia-cast-initiative-delivers-500-ebola-prevention-kits/)

## What's wrong with our energy system and how do we fix it?

The world's current energy system is unsustainable, unjust and harms communities, workers, the environment and the climate. This is fundamentally an issue of corporate and elite power and interests outweighing the power of ordinary citizens and communities. FoE International's new website [www.goodenergybadenergy.org](http://www.goodenergybadenergy.org) explores why a just, sustainable, climate-safe energy system is more urgent than ever. [www.goodenergybadenergy.org](http://www.goodenergybadenergy.org) is about the central problems with the current energy system; the drivers and logic that underpin these problems; the destructive impacts of the energy sources on which the system is primarily reliant (oil, gas and coal); and energy sources that are misleadingly put forward as 'clean' energy alternatives (nuclear power, industrial agrofuels and biomass, mega dams and waste-to-energy incineration).

## Report: The great REDD gamble

Governments around the world are recklessly betting that a risky method called REDD, or Reducing Emissions from Deforestation and forest Degradation, will reverse deforestation and help fight climate change. FoE International's 'No REDD' position has been developed after long discussions amongst our members, and is based on our work with local communities and Indigenous Peoples, our collaboration with allied civil society organisations and social movements such as La Vía Campesina and World Rainforest Movement, and our involvement in tracking the development of intergovernmental climate change negotiations.

*FoE International, Oct 2014, The Great REDD Gamble, [www.foei.org/wp-content/uploads/2014/09/The-great-REDD-gamble.pdf](http://www.foei.org/wp-content/uploads/2014/09/The-great-REDD-gamble.pdf)*

## FoE files OECD complaint against Rabobank for illegal palm oil

Milieudefensie/FoE Netherlands and FoE Europe have filed a complaint with the OECD against the Dutch Rabobank. The complaint focuses on multiple loans from Rabobank to the Indonesian palm oil company Bumitama, which is accused of managing an illegal palm oil plantation and causing deforestation. Rabobank demands of its customers in the palm oil sector membership of, and compliance with, the Round Table for Sustainable Palm Oil (RSPO). Bumitama is known as a company that has repeatedly caused deforestation of protected nature reserves and has been marketing illegally produced palm oil. Since July 2012, five complaints have been filed with the RSPO against the company. To date, none of the complaints has been brought to a successful conclusion. Meanwhile, Bumitama has continued to manage the illegal palm oil plantation.

*[www.banktrack.org/show/news/friends\\_of\\_the\\_earth\\_files\\_oecd\\_complaint\\_against\\_rabobank\\_finance\\_for\\_illegal\\_palm\\_oil](http://www.banktrack.org/show/news/friends_of_the_earth_files_oecd_complaint_against_rabobank_finance_for_illegal_palm_oil)*

## Victory at the UN Human Rights Council

FoE International and other social movements are celebrating a significant victory – a majority in the United Nations Human Rights Council (UNHRC) voted yes to a resolution to begin work on an international, legally binding instrument to regulate the activities of transnational corporations with respect to human rights.

Jagoda Munic, chair of FoE International said: "This shows movement building can really change the power balance and expose US and EU commitments to the corporate agenda." The US and EU not only fiercely opposed the proposal, but also actively bullied other countries to side with them, threatening them with financial and development aid losses.

FoE International worked with other members of the Treaty Alliance ([treatymovement.com](http://treatymovement.com)) on advocacy work in Geneva and in capitals in the EU, South Africa, Costa Rica, Mexico, Brazil and elsewhere. During the Week of Mobilization organised by Swiss NGOs and the Campaign to Dismantle Corporate Power

(org), FoE groups from Europe, Nigeria, Uruguay, Palestine, Guatemala, Brazil and Real World Radio were involved in the special session of the Peoples Permanent Tribunal, side events and street protests.

*More information: [www.twinside.org.sg/title2/FTAs/info.service/2014/fta276.btm](http://www.twinside.org.sg/title2/FTAs/info.service/2014/fta276.btm)*

*UNHRC Resolution A/HRC/26/L.22, Elaboration of an international legally binding instrument on Transnational Corporations and other Business Enterprises with respect to Human Rights*

*[http://ap.ohchr.org/Documents/E/HRC/d\\_res\\_dec/A\\_HRC\\_26\\_L22\\_rev1.doc](http://ap.ohchr.org/Documents/E/HRC/d_res_dec/A_HRC_26_L22_rev1.doc)*



Photo by Victor Barro.

# Attacks on NGOs are a threat to our democracy

## Joan Staples

The Federal Council of the Liberal Party, Federal Ministers, Coalition MPs, the Minerals Council of Australia and representatives from the Institute of Public Affairs (IPA) are targeting the advocacy role of Australia's environmental NGOs. There have been calls for the removal of tax deductible status for these NGOs, and for changes to the Competition and Consumer Act and the Corporations Act to restrict their advocacy.

Under the Howard Coalition government, there were concerted attacks on NGOs over a decade aimed at silencing advocacy.<sup>1</sup> While there is now a similar theme of silencing NGO voices, a significant difference is that the current attacks focus strongly on the environment movement and its climate change campaigns. Increasingly, NGOs are questioning the corporate social responsibility and long-term economic viability of the fossil fuel industry, because of climate change. They have also publicised what they consider to be unsustainable practices in other industries such as forestry and fishing. Conservative forces are marshalling their considerable power. The overall result is that legitimate debate by community voices is under attack.

## Tax deductibility

For community organisations that do not receive government support, their main source of income is usually donations from the public that are tax deductible. In June, the Liberal Party Federal Council unanimously recommended that the federal government strip environmental NGOs of their charity status and ability to receive tax deductible donations.<sup>2</sup> They cited NGO engagement in 'illegal activities'. The move came from Tasmanian MP, Andrew Nikolic, the Member for Bass. He named the Wilderness Society, the Australian Conservation Foundation (ACF), the Bob Brown Foundation and the Environmental Defenders Offices (EDOs) as engaging in 'untruthful, destructive attacks on legitimate business' and characterised their work as 'political activism'. Nikolic claimed NGO activism was at odds with his state's 'future prosperity', and that NGOs engaged in 'boot camps' and that their activism was 'illegal'.

The ACF and the Environmental Defenders Offices (now known as Environmental Justice Australia (EJA)) responded strongly to the Nikolic/Federal Council attack, with ACF calling on Nikolic to withdraw his comments, because the allegations were damaging to ACF's reputation. Their legal counsel, Elizabeth Mackinnon, pointed out that the Charities Act makes it very clear that advocacy and lobbying activities on behalf of the environment are not unlawful or inconsistent with charitable purposes and that protection of the natural environment is fully entrenched

in charitable law.<sup>3</sup> EJA referred to their significant contributions to law reform at the invitation of government agencies and that ICAC had recognised the key safeguard against corruption provided by EJA cases, which are run on behalf of individuals and community groups.

At the same time as the Federal Council resolution, Coalition MP George Christianson, Member for Dawson in north Queensland, attacked environmental NGOs in parliament, calling for a 'cleansing' of the Department of Environment's list of organisations that can receive tax deductible donations.<sup>4</sup> His attack was focussed on GetUp and Friends of the Earth that were featured in a News Limited article<sup>5</sup>, but he also targeted the local Mackay Environment Group. The group is trying to protect the Great Barrier Reef with a legal challenge to the federal minister's approval of dredging for Abbot Point coal port.

There have also been reports of some NGOs being audited by the Australian Tax Office (ATO) and questioned by the Department of Environment in relation to their tax deductibility. Repeated ATO audits were experienced by the Wilderness Society during the Howard government - a tactic that found no wrongdoing, but which seriously disrupted the work of the organisation.

Attacks on the advocacy role of NGOs are misguided. A significant High Court case in 2010 upheld the right to advocate of a small NGO called AID/WATCH. The case was the culmination of a series of appeals because the ATO had removed the NGO's charity status and its ability to receive tax deductible donations. AID/WATCH successfully fought its case on the implied right in the Australian Constitution of freedom of political communication and freedom of speech.<sup>6</sup> In 2011, following the High Court decision, the ATO issued guidelines that clarified the issue, making it clear that it is legitimate for charities to advocate publicly, and that there is no limitation on charities if their purpose is to influence government policy.

## Defunding

In December, the national network of legal centres, Environmental Defenders Offices (now Environmental Justice Australia) abruptly had their funding cut by Attorney General George Brandis.<sup>7</sup> The EJAs provide advice and assistance to individuals and groups wanting to challenge local and state government planning decisions. With limited resources, the EJAs have also taken on high-profile cases that their lawyers consider to be of some legal significance. Recently some of these have been community challenges to coal-seam gas and coal mining, including supporting farmers in rural areas. Kelly O'Shannassy, now CEO of ACF, commented that: "This is not a matter of

*'Current attacks focus strongly on the environment movement and its climate change campaigns.'*

government budget savings. If the Federal Government can give \$10 billion to wealthy mining corporations every year in fossil fuel subsidies, they can spare some change for the Environmental Defenders' Offices.<sup>8</sup>

Attorney General Brandis has also indicated that the service agreements of community legal centres (CLCs) will be reframed to prevent them advocating for legal reform.<sup>9</sup> CLCs are an outlier in this debate as they are not environment organisations. They help a broad cross-section of the community, but particularly those unable to afford legal assistance and who are at the margins of society. They are therefore strongly placed to give advice on systemic issues requiring legal reform – a fact that has been recognised by the Productivity Commission's 'Access to Justice Arrangements' inquiry.

A number of writers have pointed out the irony of Senator Brandis's attempts to change section 18C of the Racial Discrimination Act on the grounds of encouraging and protecting freedom of speech. This followed the high-profile case in which conservative journalist Andrew Bolt was found guilty of racial discrimination under that Act. At the same time, Senator Brandis was trying to silence the voices of environmental lawyers and community law centres in commenting on public policy!

The 2014 Budget saw the abolition of Grants to Voluntary Environment, Sustainability and Heritage Organisations – a scheme that assisted state conservation councils and their member groups, as well as hundreds of grass-roots groups throughout the country.<sup>10</sup> It had been in place since 1973.

The Coalition has also been moving to abolish the Australian Charities and Not-for-profits Commission, a relatively new body that the NGO sector had hoped would facilitate accountability, as well as reduce government red tape.<sup>11</sup> Any changes to the governance regime overseeing charities raises concerns how that might play out when the government is trying to silence advocacy.

## Competition and Consumer Act

For some months there have been calls from Coalition MPs, Ministers, MPs and the Australian Minerals Council to amend Section 45DD of the Competition and Consumer Act. The relevant Section is an industrial relations provision aimed at unions conducting boycotts unrelated to their immediate wages and conditions. It also has exemptions if:

- the dominant purpose for which the conduct is engaged in is substantially related to environmental protection or consumer protection; and
- engaging in the conduct is not industrial action.

The amendments would remove the exemption for 'environmental protection'. Calls for amendments appear to be aimed at groups that provide public information about the environmental effects of products (such as unsustainable timber extraction and seafood harvesting), as well as information on the effects of investing in, extracting and using fossil fuel.

As the threat of climate change increases, NGOs are questioning the corporate social responsibility of the fossil fuel industry because of its contribution to climate change.<sup>12</sup> They have also been pointing out the danger to investors if assets become 'stranded' or lose their value as international climate change regulations develop.<sup>13</sup> The fossil fuel divestment campaign in the US has been described by the *New York Times* as 'the fastest growing student campaign in generations'. Similar campaigns have dramatically taken off in Australia with a number of sophisticated NGOs demonstrating both effectiveness and the ability to attract strong support.

A review of competition law announced by the government has been used as a platform to promote the idea of changes to Section 45DD. The week before the review panel released its issues paper, parliamentary secretary for agriculture, Tasmanian Senator Richard Colbeck, stated that, "I think there is an appetite in the government for changing these laws".<sup>14</sup> Submissions such as that from the Australian Forest Products Association have called for the removal of the exemption.

The Minerals Council of Australia released a document in June written by Spencer Davidson, a Senior Fellow of the IPA, entitled *A Critique of the Coal Divestment Campaign*.<sup>15</sup> In it, he welcomed the Abbott government's 'announced plans' to remove the Section 45DD exemption "to provide a level playing field and hold environmental groups to the same standard as business".

Community boycotts against unethical products and practices have a long and honourable history. British slave traders were called to account with a boycott on slave-grown sugar in the late 18th century.<sup>16</sup> Slaves were being taken to sugar plantations by British ship owners. A campaign led by women who were disenfranchised at the time saw over 400,000 people giving up the use of slave-grown sugar in protest.

Respected economist John Quiggin noted that calls to amend section 45DD are against freedom of speech.<sup>17</sup> Quiggin mused ironically that they should be of concern to new Human Rights Commission, Tim Wilson, formerly from the IPA.<sup>18</sup> It should also be noted that where such changes to go ahead they would also impact on the anti-wind farm lobby!

## Corporations Act

Davidson went further in his paper for the Minerals Council and claimed that organisations such as 350.org and Market Forces were in violation of Section 1041E of the Corporations Act by encouraging investors to divest from fossil fuel companies because of climate change impacts.<sup>15</sup> He argued that by stigmatising the industry, the NGOs were infringing the property rights of fossil fuel companies. Davidson repeated his arguments about both the Competition and Consumer Act and the Corporations Act in *The Conversation* in July.<sup>19</sup>

A proposition that NGOs were in breach of Section 1041E would require very high thresholds to prove according to Ian Ramsay, Professor of Commercial Law at Melbourne University. He was quoted in the *Australian Financial Review* as saying that first the Minerals Council would have to prove the statements by environmentalists were materially false and misleading.<sup>20</sup>

Ramsay also went on to say: "You also need to prove that the environmentalists who made the statements or disseminate them don't care whether the statements are true or false or that they know or ought reasonably to know the statements are materially false or misleading. Again, it may not be easy to prove this. And a third requirement is that the statements are likely to induce someone to buy or sell financial products, or else the statements have the effect of reducing the price for trading in financial products on a financial market."

## Conclusion

During the Howard government, its attempts at silencing NGO advocacy were well-documented by writers such as Hamilton and Maddison.<sup>21</sup> I wrote at the time on the theoretical background to the attacks, pointing out that the Howard government and representatives of the IPA denied the legitimacy of NGOs in our community life and rejected Australia's long-held model of democracy in which many voices contribute to public policy.<sup>22</sup> Instead, our democracy was portrayed as a market in which NGOs 'interfered with the market' by proposing public policy when they were not elected representatives or 'accountable'.

These current attacks continue that theoretical push, but are more focussed on silencing climate change

advocacy and protecting the corporations that NGOs are rightly targeting as being responsible for emissions and unsustainable practices. The charges are of being 'illegal', of conducting 'political activism' and 'economic sabotage'.

It goes without saying that NGOs need to have good internal governance, with transparent accurate accounting at all times. Those who find their tax deductibility status targeted by government will need to respond to the immediate line of attack. But, as well, their defence should always be to publicly defend their democratic right to speak publicly. AID/WATCH set an excellent example of this. The defence it mounted in its long and successful campaign did not waver in calling the attacks for what they were - an attack of freedom of speech.

There is good reason why the NGO sector is also called the Third Sector - with government and business being the first and second sectors. All three sectors make up our democratic arrangements and each is needed. The essential role of the NGO sector is in giving voice to the average citizen, in calling governments and business to account, in promoting policy that has a longer time frame than the next election, and in providing debate that enriches options in public policy. All three sectors need equal respect, but we seem to have a situation in which the business sector is paramount and government is its lackey. Attacking the NGO sector's ability to advocate and trying to silencing this essential voice can only undermine the health of our democracy.

*Dr Joan Staples is a public commentator and academic based in Melbourne. <http://joanstaples.org>*

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*<http://joanstaples.org/2014/07/25/attacks-on-ngos-are-a-threat-to-our-democracy/>*

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# Malaysia: eco-activists combat judicial repression

Meena Raman

Thirty years ago the Malaysian government suppressed environmental and human rights protests using arbitrary detentions and sedition law. Today, we are again faced with the same challenge. The Malaysian government has recently been invoking many of its repressive laws, such as the Sedition Act 1984, against political activists, one notable academic and a journalist.

In 1987 I was arrested under the Internal Security Act (ISA) 1960 – which allows detention without trial. I was held in solitary confinement for 47 days without the right to a lawyer or to be heard in court. No charges were ever filed against me. I still do not know the real reasons for my arrest, but the authorities use the ISA against those they regard as “subversive”.

During that time, I was involved in many public interest cases which we brought on behalf of communities. One of them was a case involving a community in Bukit Merah affected by Asian Rare Earth – a company whose majority shareholder was Japanese giant Mitsubishi Chemicals.

The ISA 1960 was repealed on September 15, 2011 but has been replaced by a new law called the Security Offences (Special Measures) Act 2012.

I have also been barred from entering the East Malaysian state of Sarawak because of my involvement in the movement against the Bakun Dam in the 1990s, and a case that was filed on behalf of indigenous communities affected by the Bakun Hydro-electric Dam. This dam caused the relocation of about 10,000 indigenous people from their original settlement sites. They were asked to move to a resettlement site with poor amenities and infrastructure. Even now, in 2014, the complaints from those who live at the resettlement site have not been adequately addressed by the Malaysian government.

## Development versus environment and the poor

Wherever environmental crises take place, it is the poor who are the main victims. Farmers, fishermen, plantation and industrial workers, indigenous peoples who live in the forest, and people living near polluting factories are among those who pay the biggest price when ‘development’ projects cause environmental problems. Not only is their health and safety jeopardized by pollution and environmental contamination, but their very survival is often at stake.

Again and again I have seen natural resources destroyed by chemicals, forests and land taken away because of ‘development projects’, water resources polluted by industrial waste, indigenous skills rendered useless, and indigenous peoples’ livelihoods destroyed.

Such projects usually involve powerful parties who often want nothing more than to remove or silence opposition as quickly and conveniently as possible. Environmental concerns, groups and defenders are increasingly subject to criminalisation, persecution and slander.

However, with growing awareness of environmental issues, communities are increasingly standing up to defend their rights – often using the law to do so, with many key environmental legal cases being filed.

As in the 1980s, Friends of the Earth Malaysia is playing its part in this – helping communities to file legal cases to defend their health and environment in the local courts.

## Environmental activism

In the past ten years, two particular cases have raised the level of environmental awareness in Malaysia. The first involves a community in Bukit Koman in Pahang where many people began to suffer various skin, eye and respiratory problems after a gold mining company began operations.

A civil case brought by the community against the Malaysian Department of the Environment (DoE) and the gold mining company, Raub Australian Gold Mining Sdn Bhd (RAGM) requesting a new Environmental Impact Assessment (EIA) was met with defeat at all stages from the High Court to the Federal Court (the highest court).

In 2013 RAGM brought defamation suits against three community leaders in reaction to statements made to the press. One of the defamation suits has since been withdrawn, as an apology was tendered in court and no damages or costs had to be paid to the company. The apology was given in the interest of resolving the matter amicably.

In 2012, RAGM also sued two internet news portals, Malaysiakini and Free Malaysia Today (FMT [www.freemalaysiatoday.com](http://www.freemalaysiatoday.com)) for publishing allegedly defamatory articles relating to the Bukit Koman issues. RAGM withdrew the defamation suit against FMT after it tendered a full apology in court this year.

The second case relates to the opposition of 1.2 million people to the operations of a rare earths factory in Gebeng, Kuantan, Pahang. The plant, Lynas Advance Materials Plant (LAMP), belongs to the Australian Lynas Corporation Ltd. There is an ongoing campaign on the ground to get Lynas out of Malaysia because the company will be producing radioactive waste and has yet to find a permanent solution to where this waste will be stored.

Both these cases, along with numerous other environment and human rights related issues, have been the subject of many heated debates, media coverage and street demonstrations.

## Repressive laws

The Malaysian government has recently been invoking many of its repressive laws, such as the Sedition Act 1984, against political activists, one notable academic and a journalist.

The government has charged a number of environmental activists under the newly enacted Peaceful Assembly Act 2012 for taking part in street demonstrations without giving prior notice to the police. Prior to this, many were also charged under the Police Act 1967, which stipulates



Protest against Lynas, April 2012, near Kuala Lumpur.

*'With growing awareness of environmental issues, communities are increasingly standing up to defend their rights.'*

that permits are needed for any public gathering.

In August 2013, four people were charged under the Peaceful Assembly Act 2012 for organising and taking part in a solidarity rally to seek answers from the government for the health problems suffered by the Bukit Koman community. All four have since been discharged by court and no further charges have been brought against them.

In July this year, 15 people were charged in court under the Penal Code for rioting, taking part in an unlawful assembly and obstructing the police following a street demonstration that took place in June for opposing the activities of Lynas Corporation. Natalie Lowrey, a member of the Stop Lynas Coalition (<http://stoplynas.org>) who was also present during the demonstration, was arrested and kept in detention for six days. She was released without charge after a popular international appeal, and told she was free to leave the country. On August 31, when Natalie attempted to enter Malaysia again, she was deported. Immigration officials informed her that she was on the police blacklist and was unable to enter Malaysia.

These actions show the government's suppression of the constitutional rights to assemble and speak freely without fear or favour.

Corporations are also threatening legal action and have filed legal suits against activists and the media following interviews, statements given and news reports. Millions of Malaysian Ringgits are being asked in damages for these legal suits.

## Rights of Citizens

Despite the legal assaults, environmental activism in Malaysia is still strong and environmental defenders are keeping up their spirits.

Friends of the Earth Malaysia has always championed the rights of the marginalised and has advocated for freedom of speech, freedom to assemble, access to information and public participation in decision making processes as well as environmental justice. And we are not about to stop.

For any country to develop in an ecologically and socially just way, it is vital that local communities, especially the poor, are consulted, heard and their interests given priority over the interests of big corporations and other vested interests.

If development does not bring real benefits to the poor and the marginalised, it is mal-development, where the rich benefit over the poor. This cannot be countenanced in any society which is premised on being just and democratic.

From September 22–26, a solidarity mission coordinated by Friends of the Earth International visited Malaysia to express solidarity with affected communities. FoE International believes that for the Malaysian government to contribute to a better future for all its citizens it must support the struggle of environmental rights defenders and protect and respect them, instead of criminalising environmental activism.

In addition, the government must ensure that any corporations responsible for environmental or human rights violations are held accountable for their actions.

*Meena Raman is the Friends of the Earth Malaysia Honorary Secretary ([www.foe-malaysia.org](http://www.foe-malaysia.org)) and a member of the Friends of the Earth International executive committee ([www.foei.org](http://www.foei.org)).*

# Nanomaterials in food packaging: FSANZ fails consumers again

Jeremy Tager

A recent Food Standards Australia New Zealand (FSANZ) **survey** of packaging manufacturers and the food industry reveals that FSANZ is failing to protect consumers from the risks associated with the use of nanomaterials in food packaging.

Nanomaterials are being increasingly used in food packaging – posing potential health risks – and yet to date FSANZ has taken no action to ensure these products are safe.

FSANZ's own **summary** of the responses to the survey, tabled in response to recent Senate Estimates **questions**,<sup>1</sup> concludes that “the standards in the [Food Standards] Code are ‘largely irrelevant’” and that “Australia is viewed as not having any legislation for packaging in contact with food”. Industry also raised concerns regarding the “lack of legislative requirements about the safety of unknown, new and emerging packaging materials.”

According to FSANZ's summary: “the majority of respondents (60–80%) indicated that the current requirements for packaging in the Code are inadequate (‘minimalistic at best’) or not suitably specific for them to manage risks and do not meet the requirements of their customers.”

Apparently as a result of the response to this survey, FSANZ recently announced it intends to conduct a review investigating chemical migration from packaging into food – in order to identify and manage any risks.<sup>2</sup>

Friends of the Earth's recent report on nanotechnology and food, *Way too little*,<sup>3</sup> revealed that FSANZ is failing consumers in areas other than food packaging. Nanomaterials are used in a wide range of food and food contact materials including appliances, coatings used on kitchen surfaces, cutlery, cutting boards, baby bottles and refrigerators – all of which are effectively unregulated, untested and unlabelled.<sup>4</sup>

A variety of nanomaterials are used in packaging and food contact materials, including titanium dioxide, titanium nitride, carbon black, silicon dioxide, aluminium, silver, gold, chlorine-dioxide and zinc oxide.<sup>5</sup> The quantity of packaging and food contact materials containing nanomaterials is growing rapidly.

The absence of a register of nanomaterials means that currently we have no way of knowing with any certainty how many packaging and food contact materials in Australia contain nanomaterials, which nanomaterials, and with which foods they are coming into contact.

Nanomaterials are generally used in food packaging to improve the barrier functions of food packaging – to reduce gas and moisture exchange and UV light exposure

and to extend the shelf life of products. Nanomaterials such as nano-silver are also used in food contact materials as biocides to kill microbes.<sup>6</sup>

The extent of migration of chemicals from packaging varies depending on the chemicals used, the nature of the packaging and the chemical properties of the food.<sup>7</sup> Because of their smaller size and greater reactivity, nanomaterials are likely to be particularly prone to migration. Studies have shown that migration of nanomaterials can occur, but there is still insufficient data to draw broad conclusions.<sup>8</sup>

Nanomaterials are generally more chemically reactive than larger particles of the same chemicals and are much more likely to be taken up into our cells and tissues than larger particles.<sup>9</sup> Numerous studies have shown that nanoparticles can be absorbed through the intestine and can accumulate in the liver, kidney, spleen, lung and brain.<sup>10</sup>

There is a growing body of peer-reviewed work indicating potentially serious health concerns with some nanomaterials.<sup>11</sup> Nanoparticles have been associated with immune dysfunction and colon cancer and there is evidence that nanoparticles may remain in the body for extended periods.<sup>12</sup>

Dr Janet Muncke estimates that there are around 6 500 chemicals known to be used in packaging but there are also a “number of unknown substances as a result of reaction, by-products, breakdown products and impurities, and we need to get a better understanding of what they are and what their toxicity is.”<sup>13</sup> The rapidly increasing use of nanomaterials – generally poorly understood – will only further complicate this assessment.

While the decision by FSANZ to examine more closely the question of migration in food packaging is welcome – if overdue – it does raise disturbing questions regarding the way in which FSANZ makes decisions to address emerging issues of concern to public health.

This decision to conduct a review was clearly driven by industry discontent, not by scientific or health concerns. FSANZ is lagging far behind the EU in addressing the health concerns associated with the use of nanomaterials in food packaging. Currently, there is no specific standard or regulation pertaining to nanomaterials in food packaging or food contact materials except a general – and virtually unenforceable – obligation on retailers “to ensure their products are safe.”<sup>14</sup>

Europe has had nano-specific provisions for packaging since 2011 (EC10/2011).



The FSANZ inquiry into migration won't have a recommendation until mid-2016 and a regulation, if decided upon, will not be gazetted until February 2017.

Requiring substantial evidence of safety before the commercial release of foods or food contact materials containing nanomaterials is neither impossible nor an unreasonable standard. In 2004 the UK Royal Society called for intentional release of nanomaterials "to be prohibited until appropriate research has been undertaken and it can be demonstrated that the potential benefits outweigh the risk".<sup>15</sup> Unfortunately, that call has been mostly ignored for over a decade.

Instead we have seen rapid commercialisation and a regulatory system that hasn't even required the basic steps that would allow it to understand and track the industry it is charged with regulating.

Once a product is on the market and research raises concerns, regulatory intervention is slower and weaker than if safety testing occurs before a market is created.

Industry resistance is understandably greater once they have an established market. Tobacco is the classic example but certainly not the only one.

Industry traditionally claims that pre-market safety testing constitutes unnecessary regulation and will kill innovation. However, a recent report by the European Environment Agency investigated the extent to which regulators respond to early warnings with over-regulation. It rarely happens and when there is early regulatory intervention "contrary to conventional perception, preventive measures do not strangle innovation." We are far more likely to see lack of response to early and late warnings, often with severe and costly consequences.<sup>16</sup>

If FSANZ is serious about ensuring that public health isn't at risk from nanomaterials in food packaging and food contact materials, it should put a moratorium on the release and use of those materials until a full safety review is completed.

*Jeremy Tager is a campaigner with Friends of the Earth's Emerging Tech Project. [www.emergingtech.foe.org.au](http://www.emergingtech.foe.org.au), [jeremy.tager@foe.org.au](mailto:jeremy.tager@foe.org.au)*

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# Throwing precaution to the wind: the government's attempts to thwart the regulation of synthetic biology

## What is synbio?

Synthetic biology (synbio) is an extreme version of genetic engineering. Instead of swapping genes from one species to another (as in genetic engineering), synthetic biology creates entirely new forms of life – or reprograms organisms to do things that would not naturally occur. Synbio uses a variety of techniques, including constructing synthetic (human made) DNA.

Louise Sales

Since it was first proposed that synthetic biology be looked at as a new and emerging issue under the Convention for Biological Diversity (CBD), the Australian Government – under both the ALP and the Coalition – has consistently attempted to destroy any prospect of international regulations governing this new and potentially dangerous technology. Doubtless the government's behaviour at the Convention meeting (COP12) in South Korea from 6–17 October will be no exception.

The CBD entered into force on 29 December 1993. Its key objectives are the conservation of biological diversity, the sustainable use of the components of biological diversity and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.<sup>1</sup>

It was first proposed that synthetic biology be considered as new an emerging issue by the CBD's Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) in 2010.<sup>2</sup>

A SBSTTA delegate from the Philippines urged the 195 countries that are members of the CBD to develop an international agreement with a strong precautionary approach regarding “living organisms produced by synthetic biology” arguing that “there should be no field release of synthetic life, cell or genome into the environment until thorough scientific assessments have been conducted in an open, transparent and participatory process involving all parties (members), indigenous and local communities.”<sup>3</sup>

The Philippines' calls were backed by a number of African countries, including Cameroon, Kenya, Liberia and South Africa. In Latin America, Bolivia and the Dominican Republic also supported a precautionary approach.<sup>4</sup>

Australia however flatly rejected the proposal for a moratorium and even opposed synthetic biology being looked at as a new and emerging issue by SBSTTA.<sup>5</sup>

Australia was by no means alone in its opposition to synbio even being discussed by the SBSTTA. Canada, New Zealand the UK and the European Commission have all adopted similar tactics – opposing a precautionary approach,

attempting to water down the text of any agreements, and calling for more information to stall for time. The US has also played an active role in attempting to hijack proceedings – despite not even being a Party to the Convention.<sup>6</sup>

Despite the wrecking tactics of these countries, at the CBD's eleventh meeting of the Conference of the Parties (COP11) in Hyderabad, India in October 2012 there was an agreement that: “urges parties to take a precautionary approach ... when addressing threats of significant reduction or loss of biodiversity posed by organisms, components and products resulting from synthetic biology, in accordance with domestic legislation and other relevant international obligations.”<sup>7</sup>

There was also an agreement that information be gathered to inform the decision as to whether synbio should be looked at by the SBSTTA as a new and emerging issue. Two peer-reviewed reports by the SBSTTA Secretariat were produced – looking at the potential impacts of synbio and their relevance to the Convention. At the last CBD SBSTTA meeting in June, the Parties that were pro-synbio (Australia, Canada, the European Commission and the UK) expressed their displeasure with the peer-reviewed reports and called for another round of peer review<sup>8</sup> – presumably to give the synbio industry an opportunity to rubbish the reports.

There are also ongoing attempts to remove the reference to a ‘precautionary approach’ from the decision text.<sup>9</sup>

It is disturbing that the Australian government appears not to have learnt from any of the lessons of the past in racing to embrace new technologies. PCBs, thalidomide and asbestos all seemed like great ideas at the time – until they caused untold damage and had to be recalled. Only in the case of synthetic organisms the stakes are significantly higher. Synthetic biologists are creating new organisms that have never existed before in nature and there is currently no way of predicting what their impacts on human health, biodiversity and the environment will be.

From listening to some of the hype associated with the emerging field of synbio, you'd be forgiven for thinking that synbio is straight-forward and predictable. Surely all you need to do is to isolate the gene you need to create the molecule you want, model it on a computer, print it, insert it into your organism of a choice – be it an algae, bacteria or plant – and you can churn out as much of your chosen molecule as you want – with no unintended consequences. However, these kinds of descriptions of synthetic biology fail to adequately convey the massive knowledge gaps that exist when it comes to how life works and the unpredictability of living organisms, particularly within complex systems.

Earlier this year the Wilson Center and MIT published a report that outlines the research that is needed if we are to understand the potential ecological effects associated with the release of organisms modified or created using

synthetic biology.<sup>10</sup> The report, which was funded by the US National Science Foundation, is the US government's first attempt to draw up a research agenda that outlines the major unanswered ecological questions about synbio. However, it is just a list of serious questions about ecological risks – actually funding and conducting the research, and arguing about and applying the results, is all in the future.

It is disturbing that the same US government agency which has been promoting the rapid development of synbio for years has only just funded an attempt to come up with a comparable research agenda to explore the ecological impacts of synbio. The rational conclusion, given the gravity of the concerns and the major data gaps that exist, is that it's premature to be pursuing commercialisation.

Industry traditionally claims that pre-market safety testing constitutes unnecessary regulation and will kill innovation. Unfortunately these views now appear to have been institutionalised by the Australian government and have led to

them viewing critical regulation to protect human health and the environment as 'red tape' and 'barriers to innovation'.

However, a recent report by the European Environment Agency investigated the extent to which regulators respond to early warnings with over-regulation. It rarely happens and when there is early regulatory intervention "contrary to conventional perception, preventive measures do not strangle innovation." We are far more likely to see lack of response to early and late warnings, often with severe and costly consequences.<sup>11</sup>

Friends of the Earth supports the precautionary approach adopted by COP11 and recommends that Parties at COP12 establish a moratorium on the environmental and commercial release of Synthetically Modified Organisms.

*Louise Sales is the coordinator of Friends of the Earth's Emerging Tech Project.*

*[www.emergingtech.foe.org.au](http://www.emergingtech.foe.org.au), [louise.sales@foe.org.au](mailto:louise.sales@foe.org.au)*

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## Stop Press: 194 Countries call for the regulation of synthetic biology

In a unanimous decision of 194 countries, the United Nations Convention on Biological Diversity (CBD) has formally urged nation states to regulate synthetic biology. The landmark decision follows 10 days of hard-fought negotiations between developing countries and a small group of wealthy biotech-friendly economies. Until now, synthetic organisms have been developed and commercialised without international regulations and increasing numbers of synbio products are making their way to market. The CBD's decision is regarded as a "starting signal" for governments to begin establishing formal oversight for this exploding and controversial field.

Many of the diplomats negotiating at the UN Convention had instructions to establish a moratorium on the release of synthetically modified organisms. However, they faced stiff opposition from a small group of wealthy countries with strong biotech industries, particularly Brazil, Canada, New Zealand, Australia and the UK.

Global South representatives raised concerns that synbio products intended to replace agricultural commodities could devastate their economies and degrade biodiversity. Many delegates were also concerned that synthetically modified organisms could create biosafety risks – e.g. the possibility of synthetic algae escaping into waterways, producing a solar-powered oil spill.

A network of international organisations including Friends of the Earth, ETC Group, Eonexus and the Federation of German Scientists has been closely monitoring the negotiations and providing input for over four years.

The CBD decision urges all member countries to:

- Follow a precautionary approach to synthetic biology.
- Set up systems to regulate the environmental release of any synthetic biology organisms or products. These regulations must ensure that activities in one country cannot harm the environment of another. (Article 3 of the CBD)
- Ensure that no synthetic biology organisms are released for field trials without a process of formal prior risk assessment.
- Submit synthetic biology organisms, components and products to scientific assessments that consider risks to conservation and sustainable use of biodiversity as well as human health, food security and socio-economic considerations.
- Encourage research funds to assess the safety of synthetic biology as well the socio-economic impacts of the technology.
- Support developing countries to develop their capacity to assess synthetic biology.

The decision also:

- Establishes an expert group to develop a definition of synthetic biology and identify whether existing governance arrangements are adequate.
- Invites other UN bodies to consider the issue of synthetic biology as it relates to their mandates.

# Working for water justice in the Murray-Darling Basin

Will Mooney

Sitting in a stuffy boardroom at the fancy Park Royal Hotel in Melbourne Airport, the last thing I expected to witness was a spontaneous performance of Indigenous song and dance. Arrayed around the room were delegates from environment groups and Indigenous Nations, as well as a few ministerial advisors and federal bureaucrats. We were here to discuss the review of the Commonwealth Water Act, the key national legislation governing the management of the precious water resources of the Murray-Darling Basin. At one of end of the room, the review 'expert committee' sat before the window, a row of imposing men in suits. Planes zipped back and forth off the runway behind them.

Indigenous campaigners were speaking eloquently about the importance of water to communities dotted across the huge, semi-arid landscape of the northern Basin. Jason Wilson, a Gomeri man from north-west New South Wales, was fidgeting in his seat. "I'm just gonna have to sing you all a song," he explained, getting up. "This is the best way I can explain it". Rubbing his hands and gazing at the members of the review panel, backs against the window, he began. It was a powerful moment. Jason's big voice resonated through the drab room, telling a story about big rains and floods on a dry landscape far away. The suited members of the 'expert committee', slightly stunned and silent, sat politely listening to this powerful evocation of Country. I had to smile.

Jason's song was a stark reminder of the challenges facing Indigenous activists and communities across Australia who are campaigning to restore a basic right: access to water on their traditional Country. The materialistic and technocratic discourse of modern water management doesn't account for the complex, spiritual and holistic perspective of Traditional Owners, whose connection to river country encompasses sacred geography, the movement of spirit beings and ancestors, as well as the day-to-day management of water resources. Jason's song was met with some slightly confused stares and blank looks from the four members of the committee. For these men, versed in the disciplines of law, reductive science and modern agribusiness, old songs about rain and big floods don't carry much weight against economic data, production figures and peer-reviewed research.

However, the campaign for Indigenous water allocations, or 'Cultural Flows', is gaining momentum across Australia. For over a decade, Traditional Owners from across the Murray-Darling Basin have been methodically building up the case for greater recognition of Indigenous water rights. Centuries of dispossession and disadvantage mean that many communities have never had the opportunity, let alone the capital or infrastructure, to own water or participate in the modern water market.

A comparison of water ownership in the Murray-Darling Basin shows that Indigenous people combined currently own less than 2% of the water holdings of just *one* large cotton farm, Cubbie Station. Considering how vital water is to ensuring cultural survival and developing sustainable livelihoods, this is a stark injustice. The current review of the Commonwealth Water Act offers an opportunity to address this key 'unfinished business' of national water reform.

Indigenous representative organisations such as the Murray Lower Darling Rivers Indigenous Nations (MLDRIN) and the Northern Basin Aboriginal Nations (NBAN) were joined by environmental groups in August for the roundtable to discuss possible changes to the Act. A crucial piece of reform sought by these groups is to ensure that our national water legislation reflects Australia's international obligations to support a sustainable future for Indigenous Nations.

The Water Act is supposed to give effect to a range of international treaties and agreements, including the Convention on Biological Diversity. But one agreement notably absent from the Act is the UN Declaration on the Rights of Indigenous People, which Australia ratified in 2009. Indigenous campaigners argue that the Act should be amended to include the UN Declaration as a 'relevant agreement' and to strengthen the recognition of Indigenous rights to manage and access water.

## Victorian Water Bill

In Victoria, Traditional Owners recently assembled a range of experts and Indigenous representatives to discuss the new Victorian Water Bill. This new legislation is set to replace the Victorian *Water Act 1989*. Like the review of the Commonwealth Water Act, this new Water Bill represents a vital opportunity to ensure that Indigenous rights are given legal recognition. Yet the State Coalition government has all but ignored a decade of research and policy advice from the National Water Commission that calls on all the States to include Indigenous access in water plans. The new Victorian Water Bill does not include any improvements to Indigenous access provisions.

The Federation of Victorian Traditional Owners held a symposium in August where delegates developed a policy statement to highlight the need for reform and articulate their views to government. Given the Napthine government's current parliamentary stalemate and the scandal surrounding Water Minister Peter Walsh's Office of Living Victoria, it is unlikely that the Bill will pass this year. However, a strong campaign from Indigenous organisations and non-Indigenous allies is needed to make sure that the Bill is sent back to the drawing board, whichever party wins November's State Election.

The campaign for Indigenous water rights received a further blow this year when the Federal Government announced that it would be scrapping the National Water Commission (NWC) – the independent agency tasked with overseeing government progress on water reform. A key requirement spelt out in Australia’s water reform policy, the National Water Initiative, is that all governments should improve Indigenous access to water and involvement in water planning. The NWC had held state and federal governments to account for their slow delivery on this requirement. In 2012 they released strong policy advice, encouraging governments to include provisions for Indigenous access in all water plans.

In September it was announced that the NWC’s role would be overtaken by the Productivity Commission (PC). Given the PC’s focus on “ways of achieving a more productive economy” it is very unlikely that Indigenous rights will receive the level or recognition needed to leverage governments into action.

### Powerful and positive steps

Despite these barriers, there are some powerful and positive steps being taken by Indigenous activists to ensure that this fundamental phase of water reform gathers further momentum. Traditional Owners from MLDRIN and NBAN have established the National Cultural Flows Research Project to document and quantify Indigenous water needs. The Project will engage leading scientists to establish a clear framework for the delivery of Indigenous water allocations or Cultural Flows.

Friends of the Earth has been working with MLDRIN and NBAN to increase awareness of this important work and make sure that environmental NGOs understand and actively support Indigenous-led campaigns for water rights.

Water managers and politicians are on notice that this issue can no longer be sidelined. The *Cultural Flows* films, two powerful short documentaries produced by Basin Traditional Owners and Friends of the Earth will be aired on SBS TV next year, as well as featuring at the World Park’s Congress in Sydney this November. Please help spread the word by joining us at [www.facebook.com/culturalflowsfilms](http://www.facebook.com/culturalflowsfilms)

Traditional Owners across the Basin are working to achieve justice and provide a sustainable future for a growing Indigenous population. Active allies (both Indigenous and non-Indigenous) are a powerful tool. Helping to build an alliance to campaign for water justice is a key focus of the Barmah-Millewa Collective of Friends of the Earth Melbourne. If you’re interested in finding out more or getting involved in the campaign, contact [will.mooney@foe.org.au](mailto:will.mooney@foe.org.au), ph 0404 163 700.

*Will Mooney is a community campaigner with the Barmah-Millewa Collective of Friends of the Earth Melbourne.*



## World Parks Congress to hear Indigenous water stories

The Cultural Flows films, two powerful short documentaries produced by Traditional Owners in the Murray Darling Basin, will feature in a special side event at the IUCN World Parks Congress in Sydney this November. Telling the story of two communities’ connection to river country along the Murray and Murrumbidgee, these films present a powerful argument for Indigenous water rights.

The World Parks Congress (<http://worldparkscongress.org>) is a landmark global forum on protected areas, drawing thousands of protected area managers, conservation leaders and NGOs from around the world. A major theme of the conference is ‘Respecting Indigenous and Traditional Knowledge and Culture’.

The Cultural Flows films will screen on Thursday November 13 in the ‘Stream 7 Homeroom’ at the World Parks Congress.

# Vale Eileen Wani Wingfield, 1920-2014

After an amazing life fighting for country and culture, Kokatha Elder Eileen Wani Wingfield passed away at her home in Port Augusta on August 8, 2014. Mrs Wingfield will be widely remembered and acknowledged for her contribution to the nuclear-free and peace movements in Australia and worldwide.

Living her life in the South Australian desert, Mrs Wingfield experienced first-hand the effects of the British military's nuclear weapons tests at Emu Fields and Maralinga during the 1950s and 1960s. Motivated by this injustice, she dedicated her life to protecting her country and future generations from the effects of the nuclear industry. In the early 1980s Mrs Wingfield lay down in front of bulldozers at Cane Grass Swamp in opposition to the Olympic Dam uranium mine's construction.

Joining other senior desert women in the early 1990s, Mrs Wingfield played a leading role in the Kupa Piti Kungka Tjuta who fought and won a fight against the federal government's plan to build a nuclear waste dump in the SA desert. Feeling disempowered by broken promises and the general lack of respect, Mrs Wingfield co-wrote to government officials working on the government nuclear waste dump "consultation" process that "it's just like our words went in the wind".

Ensuring that their voices were heard, Mrs Wingfield and the Kunga Tjuta wrote to "greenies" and shortly after travelled to Melbourne to attend the Global Survival and Indigenous Rights conference hosted by Friends of the Earth Melbourne in 1998. Here a strong alliance between environmentalist, particularly non-Aboriginal women and the Kunga Tjuta was formed. What followed was years of travel and campaign commitments that raised the profile of the issue and ultimately created a political wedge between the South Australian government and its federal counterparts. Throughout the Kunga Tjuta reiterated the message that "We've got the story of the land."

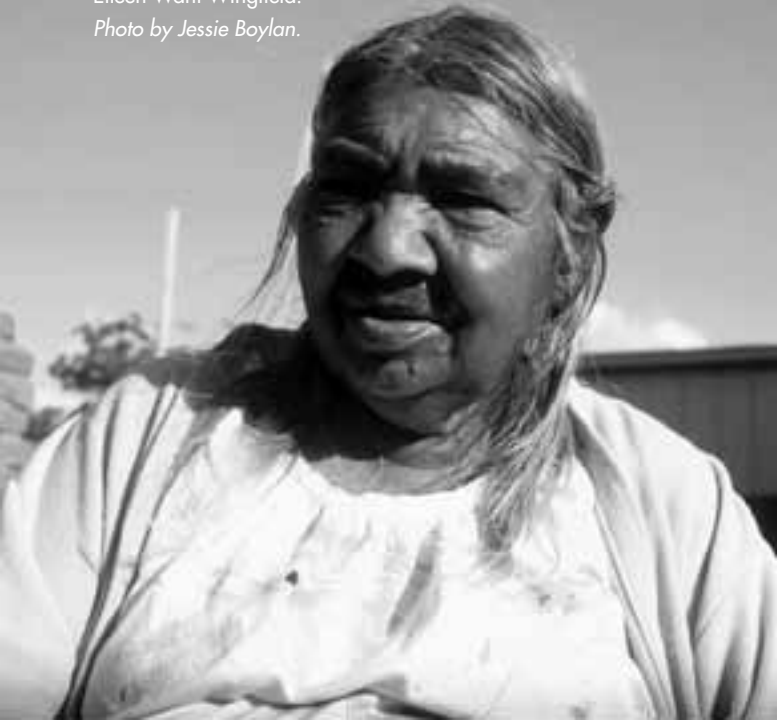
Not one to mince words, Mrs Wingfield was both an advocate for her desert Country, espousing the life and

culture it contained and resisting the view of it as a barren and lifeless. But the changes to her Country weighed heavy. She once stated "I think everything is ruined. I think the (ground) water level would have dropped. There's very few bush tucker now. I think it's the bomb and dynamites going off and everything. The country's not the same."

The worry for country, the concern for her children and future generations and the risk that practices handed down from her ancestors could be broken, kept Mrs Wingfield active. "We learned from the bedside of our Kokatha and Arabunna Old People. This is what we want to pass on to our younger generations - to keep the culture and the land alive and to keep them alive themselves". Her role in protecting Country was recognised in 2003 when Mrs Wingfield was co-recipient of the International Goldman Award for the 'protection of environment'. This prestigious prize has been dubbed the "greenie Nobel Prize" and is awarded annually to "grass-roots environmental heroes" from six geographic regions. Despite ill-health and extensive cultural and family commitments, Mrs Wingfield travelled to San Francisco to attend the official award ceremony and completed a 10-day tour in the US attending news conferences, media briefings and high-level meetings. Mrs Wingfield continued her anti-nuclear work long after the nuclear waste dump was scrapped for South Australia. She was a regular guest on Friends of the Earth's annual Radioactive Exposure Tour and often travelled with family to sit by the campfire to retell her stories once again to aspiring greenies and long-term activist colleagues. It was here she often handed over a big bucket of prized *Irmangka Irmangka* - a bush medicine ointment that anti-nuclear campaigners would take back to Melbourne, divide and sell as a fundraiser. It was practical and generous donation that continued for many years.

Mrs Wingfield was a formative member of the Alliance against Uranium which later became the Australian Nuclear Free Alliance (ANFA). In 2009 she became the honorary president. Mrs Wingfield stood in solidarity

Eileen Wani Wingfield.  
Photo by Jessie Boylan.



with communities from Northern Territory in their incredible efforts to stop nuclear waste being dumped in their lands and with many other Aboriginal people also facing the results or prospect of uranium mining. "It's all for the wellbeing of the land; its against uranium and the radioactive dump." Her contribution to ANFA's meetings over many years helped grow and shape the alliance and she will be dearly missed.

Mrs Wingfield was a mother to 13 children, beloved grandmother of 51 grandchildren, great grandmother of 64 and great-great grandmother of 19. Alongside these extensive family and cultural responsibilities, Mrs Wingfield tirelessly spent her life travelling to attend forums and events; lobbying politicians and addressing students, tour groups and the general public. She worked within her local community and with numerous environmental groups from around Australia. She was cofounder of several committees and corporations, including the Kokatha Mula Aboriginal Corporation which was party to recent Native Title determinations in the Gawler Ranges and the Roxby Downs Area. Mrs Wingfield received many awards for her efforts, was featured in documentaries and was the author of three books. She was as an amazing artist who enjoyed painting and of course a committed activist. Her resilience, passion and dedication remains an inspiration to everyone that met her.

Mrs Wingfield was laid to rest in Port Augusta on August 29. Family, friends and environmentalists travelled from afar to pay respects and say goodbye. A vibrant anti-nuclear flag flew strong in the gentle wind over the hundreds of mourners gathered in the cemetery. It was a colourful reminder of her life's work and the future we can all aspire to. Rest in Peace.

## Uranium sales to India

The federal government's plan to permit uranium sales to India has been subjected to a strong critique by the former Director-General of the Australian Safeguards and Non-Proliferation Office (ASNO), John Carlson. Others to have raised concerns include former Defence Department Secretary Paul Barratt, and Ron Walker, former Chair of the International Atomic Energy Agency (IAEA) Board of Governors. But Carlson's critique carries particular weight given his 21 years experience as the head of Australia's safeguards office.

Carlson notes that the civil nuclear cooperation agreement signed by Australia and India in September contains "substantial departures from Australia's current safeguards conditions" which suggest "that Australia may be unable to keep track of what happens to uranium supplied to India."

Carlson writes: "Disturbingly, it is reported that Indian officials will not provide Australia with reports accounting for material under the agreement, and that the Abbott Government seems prepared to waive this requirement for India. ... The reporting procedures are not optional; they are fundamental to Australia's ability to confirm that our safeguards conditions are being met. They have long applied to close and trusted partners such as the US, the EU, Japan and South Korea. There is absolutely no case to waive them for India."

The failure to provide regular reports "will also expose the agreement to potential legal challenge under the 1987 Safeguards Act", Carlson writes. (Another problem, not mentioned, is that nuclear material could be diverted and reports falsified. There is little likelihood that the falsification of reports would be detected.)

Carlson notes that provisions for 'fallback safeguards' in the event of IAEA safeguards ceasing to apply are vague and open to differing interpretations.

There are many concerns other than those noted by Carlson. The IAEA-India safeguards agreement is on the public record, if only because it was leaked, and it is clear from the agreement that safeguards inspections are few and far between. A leaked IAEA document states that the IAEA "will not mechanically or systematically seek to verify" information obtained from India.

Carlson notes that the 'administrative arrangement' which will append the nuclear cooperation agreement may be "even more consequential than the agreement itself" as it sets out the working procedures for the agreement. But the Australian public will never get to see the administrative arrangement. And the Australian public will never be able to find out any information about the separation and stockpiling of weapons-useable plutonium in India; or nuclear accounting discrepancies ('Material Unaccounted For'); or even the quantity of Australian uranium (and its by-products) held in India.

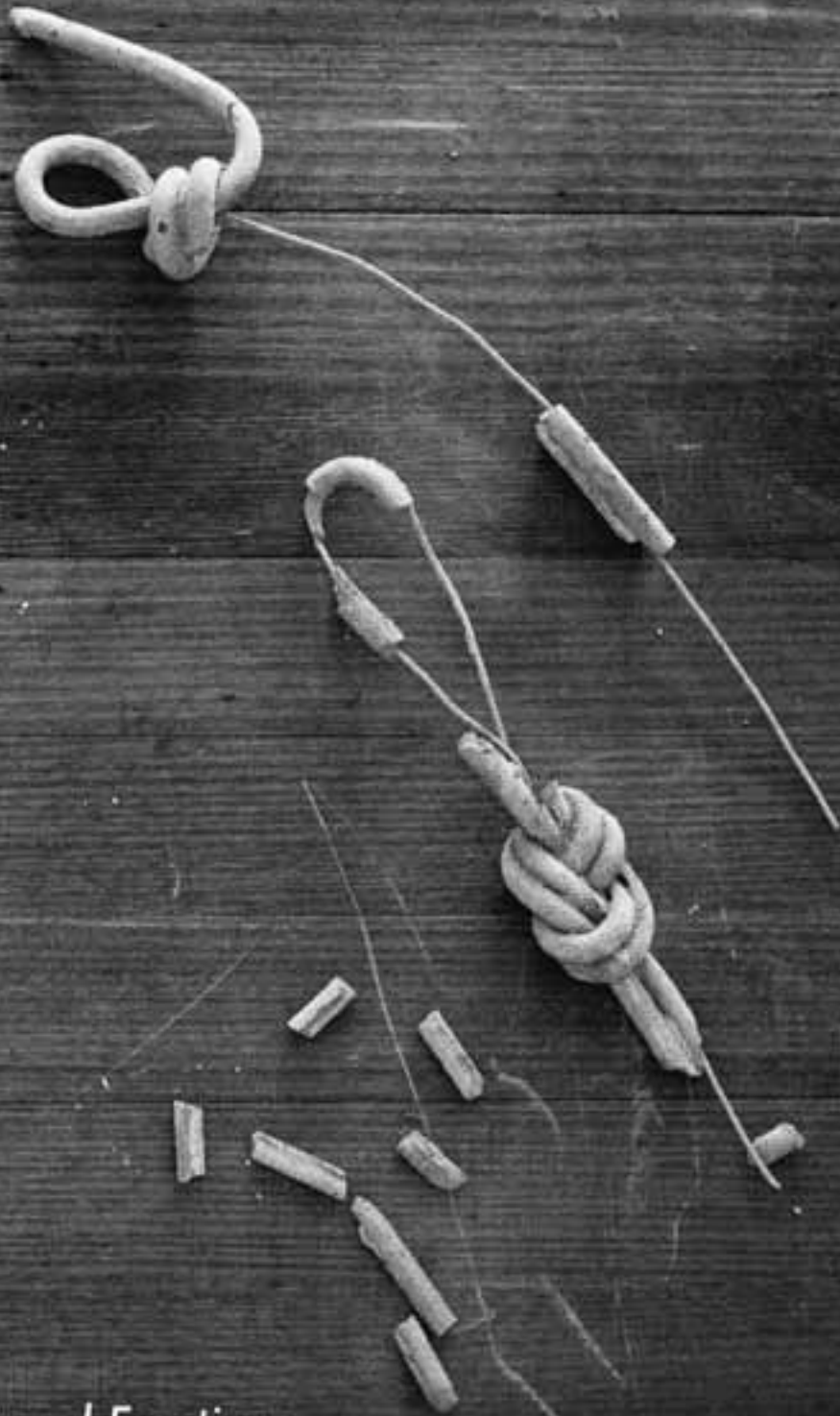
*More information:*

[www.foe.org.au/anti-nuclear/issues/oz/u/cc](http://www.foe.org.au/anti-nuclear/issues/oz/u/cc)



Photography credit  
Timothy Casten





## *Irrational Emotions*

Sophia "Flo" Dacy-Cole

August 31 - September 14, 2014

*Irrational Emotions* was the result of the artist's six-month artistic residency at the Melbourne Friends of the Earth Smith Street headquarters.

Held in the building's little known mezzanine floor, the exhibition was an homage to the history of the building and to FoE's legacy of non-violent direct action.

The objects depicted were cast in concrete composite with fly ash. The molds were taken from climbing tools: a rope, a carabiner and a handled ascender.

The show would not have been possible without the generosity of the FoE food co-op and the FoE office co-op.

# Small-is-beautiful nuclear rhetoric fading fast

Jim Green

There's an Alice in Wonderland flavour to the nuclear power debate with lobbyists promoting all sorts of non-existent reactor types – an implicit acknowledgement that conventional uranium-fuelled reactors aren't all they're cracked up to be. Some favour non-existent Integral Fast Reactors, others favour non-existent Liquid Fluoride Thorium Reactors, others favour non-existent Pebble Bed Modular Reactors, others favour non-existent fusion reactors, and on it goes.

Two to three decades ago, the nuclear industry promised a new generation of gee-whiz 'Generation IV' reactors in two to three decades. That's what they're still saying now, and that's what they'll be saying two to three decades from now. The Generation IV International Forum website states: "It will take at least two or three decades before the deployment of commercial Gen IV systems. In the meantime, a number of prototypes will need to be built and operated. The Gen IV concepts currently under investigation are not all on the same timeline and some might not even reach the stage of commercial exploitation."

## Integral Fast Reactors

Integral Fast Reactors (IFRs) are a case in point. According to the lobbyists they are ready to roll, will be cheap to build and operate, couldn't be used to feed WMD proliferation, etc.

The UK and US governments have been analysing the potential of IFRs. The UK government found that the facilities have not been industrially demonstrated; waste disposal issues remain unresolved and could be further complicated if it is deemed necessary to remove sodium from spent fuel to facilitate disposal; and little could be ascertained about cost since General Electric Hitachi refuses to release estimates of capital and operating costs, saying they are "commercially sensitive".

The US government has considered the use of IFRs (which it calls Advanced Disposition Reactors – ADR) to manage US plutonium stockpiles and concluded that the ADR approach would be more than twice as expensive as all the other options under consideration; that it would take 18 years to construct an ADR and associated facilities; and that the ADR option is associated with "significant technical risk".

Unsurprisingly, the IFR rhetoric doesn't match the sober assessments of the UK and US governments. As nuclear engineer Dave Lochbaum from the Union of Concerned Scientists puts it: "The IFR looks good on paper. So good, in fact, that we should leave it on paper. For it only gets ugly in moving from blueprint to backyard."

## Small Modular Reactors

In any case, IFRs are yesterday's news. Now it's all about Small Modular Reactors (SMRs). The Energy Green Paper recently released by the Australian government is typical

of the small-is-beautiful rhetoric: "The main development in technology since 2006 has been further work on Small Modular Reactors (SMRs). SMRs have the potential to be flexibly deployed, as they are a simpler 'plug-in' technology that does not require the same level of operating skills and access to water as traditional, large reactors."

The rhetoric doesn't match reality. Interest in SMRs is on the wane. Thus Thomas W. Overton, associate editor of POWER magazine, wrote in a recent article: "At the graveyard wherein resides the 'nuclear renaissance' of the 2000s, a new occupant appears to be moving in: the small modular reactor (SMR). ... Over the past year, the SMR industry has been bumping up against an uncomfortable and not-entirely-unpredictable problem: It appears that no one actually wants to buy one."

Overton notes that in 2013, MidAmerican Energy scuttled plans to build an SMR-based plant in Iowa. This year, Babcock & Wilcox scaled back much of its SMR program and sacked 100 workers in its SMR division. Westinghouse has abandoned its SMR program.

Overton explains: "The problem has really been lurking in the idea behind SMRs all along. The reason conventional nuclear plants are built so large is the economies of scale: Big plants can produce power less expensively per kilowatt-hour than smaller ones. The SMR concept disdains those economies of scale in favor of others: large-scale standardized manufacturing that will churn out dozens, if not hundreds, of identical plants, each of which would ultimately produce cheaper kilowatt-hours than large one-off designs. It's an attractive idea. But it's also one that depends on someone building that massive supply chain, since none of it currently exists. ... That money would presumably come from customer orders – if there were any. Unfortunately, the SMR "market" doesn't exist in a vacuum. SMRs must compete with cheap natural gas, renewables that continue to decline in cost, and storage options that are rapidly becoming competitive. Worse, those options are available for delivery now, not at the end of a long, uncertain process that still lacks [US Nuclear Regulatory Commission] approval."

Dr Mark Cooper, Senior Fellow for Economic Analysis at the Institute for Energy and the Environment, Vermont Law School, points to some economic constraints: "SMR technology will suffer disproportionately from material cost increases because they use more material per MW of capacity. Higher costs will result from: lost economies of scale; higher operating costs; and higher decommissioning costs. Cost estimates that assume quick design approval and deployment are certain to prove to be wildly optimistic."

Westinghouse CEO Danny Roderick said in January: "The problem I have with SMRs is not the technology, it's not the



deployment – it’s that there’s no customers.” Westinghouse is looking to triple its decommissioning business. “We see this as a \$1 billion-per-year business for us,” Roderick said. With the world’s fleet of mostly middle-aged reactors inexorably becoming a fleet of mostly ageing, decrepit reactors, Westinghouse is getting ahead of the game.

Academics M.V. Ramana and Zia Mian state in their detailed analysis of SMRs: “Proponents of the development and large scale deployment of small modular reactors suggest that this approach to nuclear power technology and fuel cycles can resolve the four key problems facing nuclear power today: costs, safety, waste, and proliferation. Nuclear developers and vendors seek to encode as many if not all of these priorities into the designs of their specific nuclear reactor. The technical reality, however, is that each of these priorities can drive the requirements on the reactor design in different, sometimes opposing, directions. Of the different major SMR designs under development, it seems none meets all four of these challenges simultaneously. In most, if not all designs, it is likely that addressing one of the four problems will involve choices that make one or more of the other problems worse.”

Likewise, Kennette Benedict, Executive Director of the *Bulletin of the Atomic Scientists*, states: “Small modular nuclear reactors may be attractive, but they will not, in themselves, offer satisfactory solutions to the most pressing problems of nuclear energy: high cost, safety, and weapons proliferation.”

### The writing is on the wall

Some SMR R&D work continues but it all seems to be leading to the conclusions mentioned above. Argentina

On September 4, FoE’s Anti-Nuclear & Clean Energy (ACE) Collective teamed up with the International Campaign to Abolish Nuclear Weapons to take a message to the streets of Melbourne on the day that PM Tony Abbott travelled to India to sign a uranium export agreement. The indigenous people of Australia and India bear the brunt of the uranium industry in both countries, with Traditional Owners in Australia opposed to uranium mining on their country and mass movements against nuclear power across India. On the day that the deal was signed, FoE released a solidarity letter to the peoples’ movements against nuclear throughout India, signed by 14 environment, Aboriginal and public health organisations. From Kakadu to Kudankulam, nuclear is a risky business.

is ahead of the rest, with construction underway on a 27 MWe reactor – but the cost equates to an astronomical US\$15.2 billion per 1000 MWe. Argentina’s expertise with reactor technology stems from its covert weapons program from the 1960s to the early 1980s.

And while the ‘small is beautiful’ approach is faltering, so too is the ‘bigger is better’ mantra. The 1,600 MW Olkiluoto-3 European Pressurized Reactor (EPR) under construction in Finland is nine years behind schedule (and counting) and US\$6.9 billion over-budget (and counting). The UK is embarking on a hotly-contested plan to build two 1,600 MW EPRs at Hinkley Point with a capital cost of US\$26 billion and mind-boggling public subsidies. Economic consulting firm Liberum Capital said Hinkley Point will be “both the most expensive power station in the world and also the plant with the longest construction period.”

*Jim Green is the national nuclear campaigner with Friends of the Earth, Australia.*

# Historical pesticide monitoring of Victorian waterways – a jigsaw with many missing pieces

Anthony Amis

*“In Victoria no information is available on contamination of water supplies although fish mortalities from time to time in some streams are an indication that some pesticides from farms lands are getting into water which may be drawn off for town supply.”*

– Commission of Enquiry Into Effects Of Pesticides, 1966

For some time I have been researching the impacts of pesticides on waterways. I have been particularly interested in the impacts of pesticides on human health and ecology. The focus of my research has been domestic water supplies. Because I have been based in Victoria for the past 30 years, my attention has been on Victorian waterways. Much of the data gathering has required years of Freedom of Information requests. Data has been sparse because in most cases the information did not exist at all or was buried in unpublished government reports.

One area of research that appears to have passed many people by is the impact of spraying weeds in irrigation channels and drains. Victoria was the first state in Australia to start a massive irrigation scheme with the construction of the Goulburn Weir between 1887 and 1891. Water from this weir was diverted across hundreds of thousands of hectares of land throughout northern Victoria. Since the late 1800s, much of this region has been criss-crossed by tens of thousands of kilometres of channels and drains. Regular spraying of these channels and drains with herbicides as a means of controlling aquatic weeds, including natural vegetation, has occurred since the 1950s. Some of the channels and drains outflow into natural streams, with herbicides contributing to ecological decline in those streams. Some natural streams have been sprayed directly.

I have also been interested in the continuing impact of legacy chemicals, or those long-lasting, highly toxic chemicals that were used frequently until the 1990s, when regulators took the chemicals off the market due to safety concerns. It is important to understand that in terms of health problems, illnesses may not be observed until many years after exposure. Many people suffering illnesses today may have been exposed decades ago.

Over 60 communities currently rely on drinking water from irrigation channels in Victoria. Herbicides are commonly used in channels and drains. Acrolein, for example, is

injected directly into flowing water, whilst amitrole, glyphosate and 2,4-D are spot sprayed when the weeds are not submerged. Excessively high levels of 2,4-D, glyphosate and amitrole were detected in Goulburn-Murray Water drains in 2006. Goulburn-Murray Water has also sprayed glyphosate into water supplies such as Broken Creek and Nine Mile Creek. The Murray River and water bodies such as Lake Nagambie are also sprayed. Channel water can also be diverted to supply raw water for potable use. It is likely that communities relying on channel water have been exposed to dangerous levels of herbicides in the past; however, monitoring of pesticide residues simply did not occur.

## Amitrole

Pesticide Action Network lists amitrole as a carcinogen and suspected endocrine disruptor. It also affects thyroid function. Amitrole's Health Guideline in the 2011 Australian Drinking Water Guidelines (ADWG) is 0.9 parts per billion (ppb). This was reduced from 10 parts per billion under the preceding 2004 guidelines, a reduction of 91%. No explanation of this reduction was given in the ADWGs, which are determined by the National Health and Medical Research Council. It also means that levels of amitrole under 10 ppb, would not have been regarded as “dangerous” as recently as 2011 before the new Guidelines were published.

Amitrole was and is used widely across irrigation areas of Victoria as a control to aquatic weeds such as couch grass in drains and channels. Approval was first given in September 1962 at the Intergovernmental Committee on Pesticides for the State Rivers and Water Supply Commission (SRWSC) to use amitrole provided that the level in domestic drinking water did not exceed 300 parts per billion. Gippsland was excluded from this approval as it is a goitre (enlarged thyroid gland) area. In June 1963 the Commission adopted a maximum concentration of amitrole in streams of 2 ppb.

SRWSC started testing for amitrole in 1962. Sample sizes were small and by 1965 only 47 samples were tested, mainly from, the Murray River at Swan Hill and the Tongala Drain outfall near Echuca on the Murray River. By 1970/71, 297 samples had been taken from rivers, drains and streams. Five samples gave a positive reading of between 30 and 100 ppb. Up until 1970, the limit for analytical determination was 30 ppb, dropping to 8 ppb a year or so later. This means that no amitrole would have been detected at levels now regarded as dangerous, a ruse often employed by government agencies.

By 1971 about 2000 pounds of amitrole had been used to control couch grass in drains in Victoria, the same year that the US Environmental Protection Agency banned amitrole for crop use in the US. Excessively high levels of amitrole were recorded in the Murray River at Swan Hill in 1972 and Broken Creek in 1972. Broken Creek is a domestic water supply for Nathalia, Numurkah and Wunghnu and the Murray River is the drinking water supply for Swan Hill and many communities along the Murray, including Mildura.

As discussed, the Health Guideline for amitrole in the 2011 Australian Drinking Water Guidelines is 0.9 parts per billion. The highest levels recorded in Nathalia and Swan Hill in 1972 were 430 and 320 ppb respectively! As far as I can determine, these two cases are the most serious concerning water contamination by pesticides in Victoria and possibly Australia. Amitrole was recorded in Broken Creek at levels above current drinking water guidelines regularly between 1973–75.

## Paraquat

In 1968, the SRWSC was alarmed by the increasing amount of paraquat used in streams to control cumbungi. Possibly 5 gallons of paraquat was used in drains and channels in the Kerang region with another 20 gallons used in drains at Nathalia. Paraquat is highly toxic to humans and the SRWSC was concerned that “some of the chemical will be entering water systems which could eventually be used for human consumption”. As little as one teaspoon of the herbicide is lethal and it is currently the leading cause of fatal poisoning in the Pacific, Americas and Asia. Paraquat currently has an Acceptable Daily Intake four times higher than amitrole, yet for some reason the SRWSC didn't appear to be as concerned with amitrole.

## 2,4-D

The Victorian state government owned the patent for 2,4-D application in waterways in the 1950s. In 1971 the SRWSC began testing the Broken Creek at Nathalia for 2,4-D residues. 2,4-D was directly applied to the creek as a means of controlling weeds and had been for some years. It was regularly detected during the two months when testing occurred in June and December 1971. 2,4-D and glyphosate are still used in Broken Creek to control aquatic weeds, with high readings recorded at Numurkah in 2006.

The Pesticide Action Network classes 2,4-D as a potential carcinogen and suspected endocrine disruptor. It can

also contain dioxins, as a result of impurities in the manufacturing process. It is possible that communities relying on Broken Creek for drinking water have been ingesting both 2,4-D and amitrole for decades.

## Ovens River

In 1971/72 pesticide testing was also established in the Ovens River, which supplied the town of Wangaratta with drinking water. The Ovens River was also home to Victoria's “notorious” tobacco industry, which had been linked to pesticide pollution for many years.

The Commission of Enquiry Into Effects of Pesticides noted in its February 1966 report: “Evidence was received concerning the tobacco growing areas along the Ovens, King and Buffalo Rivers that weekly spraying with persistent insecticides and fungicides is a routine practice and that a proportion of the spraying is done by aircraft. Fish have been killed on occasions when pesticides have reached the river ...”

Five different pesticides were recorded in Wangaratta filtered water in 1971/72, namely HCB, TDE, lindane and DDT. My family was living in Wangaratta at this time. Twenty years later more tests were conducted into Wangaratta's drinking water by the Victorian Environmental Protection Authority. High levels of heptachlor and dieldrin were detected. Is it possible that residents in Wangaratta were consuming pesticide-tainted drinking water for decades?

The ABC reported in 2005: “Melbourne scientists have helped to explain why women in an area of Victoria's north-east have a much higher incidence of breast cancer. Monash University researchers analysed the breast milk of hundreds of Victorian women for traces of pesticides. Dr Narges Khanjani says the highest levels have been found in samples from women in the Ovens Valley district. She says it is an area where organochlorine pesticides have been used on tobacco crops since the 1940s.” (ABC, 29/1/05, ‘Breast cancer cluster linked to crop chemicals’.)

## Increased herbicide arsenal

By 1972 the SRWSC had increased its herbicide arsenal against a variety of aquatic weeds to include the following: acrolein, dalapon, amitrole, ammonium sulphate, copper sulphate, Diuron, atrazine, boron trioxide, picloram, 2,4-D and xylene.

Diana Crumpler wrote in a 1994 book: “Another time, a herbicide was added directly to the water and allowed to wash downstream. Our neighbour, Lionel, was told by one of the government workers that they had to drop the chemical in the channel from a bridge on the main road, because it was too explosive to carry across country. And then Lionel collapsed when the fumes wafted up from the channel near where he was working. In later years, when we were discussing events with Lionel, we came to suspect that this particular herbicide was acrolein – because the warnings we received to remove stock from the channel, and our indirect discovery of the chemical's explosive

nature and its extreme volatility, all match what we now know to be the properties of acrolein." (*Chemical Crisis – One Woman's Story – Humanity's Future*, Scribe )

Use of phenoxy herbicides 2,4-D and 2,4,5-T was also common throughout state rivers and the water supply system during the 1960s and 1970s. 2,4,5-T was used to kill blackberry in the Mornington Peninsula, Coliban and Koo-Wee-Rup systems. 2,4-D was used to kill furze, arrowhead, rushes, and woody species in Koo-wee-rup, Shepparton, Coliban and Murray Valley. Herbicides were also regularly used in the Macalister Irrigation District in Gippsland. Both 2,4,5-T and 2,4-D can be contaminated with dioxins, some of the most toxic substances known.

Pesticide exposure from aquatic weed spraying in and near irrigation areas such as Swan Hill, Wangaratta, Numurkah, Nathalia and Wunghnu is likely to be the tip of the iceberg. In 2005 three pesticides including esfenvalerate were detected in a channel that supplies the town of Kerang with drinking water in Victoria's most serious pesticide-in-drinking-water case in the past 40 years. This event was never publicly reported. A number of other towns in Victoria that rely on channel water have also recorded levels of pesticide residue over the past decade. The problem appears to be that the communities are small, and that the economic power of the chemical and agricultural industries, along with compliant regulatory bodies, allow the problem to continue to be swept under the carpet.

*Anthony Amis is a member of Friends of the Earth Melbourne. [ajamis50@gmail.com](mailto:ajamis50@gmail.com)*

*More information:*

*Pesticide detections between 1998–2012:*

*[www.foe.org.au/sites/default/files/](http://www.foe.org.au/sites/default/files/)*

*[PesticidesVictorianWaterSupplies1998-2011\\_0.pdf](#)*

## Weed sprayers demand action

The Ballarat *Courier* has recently run a series of articles concerning the ill-health of workers who were involved in spraying herbicides for the Lands Department from the 1960s to the 1980s. The Victorian Labor opposition and federal opposition leader Bill Shorten are calling for a public inquiry into the issue, which has seen workers die young and suffer from horrible diseases.

It appears that the workers were exposed to high levels of dioxin associated with the spraying of 2,4,5-T to kill a variety of weeds. Friends of the Earth supports an inquiry, but we would like to see it broadened to include other people who were exposed to the pesticides either through spray drift or water pollution.

The Victorian government ran a similar inquiry in 1978 after a cluster of birth deformities was found in the South Gippsland town of Yarram. The results of that inquiry were controversial because of poor statistical assumptions that were used at the time. Unions have been concerned about these problems for decades.

– Anthony Amis

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# Maules Creek mine: front line action on coal

Leard State Forest.

Phil Evans

Tucked away at the edge of the Liverpool Plains, on the foothills of the Nandewar Ranges in north-western New South Wales is the small community of Maules Creek. Fewer than 100 people currently live in the area, mostly operating mixed farming operations grazing sheep and cattle, and often producing two crops a year of wheat, canola, cotton, sorghum, lucerne and other crops.

The Leard State Forest is named after a Maules Creek family who have lived in the area for six generations,<sup>1</sup> and is the largest remaining stand of native vegetation on the Liverpool Plains.<sup>2</sup> Separated from the Hunter Valley by the Great Dividing Range and several hundred kilometres of rail line, nobody in the area expected Maules Creek to be threatened by open-cut coal mining. But in 2009, a former pit electrician by the name of Nathan Tinkler bought a mining lease<sup>3</sup> and announced that his company would build the largest new coal mine in the state – a \$767 million project,<sup>4</sup> now owned by Whitehaven Coal, that has since become plagued by scandal and controversy.

Maules Creek has no store or post office, just a hall, a school, a church, and that's about it. It is situated about 460 km north-west of Sydney near the Mt Kaputar National Park and about 50 km south-east of Narrabri. The creek after which it is named is dry most of the year, its porous rocky creek bed soaking through to the Gunnedah Basin aquifers that allow this area to be a highly productive agricultural area.

Like most of the north-west, Maules Creek farmers have typically been loyal National Party supporters, but their area is now threatened by a company chaired by former Nationals leader Mark Vaile. For several years local residents waged an at times lonely campaign to protect the farmlands, forest and aquifers, but over the last two years an alliance with environmental groups has been forged, creating a flashpoint in resistance to the rapid growth in coal exports.

The area is the land of the Gomeroi people, the traditional custodians of the woodlands now known as the Leard State

Forest. The forest abounds with sites that show the rich and long history of the area, including scar trees, burial grounds and grinding groove sites. Tragically, some of these have now been lost forever. In early 2014, the Leard Forest Alliance (a coalition of local groups and NGOs like Friends of the Earth, Greenpeace, 350.org and The Wilderness Society) signed a protection treaty with the Gomeroi Traditional Custodians with a commitment to mutual respect and value for the Leard State Forest's cultural significance.<sup>5</sup>

The forest itself has been described by the NSW Office of Environment and Heritage as 'irreplaceable'.<sup>6</sup> It is home to the largest remnant of white box-gum woodland – listed as an endangered ecological community at the state level<sup>7</sup> and critically endangered federally.<sup>8</sup> Although the forest was selectively logged some decades ago for ironbark to produce railway sleepers,<sup>9</sup> the box-gum vegetation was largely untouched in the forest, as it is of little value for the timber industry because of the way the trees hollow out. However, this hollowing quality makes the trees almost akin to high rise houses for the many species that inhabit the forest, with as many as 100 hollows per hectare.<sup>10</sup> Of the 396 species of flora and fauna known to inhabit the forest, 34 of those are listed as threatened or endangered.<sup>11</sup>

## Offsetting biodiversity

In 2014, the Australian Department of Environment launched a criminal investigation into whether Whitehaven Coal had deliberately misled the government about the conservation value of their biodiversity offsets<sup>12</sup> following audits by independent ecologists which found that areas marked as box-gum woodland were completely different vegetation types.<sup>13</sup> Although the investigation could not prove that the misleading claims were made deliberately, a government-ordered review validated the findings of the independent ecologists.<sup>14</sup> This investigation also sparked a Senate Inquiry into the adequacy of offset programs,<sup>15</sup> which has since recommended that critically endangered



Protest action at  
Maules Creek Mine.

ecological communities should not be considered to be able to be offset, and that the market-based system of biodiversity offsetting is poorly regulated and deeply flawed.

While many submissions to the Senate Inquiry called for the integrity of the offsetting system to be strengthened, others questioned the concept of offsetting itself, likening it to a smoke and mirrors game that paves the way for projects that would be otherwise considered unacceptable because of high biodiversity impacts.

Whitehaven has since been forced to purchase a series of extra properties to bolster their inadequate offsets, but questions continue to be raised about the quality of these offsets and their 'like for like' habitats. At the heart of this controversy is an impossible dilemma for Whitehaven: since the Leard State Forest contains the largest intact high-quality remnant of white box-gum woodland, it is not possible to find enough of that ecosystem in the same condition to offset its destruction in the Leard State Forest. Nevertheless, having convinced both state and federal governments to approve the mine early last year, the company has been allowed to continue to clear and purchase offset properties over the life of the mine.

### A threat to over 50 % of the forest

In 2006, two small coal mines, Tarrawonga and Boggabri, began operation in the area. In February 2013, not only were both mines given approval to expand into the Leard State Forest, but approval for the Maules Creek mine, with a production greater than both other mines combined, was also given.<sup>16</sup>

The approvals represent a threat to over 50 % of the 8000 hectare forest and, according to the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development, would lead to a drawdown in

alluvial aquifers of at least 2 m, and over 10 m for hard rock aquifers.<sup>17</sup> These impacts would not only affect the sustainability of the agricultural industry in the area, but also present a threat that was "significant in terms of the ecology of groundwater dependent or influenced ecological communities" in the forest.

### Coalruption

At the time of the approval process, the project was owned by Aston Resources, a company owned by Nathan Tinkler. Tinkler has been implicated in the Independent Commission Against Corruption's (ICAC) recent investigation linking Coalition MPs to prohibited political donations.<sup>18</sup> That investigation, Operation Spicer, saw Barry O'Farrell resign as NSW Premier and 10 MPs resign from the Liberal Party and move to the cross-benches. The investigation focussed on slush funds being set up to channel donations to the Liberal Party, and implicated Liberal Party apparatchiks right up to the federal level.

Tinkler said to ICAC that he made political donations in the belief it would "grease the wheels" for government consideration of his coal related infrastructure. This 'coalruption' in NSW has also plagued the ALP in NSW, with ICAC's Operation Jasper exposing corrupt dealings, most notably by Eddie Obeid. Tinkler's Aston Resources and Whitehaven Coal merged in 2012, with the Maules Creek project making up almost half of the value of the merged company.

For the first time, the local community was prohibited from mounting a legal challenge to the merits of the mine – a process that has since become standard for major coal mines<sup>19</sup> – and detailed submissions from the community were ignored. Ultimately, both the state and federal approvals were given with key parts of the impact



assessment uncompleted. Instead, the company was required to continue with the assessment process as a condition of their approval. Former federal environment minister Tony Burke blamed the incomplete assessment and subsequent "Clayton's approval" on the leaking of a letter by Chris Hartcher,<sup>20</sup> the former NSW resources minister, who has since resigned over the Tinkler donations scandal.

## Front Line Action on Coal

In August 2012, a small group of people came to show support for the Maules Creek community by pitching tents in the Leard State Forest – amongst them Murray Drechsler, Tania Marshall and the now infamous Jonathan Moylan – who was recently charged with an offence under the Corporations Act for an email hoax claiming that ANZ had withdrawn its \$1.2 billion dollar funding of the Maules Creek project.<sup>21</sup>

The camp became known as Front Line Action on Coal, which has slowly become a gathering point for climate change and forest campaigners across the country. However, in early 2014, after a request from Boggabri Coal and the NSW Police, the NSW Forestry Corporation closed the forest citing "fire danger" as a concern (the forest has not seen a significant fire in over a century) and the camp was shifted to long-time local ally Cliff Wallace's property, 'Wando' – where it continues to flourish today.

Opposition to the Maules Creek mine reflects a broader shift in the approach of the environment movement to the energy and climate debate after years of frustrating progress through lobbying on a national and international level. This new approach is in some senses a renaissance of the Lake Pedder and Franklin Dam campaigns, involving grassroots organising, supporting local communities and employing a vast array of tactics including legal action, breach reporting, divestment, and peaceful civil disobedience to frustrate the company's efforts.

The diversity of people supporting the campaign has undermined the mining lobby's attempts to paint its opponents as driven by an ideological fringe. The 250-odd people arrested at Maules Creek ranged from seasoned activists from forest and coal campaigns, to first time arrestees including farmers, doctors, lawyers, engineers, students and even a 92 year old, legally blind WWII veteran, Bill Ryan.

The high-spirited determination of the Leard Forest Alliance is creating enormous challenges for Whitehaven Coal, which

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## FoE Australia joins Leard Forest Alliance

Friends of the Earth, Australia has joined the Leard Forest Alliance. Other members include Frontline Action on Coal, Maules Creek Community Council, Lock the Gate Alliance, Greenpeace Australia-Pacific, 350.org Australia, The Wilderness Society, Quit Coal (Sydney), Northern Inland Council for the Environment, Australian Religious Response to Climate Change, Australian Student Environment Network, Friends of the Pilliga, Mary's Mount Protection Alliance, Mullaley Gas and Pipeline Accord, Protect our Water, Environment & Rights, Save Our Soils Liverpool Plains and the Nature Conservation Council of NSW.

is already battling a high Australian dollar, a depressed coal price and a series of loss-making years. However, the company continues to hope that the industry's problems are a low point in the price cycle rather than the result of a growing distaste for the world's dirtiest fuel.

More significantly, the growth and strength of the movement at Maules Creek foreshadows problems for any other company that wants to build a new coal mine in a sensitive area in the future. Whatever the future holds, those who have trekked out to Maules Creek to take action are certainly not leaving it to chance.

*Phil Evans is the Maules Creek Campaign Coordinator with 350.org and a spokesperson for Front Line Action on Coal.*

*web: <http://350.org.au/campaigns/leard-blockade>, [www.frontlineaction.org](http://www.frontlineaction.org)*

*Maules Creek Community Council - [www.maulescreek.org](http://www.maulescreek.org)*

*facebook: [www.facebook.com/350.orgAustralia](http://www.facebook.com/350.orgAustralia), [www.facebook.com/FrontLineActionOnCoal](http://www.facebook.com/FrontLineActionOnCoal)*

*Twitter: @FLACCoal and #LeardBlockade*

*email: [phil.evans@350.org.au](mailto:phil.evans@350.org.au)*

*pb: 0490 064 139*

# The search for oil and gas continues – but at what cost?

Margaret Thiselton

In January 2011, the Federal Government awarded BP four permit areas in the Great Australia Bight (GAB). Chevron has since been awarded two areas, and Murphy Oil and Santos have jointly been awarded one. These permit areas are 300 km south-west of Ceduna and 400 km south-west of Port Lincoln in South Australia. The purpose of these 'permitted areas'? The hunt for oil and gas.

BP is the only company to have so far completed the seismic testing of its permit areas, and according to its website [www.bpgabproject.com.au](http://www.bpgabproject.com.au) (which is severely lacking in information), exploratory drilling is to commence in the summer of 2015/16. What is alarming to people who know the area is how reckless and ill-considered this venture is. The ocean conditions in the GAB are amongst the roughest in the world, with swells regularly reaching 12–15 metres. BP has admitted that this is a first for the company and has described the weather conditions as "extreme".

Furthermore BP wants to drill 1.5–5 kilometres deep into the ocean floor. The technology does exist to drill these depths, but it is so far only being implemented in waters considered calm in comparison to the GAB: waters such as those of the Gulf of Mexico, the site of the terrible tragedy in 2010. Eleven people lost their lives when BP's oil rig Deepwater Horizon exploded during the exploratory phase of the project. Five million barrels of crude oil spilled out into America's seafood bowl, poisoning everything in its way during the 87 days the well leaked. The chemical dispersants, most notoriously corexit, used to 'clean' the spill continue to cause problems including marine life die-off and deformities. All along the coast numerous locals complain of skin lesions and respiratory problems. All the while BP has denied the enormous scale of its long-term impacts.

The Gulf of Mexico accident occurred in water only 1.5 kilometres deep. Now BP asks the people of South Australia to trust them to drill in the GAB? BP has not released an environmental plan for this project. This plan should

include oil spill modelling data – a computer generated model of where oil would likely spill onto under various weather conditions. The Wilderness Society has formally requested these documents and was refused. These documents have also been requested under Freedom of Information but they cannot be released as they fall under the business confidentiality category. How convenient.

BP has, however, admitted that if there is a spill, a best-case scenario would result in a plume of oil stretching 760 km. Because of this appalling lack of transparency, a group has been formed along the coast of SA under the name Clean Bight Alliance Australia (CBAA). This group is currently pushing for the SA government to demand that BP release these plans before any drilling commences.

We are encouraging seafood industries to consider the risks and we want the sea to be recognised for the food resources it produces and the jobs it provides. The GAB has an extensive wealth of marine life, with 90 % being unique to the area. The waters off the coast are crucial to many species such as the southern right whale, blue fin tuna and the Australian sea lion. The GAB waters are some of the most pristine and unpolluted in the world. This means that the people in the region are able to produce some of the world's most perfect, delicious seafood including oysters, mussels, lobsters and tuna.

CBAA believes that there is just too much at stake in the area to allow a multinational corporation to continue without scrutiny and transparency. CBAA sees the need to look beyond oil and gas and sees huge potential for local jobs in the sustainable energy sector. We need help making sure the GAB is protected.

*For more information head to our Facebook page and while you're there, follow the links to sign our online petition urging the SA government to demand BP release its environmental plan. [www.facebook.com/cleanbightallianceaustralia](http://www.facebook.com/cleanbightallianceaustralia)*



Photo by Breony Carbines.

# If irradiated food is glowingly good – why not label it?

Robin Taubenfeld

Over the past two years Food Standards Australia New Zealand (FSANZ) has supported a push to significantly expand the list of foods allowed to be irradiated in Australia and New Zealand. At the same time, irradiation proponents have been embarking on a cynical marketing strategy to reduce consumer resistance to irradiated food, namely, the removal of mandatory labelling requirements.

The Ministerial Forum on Food Regulation (FoFR) has now asked FSANZ to undertake a “review” of mandatory labelling requirements for irradiated food. In correspondence to Senator Nick Xenophon, Health Minister Fiona Nash states the purpose of the review is to “assess whether there are better ways to communicate the safety and benefits of irradiated food to consumers.”

In December 2013 correspondence with Food Irradiation Watch, Victorian Minister for Agriculture and Food Safety Peter Walsh stated: “The review has been requested to assess whether this is a more effective approach to communicate the safety and benefits of irradiation to consumers. The FoFR noted that improving consumer confidence in irradiation will reduce disincentives for increased uptake and broader application of the technology by industry.”

The words are telling. Since the lifting of a hard-won 10-year moratorium on irradiation that lasted until 1999, FSANZ has been taking up the gauntlet as an irradiation promoter rather than a non-biased adjudicator. Now, labelling has been identified as an impediment to “uptake” of the technology.

Despite FSANZ’s support, however, numerous scientific reports question the safety or wholesomeness of irradiated food. At best, scientific opinion around irradiation remains divided. There is no data to support the claim that irradiated food has been proven safe, as no long-term studies of human consumption of irradiated food have been carried out.

The Australian and New Zealand public have demonstrable, known and legitimate concerns about irradiation. In recent polling in New Zealand – where irradiated Australian produce is being marketed – 72% of respondents expressed concern.<sup>1</sup> Since the lifting of the moratorium in 1999, Australians – and their counterparts overseas – have shown ongoing resistance to irradiated food which has been expressed by opposition to food irradiation applications, rejection by informed consumers of irradiated foods on the market, community campaigns to close irradiation plants, and community campaigns to support local and organic agriculture.

Research commissioned by irradiation supporters reveals little public awareness about irradiation and consumer hesitation to support it. An overview of some of the issues appeared in *The Land* on July 31. It clearly articulates retailers concerns about consumer perception of irradiation.

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The article reveals market research into inaccurate or deceptive statements such as “cold sterilisation” which would make irradiation more palatable to the consumer. Survey results showed that even when informed, irradiation was not the preferred treatment method among consumers. The market research also found that retailers have expressed concern over public resistance to the very term ‘irradiation’ and a consumer backlash against irradiated products.

Paul Harker from Woolworths is quoted in *The Land* article: “It’s going to be an extremely emotional product and we are not going to stand alone trying to convince Australian consumers that there is nothing wrong with irradiation. We’ve communicated that back to industry and we said unless there is a concerted campaign that is led not only by the people peddling irradiation as an alternative, but unless the government and everyone else is involved in actually talking to the customer about it, the last thing I am going to do is plonk it on my shelf because I can tell you that fresh produce sales will die. People won’t shop there.”

The demand for irradiated products should be driven by consumers making informed and intentional decisions to purchase such products. Irradiators who are confident that their products are wholesome, healthy and desirable should be proud to label their products irradiated and let the market play out.

With Australia and New Zealand set to dramatically increase the amount of irradiated foods available on the market and in people’s diets, the push to remove mandatory labelling and signage requirements is unacceptable and must be stopped.

To find out what you can do, please visit:  
[www.foodirradiationwatch.org](http://www.foodirradiationwatch.org)

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# Yes 2 Renewables

## Renewable Energy Target

The Abbott cabinet has rejected Dick Warburton's widely discredited review of the Renewable Energy Target (RET). The rejection of the RET review has been a big win for Australian communities. The full-scale backlash against the Warburton Review came from many different voices. But the loudest outcry was from those towns and suburbs that have been affected, both positively by renewables or those crippled by negligent fossil fuels.

Earlier in 2014, Yes 2 Renewables undertook its own community engagement on the Renewable Energy Target: the *RET Road Trip*. Leigh Ewbank and Shaun Murray organised and carried out this fact-finding mission. Visiting nine communities around the state to demonstrate the impacts of fossil fuels and the benefits of renewable energy. Getting started in Daylesford, the road trip heard the stories of local community members who had pooled funding to develop their own two-turbine wind farm. Then in Morwell and Anglesea, Yes 2 Renewables met with communities who were sick of their health being compromised for the sake of local coal-power plants. In Portland and Ararat in Victoria, the road trip uncovered the economic benefits associated with renewable development in rural areas.

After assessing how communities felt about the impacts of the RET, Yes 2 Renewables decided to personally investigate the legitimacy of the Warburton review itself. After meeting the Warburton panel in Melbourne, Leigh and Shaun walked out as it became evident that the entire process was stacked against renewables.

## Peoples March for Climate demonstrates huge support for renewables

A march attended by over 500 in Kyneton, Victoria demonstrated strong public support for action on climate change and elevates renewable energy to a top issue in the hotly contested electorate of Macedon in the lead-up to the November 29 state election.

The "people's march" is part of a global mobilisation calling on political leaders to take action to address global warming. The Kyneton march coincided with a global gathering of heads of state at the United Nations in New York City. An estimated 30,000 people marched in Melbourne, with a massive 300,000 taking to the streets in Manhattan.

In a rousing speech, Friends of the Earth's *Yes 2 Renewables* coordinator Leigh Ewbank urged people at the Kyneton rally to take their concern for climate change to the polls and vote for renewable energy in the Victorian election: "The Coalition government axed the Victorian Climate Change Act, slashed solar incentives, and banned wind farms in the Macedon Ranges. A vote for renewable energy on November 29 will encourage whoever is elected to actively support wind farms with majority community support and champion a state target for renewables."

A campaign by Yes 2 Renewables, the Macedon Ranges Sustainability Group and local community members calling

on the government to dump its anti-wind farm laws has been gathering momentum. The pro-renewable energy campaign is calling on candidates to commit to actively support wind farms with majority community support and a renewable energy target for Victoria.

In 2011, the Coalition state government introduced a blanket ban on wind farms that killed off the Macedon Ranges Sustainability Group's vision of a community project near Woodend.

"The current planning laws mean that it's OK for Daylesford to have a community wind farm, but yet, just 40km away in Woodend, a project of similar scale is prohibited," said Ewbank.

According to Friends of the Earth's analysis, the proposed community wind farm in Woodend would have created roughly 30 construction jobs, six ongoing jobs, and over \$151,000 worth of flow-on economic benefits for the region. The wind farm would have produced enough clean electricity to power all the homes and businesses in Woodend, Macedon, Mt Macedon and Newham.

While Victoria's renewable energy sector is languishing, it is booming South Australia and the ACT – states that have renewable energy targets.

"Victoria doesn't have a renewable energy target and is missing out on jobs and investment in future industries," said Ewbank. "A state Renewable Energy Target will get Victoria back on track. It would unleash investment and create jobs while cutting pollution – which is something all political parties can support."

## Renewable energy jobs missing from Napthine's job plan

Renewable energy is omitted from the Victorian government's '21st Century' jobs plan released on October 7. The state government has missed an opportunity to restore bipartisan support for renewable energy in Victoria. The government's policy is out of step with their federal counterparts who seek a bipartisan deal on the Renewable Energy Target.

Premier Denis Napthine could unleash investment and create jobs in Victoria by repealing the state's anti-wind farm laws and setting a state Renewable Energy Target.

In 2011, the Coalition state government implemented the world's most regressive laws for wind farms. The anti-wind farm laws have cost the state at least 490 construction jobs and 64 ongoing jobs for the 30-year life of wind farms.

The Victorian Labor Party and The Greens have pledged to rip up the anti-wind farm laws that have cost jobs and investment in regional Victoria.

A Clean Energy Council analysis shows there is potential for 6,400 renewable energy jobs in the state – 750 in the Premier's own electorate. Renewable energy company Keppel Prince is the second largest employer in Portland which is located in Denis Napthine's seat.

# Farmland not Gaslands

The last two years have been incredible and frightening. People all across Victoria discovered their fertile farmland, communities and precious natural areas were blanketed with licences for unconventional gas. But in that time, those communities have banded together to create a powerful, state-wide movement to protect their land, water, health and future.

And now there's a film about it. *Farmland not Gaslands* is a moving short film about communities, ranging from Western Victoria to Gippsland, who are threatened by the activities of mining companies, but refuse to sit down and say nothing about it.

It's a matter that is close to home for director and producer Pennie Brown – literally. Her family lives in Gippsland, where over 350,000 hectares of land is covered in approved exploration licences for unconventional gas.

"I wanted to make *Farmland not Gaslands* because I wanted to bring home the risks of unconventional gas mining to a local audience and show that this growing movement of rural people from across the state are determined to do whatever it takes ... but they need our support," Brown said.

It was made on zero budget, but came together thanks to the commitment and generosity of many volunteers, including narration from AFI award winning actor Nadine Garner.

"I was really inspired to be a part of this project, we are seeing an incredible social movement of ordinary Australians growing every day, right here in our state," Garner said.

*Farmland not Gaslands* was premiered to a sold-out cinema as part of the Environmental Film Festival in early September, going on to win the People's Choice award.

This was followed by the regional premiere in Sale, which attracted big crowds, thrilled to see their story on the big screen. A moving speech from Trevor Flint, a farmer whose property is under threat, was the highlight of the night.

"When I went to my first Lock the Gate meeting, this sounds very selfish, but I went there to protect *my* farm, and I wanted a hint on how I was going to do it," Flint said. "But when I got there it took me about five minutes to realise that for me to protect my farm, my neighbour has to

be able to protect his, and for him to protect his we have to stand together."

"And as the meeting went on I realised that everyone that was there was prepared to protect my farm, I'd never met half these people in my life, they didn't know me from a bar of soap, but they were there to help me to protect my farm, my neighbours farm and our community that they are a part of."

The resounding success of this grassroots film shows that it is not only a wonderful work of art, but also a reminder of the amazing things that can happen when communities get together.

– Katherine Smyrk

## WA's first 'Gas Field Free Community'

Western Australia has vast shale and tight gas reserves covering the state which require horizontal hydraulic slickwater fracturing, or 'fracking', to extract. This process is highly water intensive, comes with high risks of contamination and has a total carbon footprint on par with that of coal.

WA recently had a great win with Central Greenough in the Midwest (iconic Wildflower country and important agricultural region) declaring itself WA's first 'Gas Field Free Community'.

Spokesperson for Frack Free Geraldton, Jo Franklin, said the declaration followed months of community consultation and door-knocking: "We knocked on every door in Central Greenough to ask the residents if they would like to declare their road gasfield free. The result was an overwhelming yes with more than 96% of people saying they supported the concept of becoming a Gasfield Free Community."

Gasfield Free Communities began in northern NSW two years ago and have since spread virally around the nation with more than three million hectares of agricultural land already declared Gasfield Free in NSW alone.

Greenough is likely to be the first of many communities in WA to join this national social movement of ordinary people who are willing to stand up for their rights, the protection of their livelihoods and that of their grandchildren against the invasive march of the gas companies

# Island Voices, Global Choices

Wendy Flannery

The third UN Conference of Small Island Developing States (SIDS) was held from September 1-4 in Samoa. All such UN conferences generate an “outcome document”, which is subject to a series of negotiating meetings before, hopefully, being formally agreed at the event itself. In this case the final text of the so-called SIDS Accelerated Modalities of Action (S.A.M.O.A) Pathway was agreed well in advance of the conference, enabling more of a focus on generating new partnerships to enable action on the various focus areas seen as essential under the overarching rubric of sustainable development.

For the official participants, both government and UN, the proximity of the conference to the Climate Summit scheduled by UN Secretary General Ban Ki-moon for September 23, served as an opportunity to indicate some of the strong themes they hoped would influence the call for serious commitments towards reducing carbon emissions and addressing unavoidable impacts.

Climate change gets significant attention in the preamble to the document, with the recognition that “sea-level rise and other adverse impacts of climate change continue to pose a significant risk to small island developing States and their efforts to achieve sustainable development, and for many, represent the gravest of threats to their survival and viability, including for some through the loss of territory.” Attention is also drawn to the inadequacy of international financial resources “to facilitate the implementation of climate change adaptation and mitigation projects” as well as the complexity of accessing them. The preamble also notes the strong leadership of SIDS in calling for climate action as well as their own commitment to conservation and mitigation strategies.

The special section of the outcome document focusing on climate change touched on all the most ambitious of the current agendas under the UNFCCC negotiating process. Of particular note were:

- The continuing global rise of greenhouse gases, the need for urgent and ambitious reduction strategies, and concern about the shortfall in pledges to date;
- The unique and particular vulnerabilities and needs of SIDS in the face of increasing diverse impacts of climate change;
- The insistence that parties to the UNFCCC undertake their responsibility “on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities”;
- The call for capitalisation of the Green Climate Fund (with \$15 billion as the SIDS target for initial mobilisation in 2014);

- Reaffirmation of the decision under the UNFCCC to “adopt a protocol, another legal instrument or an agreed outcome with legal force” at the 21st session in Paris in 2015; and
- Implementing and making operational the 2013 Warsaw International Mechanism for loss and damage, of special relevance to “developing countries, including SIDS, that are particularly vulnerable to the adverse effects of climate change”.

Completely omitted from the so-called “Zero Draft” of the outcome document, issued in May 2014, is the use of references to “security” and an issue of key concern to the work of Friends of the Earth’s Climate Frontlines group. In unusually strong language, the draft called for the need to: “Address the security implications of climate change, including violation of territorial integrity, more frequent and severe climate-related disasters, threats to water and food security, and forced displacement and the human dimensions of climate change, including, where necessary, initiatives for preparing communities for relocation.”

The “violation of territorial integrity” is replaced in the final text by a reference to “grave threats to survival and viability, including for some through the loss of territory”. Any reference to “forced displacement” or the need for community relocation has been excised. As one commentator from within the UN system remarked, two topics “toxic” to the Annex 1 countries in climate negotiations are compensation for “loss and damage” and climate-related migration!

The Outcome Statement of the so-called Major Group and Other Stakeholder Forum held the day prior to the official conference, while expressing strong support for many of the SIDS concerns and calls for action in the official document, added a call “to all SIDS members to prioritise climate-induced cross-border displacement in the human rights protection agenda, warranting urgent international attention”.

Since Samoa, Pacific SIDS leaders have continued to articulate their issues in other international forums. In the recent UN Climate Summit, the President of Nauru, as current chair of the Association of Small Island States (AOSIS), reiterated the urgent need for capitalisation of the Green Climate Fund and quick development of the Warsaw International Mechanism for Loss and Damage. And in the UN General Assembly immediately following the Summit, King Tupou of Tonga called on Ban Ki-moon to appoint a Special Representative to research the link between Climate Change and Security.

*Wendy Flannery is a member of Climate Frontlines, FoE Brisbane*

*Small Island Developing States conference website: [www.sids2014.org](http://www.sids2014.org)*

# Why renewable energy matters

Jenny Riesz

With all the debate around climate change and renewable energy, it can be easy to forget why it all matters so much. Here's why it matters to me.

A few years ago I had the good fortune to be working in the Solomon Islands. While there, I ended up on a beach with Christina, a fourteen year old Solomon Islander. We sat under the coconut trees, watching the afternoon sun on the waves, and her two younger sisters giggling and splashing in the surf.

We chatted about life, and what it was like to be a fourteen year old growing up in the Solomon Islands. The Solomons is one of the poorest countries in the world, and most people are subsistence farmers, meaning that they eat what they grow. If there is a drought, or they can't catch enough fish, they go hungry.

We chatted about school, her family and friends, and her hopes for the future. During the conversation, Christina asked me why I was in the Solomon Islands. They don't get a lot of tourists in that part of the world. I said I was working on climate change, and then paused. I asked her "have you heard about climate change?" She shook her head.

And so it was that I had to tell Christina about climate change. I had to tell her what it will mean for the Solomon Islands. I had to tell her what it will mean for her people, for her sisters, and for her. And I had to tell her that it wasn't caused by the Solomon Islands. I had to tell Christina that this problem was caused by my country, and all the other wealthy countries in the world. I had to tell her that we have the solutions, but we continue to choose not to implement them.

And I felt so ashamed. I felt ashamed because it simply isn't fair for Australia to take away the future of other countries. I felt ashamed to be an Australian. That's why we all have a responsibility to solve this problem. That's why I work on renewable energy. All the research done by myself and many others is telling us that renewable energy is an easy, cost effective way to reduce greenhouse gas emissions. In addition to being a massive part of solving the climate change problem, shifting to renewable energy will be good for Australia. It will protect us against electricity price rises, stimulate our economy, create jobs and diversify incomes for farmers and remote communities.

Do you know what Christina did, after I talked to her? She wasn't angry. She didn't accuse or get upset. She just listened calmly, nodding. Later that year I organised a competition for a scholarship to go to Canada, and Christina - the youngest entrant - won hands down. Imagine this fourteen year old who had never left the tropical Solomon Islands before, dressed in a beanie and gloves, speaking to a rally of thousands of Canadians. Surrounded by microphones and foreigners, she told them about what climate change means for her, and her country, in her quietly passionate way.

Later that year I organised for a number of young people from the Solomon Islands to go to the United Nations meeting in Copenhagen, Christina among them. While at the UN, she was selected from among the hundreds of youth attending to speak to the UN assembly on behalf of the youth of the world. She said to the UN delegates, "You have been negotiating for my entire life. You cannot tell me you need more time".

We don't need to be ashamed of our country. Renewables are ready right now, and we know it's better for us as well as better for the world.

*Dr Jenny Riesz is a research associate at the Centre for Energy and Environmental Markets at the University of New South Wales. <http://jenny.riesz.com.au>*



Christina, a fourteen year old Solomon Islander.

# Renewable energy is ready to supply all of Australia's electricity

Mark Diesendorf

In an article on *The Conversation*, University of Melbourne Professor Emeritus, Frank Larkins wrote that Australia's targets to increase renewable energy will make electricity more expensive, thanks to problems with consistency and storage.<sup>1</sup>

But Professor Larkins is several years behind developments in renewable energy and its integration into electricity grids. In fact, we already have technically feasible scenarios to run the Australian electricity industry on 100 % renewable energy without significantly affecting supply.

Professor Larkins states that hydro, wind, solar depend on "irregular weather patterns, which lead to uncertain and intermittent power output. This is a big challenge for electricity generators and retailers, and it can cost lots of money."

But the problem of 'consistency', or the variability of some renewable energy sources, is now better understood, both from empirical experience with lots of wind power in electricity grids, and from hourly computer simulations of electricity supply and demand performed for many states, countries and global regions.

For instance, South Australia nominally has two coal-fired power stations, several gas-fired ones, and at least 15 operating wind farms. Wind now supplies an annual average of 27 % of South Australia's electricity generation. As a result, one of the coal stations is now shut down for half the year and the other for the whole year. And the state's electricity supply system is operating reliably without the need for any additional non-renewable energy supply.

In Germany, the northern states of Schleswig-Holstein<sup>2</sup> and Mecklenburg-Vorpommern<sup>3</sup> have about 100 % and 120 % respectively of their electricity generated from the wind. Of course, they use their transmission links with neighbouring states (including each other) to assist in balancing supply and demand with such high wind penetrations.

But Australia's National Electricity Market<sup>4</sup> (NEM) has no such links to other electricity supplies. How could it increase generation from renewable energy without hurting electricity supply?

At UNSW Ben Elliston, Iain MacGill and I have performed thousands of computer simulations of the hour-by-hour operation of the NEM with different mixes of 100% commercially available renewable energy technologies scaled up to meet demand reliably.

We use actual hourly electricity demand and actual hourly solar and wind power data for 2010 and balance supply and demand for almost every hour, while maintaining the required reliability of supply. The relevant papers,<sup>5</sup> published in peer-reviewed international journals, can be downloaded from my UNSW website.<sup>6</sup>

Using conservative projections to 2030 for the costs of renewable energy by the federal government's Bureau of Resources and Energy Economics<sup>7</sup> (BREE), we found an optimal mix of renewable electricity sources.<sup>8</sup> The mix looks like this: wind 46 %; concentrated solar thermal<sup>9</sup> with thermal storage 22 %; photovoltaic solar 20 %; biofuelled gas turbines 6 %; existing hydro 6 %.

So two-thirds of annual energy can be supplied by wind and solar photovoltaic – energy sources that vary depending on the weather – while maintaining the reliability of the generating system at the required level. How is this possible?

It turns out that wind and solar photovoltaic are only unable to meet electricity demand a few times a year. These periods occur during peak demand on winter evenings following overcast days that also happen to have low wind speeds across the region.

Since the gaps are few in number and none exceeds two hours in duration, there only needs to be a small amount of generation from the so-called flexible renewables (those that don't depend on the vagaries of weather): hydro and biofuelled gas turbines. Concentrated solar thermal is also flexible while it has energy in its thermal storage.

The gas turbines have low capital cost and, when operated infrequently and briefly, low fuel costs, so they play the role of reliability insurance with a low premium.

Our research, together with similar extensive hourly computer simulations by others spanning up to a decade from Europe and the USA (reviewed in Chapter 3 of *Sustainable Energy Solutions for Climate Change*<sup>10</sup>), refute Professor Larkins' statement that "We need baseload electric power [from non-renewable sources] to guarantee security of supply".<sup>1</sup>

Many regions of the world could operate a 100 % renewable electricity system reliably without any baseload power stations. Indeed, in electricity supply systems with a lot of renewable energy, inflexible coal and nuclear baseload power stations get in the way. What we really need to balance the variability of wind and photovoltaic solar are the flexible renewable energy power stations: hydro, solar thermal and biofuelled gas turbines.

This mix needs only a little storage from hydro and solar thermal to maintain reliable supply. With enough fuel, biofuelled gas turbines could also be considered storage. Such a mix has no need for expensive batteries or hydrogen fuel cells.

Using BREE's conservative projections for the costs of renewable energy technologies in 2030, we find that the cost of 100 % renewable energy is A\$7–10 billion per year



Renewable energy use in different countries		
Country	Renewable electricity contribution in 2012 or 2013	Targets for renewable electricity
Denmark	30% from wind + some bioenergy from agricultural residues	50% from wind by 2020; 100% from renewable energy by 2035
Germany	About 21%	80% by 2050
Scotland	35% (mostly hydro)	100% net by 2020
Australia	13% in 2012-13	41,000 GWh/year (about 25%) by 2020

more than that of the existing polluting fossil-fuelled system. Although this is a 50 % increase, it is likely to be less than the damage caused by the increased frequency of heatwaves, droughts and floods in a business-as-usual scenario.

The renewable scenarios would be economically competitive with the fossil system either with a carbon price of A\$50 per tonne of CO<sub>2</sub> (reflecting part of the environmental and health damage from fossil fuels) or, in the absence of a carbon price, by removing the existing subsidies to the production and use of fossil fuels and transferring them temporarily to renewable energy.

As an alternative to BREE's cost estimates, Bloomberg New Energy Finance calculates that wind and solar are already cheaper than new build coal and gas in Australia.<sup>11</sup> If this is correct, 100 % renewable systems are already economically competitive with a new fossil-fuelled system.

Is Australia's Renewable Energy Target<sup>12</sup> of 41 000 gigawatt hours per year in 2020 "ambitious"? Not on a world scale. The table compares several countries' renewable energy contributions, as well as their official long-term targets.

Considering that Australia has much greater solar energy and wind potential than the European countries, its present renewable contribution and its 2020 target are both modest.

Moving to 100 % renewable electricity is safe, technically feasible and affordable. It can cut greenhouse gas and other emissions and land degradation, while creating local jobs and energy security. It is ready to go!

*Reprinted from The Conversation: <http://theconversation.com/renewable-energy-is-ready-to-supply-all-of-australias-electricity-29200>*

*Mark Diesendorf is Associate Professor and Deputy Director, Institute of Environmental Studies, UNSW.*

## It's time for Australia's next light bulb moment

Richard Keech

In 2007, the then environment minister Malcolm Turnbull regulated light bulbs. This resulted in making the common worst performing light bulbs illegal by setting a mandatory minimum energy performance threshold. As a result of this regulation, householders save much more in avoided electricity consumption than they spend on more expensive light bulbs.

Contrary to popular belief, this regulation did not ban incandescent light bulbs. Halogen bulbs *are* incandescent – just a slightly more efficient version. Turnbull's regulation just set the bar a little bit above the worst performing at the time. So the current crop of just-legal light bulbs are still incandescent, cheap poor performers. These halogen bulbs consume about 70 W where the old (now illegal) bulbs consumed about 100 W for the same performance. Compact fluorescent and LED light bulbs, now readily available, provide the same light output for less than 20 W.

Perhaps it's now time for the next light bulb moment. The current standard for 1300 lumen general light bulbs (i.e. the old 100 W bulbs) is currently a minimum of 16 lumens per watt. Good commonly available lights achieve better than 70 lumens per watt, and very high performance LEDs are on the way that will give 200 lumens per watt. So the current standard sets the bar way too low. And the current marketing of the worst performing lights as energy efficient needs to be shown for the silly greenwash that it is. The government needs to finish what it started and raise the bar to properly outlaw low performance lights.

*Richard Keech is sustainable buildings researcher with Beyond Zero Emissions. [www.bze.org.au](http://www.bze.org.au)*

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# Book Reviews

## Art in Nature

*Art in Nature*

David Rennie

Exisle Publishing [www.exislepublishing.com.au](http://www.exislepublishing.com.au)

RRP \$55

November 2014

Also available as a Leather Bound Limited Edition

The Mandurah Wetlands of Western Australia are one of the most vulnerable ecosystems on the planet. Protected by the Ramsar convention they are home to over 100 species of bird. They are part of a global network of environments essential to the breeding cycle of many migratory species, some from as far away as Russia.

In *Art in Nature*, photographer David Rennie captures glimpses of the raw and natural beauty of this threatened landscape. David, who suffers from bipolar disorder, would often be in the field day and night. In manic times, unable to sleep, he would stalk the birds he loved to photograph, capturing “the perfect second in which light and landscape rendered their magic”.

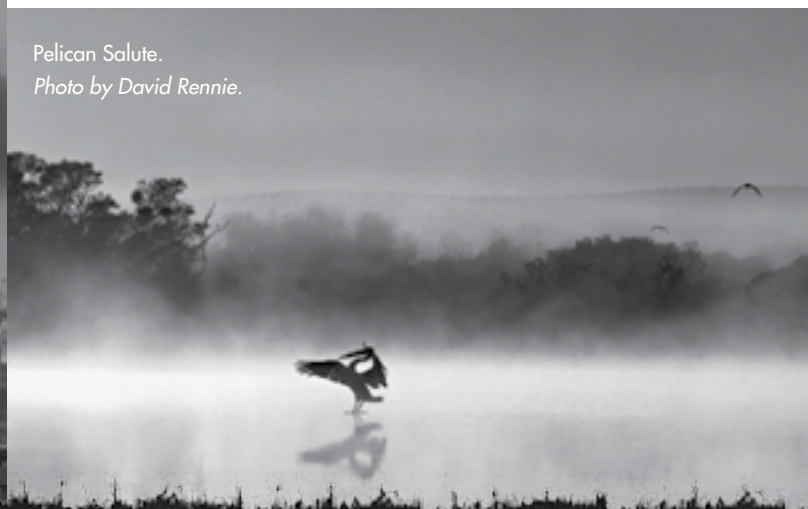


*Art In Nature* includes a selection of the strikingly memorable images that now comprise his vast collection. The result is a book that will captivate not just bird lovers but all who appreciate the art we find in nature.

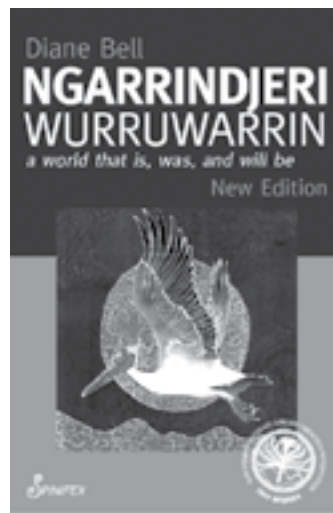
Reviewer Nicholas Cadey writes: “This is a very special book for many reasons, but the first that come to mind – after my wife and I have poured over every page – is that it’s such a comprehensive and intimate view of wildlife that we never get to see. One of my favorite things is that every stunning image seems to be accompanied by a witty insight or a fun title. This book is definitely not the dry coffee table fodder that you see so much of, it’s full of beautiful images, some cheeky, some surprising and very often images that you’d never be so lucky to see.”

David Rennie has won many awards for his work, including the prestigious Australian Geographic ANZANG Nature Photographer of the Year in 2013.

More information: [www.artinnature.com.au](http://www.artinnature.com.au), [www.davidrennie.com](http://www.davidrennie.com)



## Ngarrindjeri Wurruwarrin



*Ngarrindjeri Wurruwarrin:  
A World That Is, Was, and Will Be*

Diane Bell

Spinifex Press [www.spinifexpress.com.au](http://www.spinifexpress.com.au)

ISBN: 9781742199184

June 2014

RRP: \$39.95, eBook: \$24.99

In *Ngarrindjeri Wurruwarrin*, Diane Bell invites her readers into the complex and contested world of the cultural beliefs and practices of the Ngarrindjeri of South Australia; teases out the meanings and misreadings of the written sources; traces changes and continuities in oral accounts; challenges assumptions about what Ngarrindjeri women know, how they know it, and how outsiders may know what is to be known. Wurruwarrin: knowing and believing.

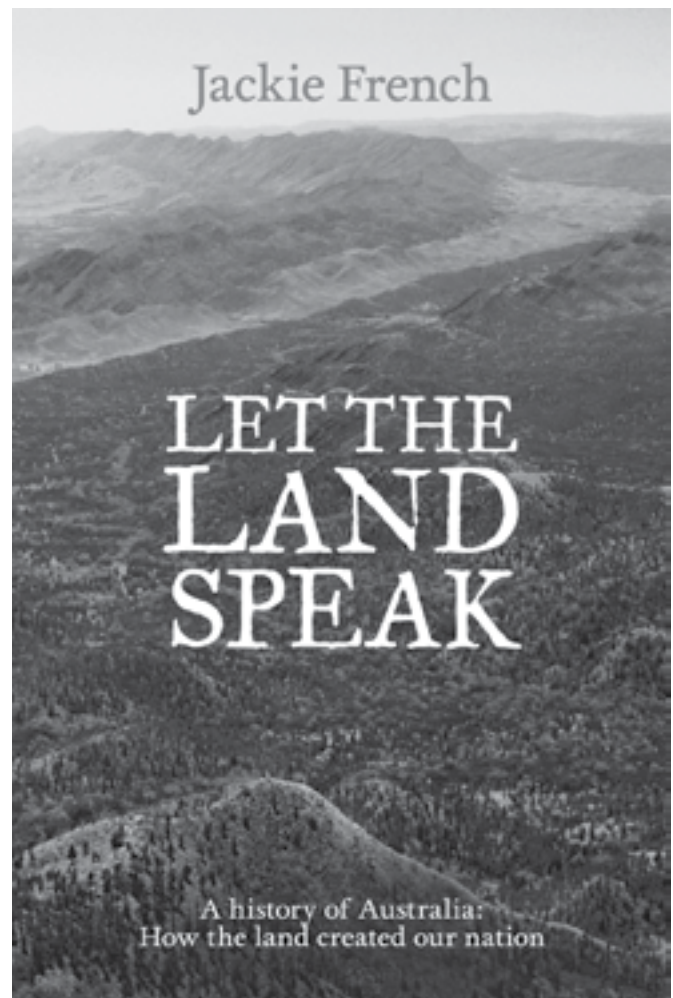
In 1995, a South Australian Royal Commission found Ngarrindjeri women to have “fabricated” their beliefs to stop the building of a bridge from Goolwa to Hindmarsh Island. By 2001, in federal court, the women were vindicated as truth-tellers. In 2009, the site was registered, but scars remain of that shameful moment.

In the Preface to the new edition of *Ngarrindjeri Wurruwarrin*, Bell looks to the world that “will be”, where talented, committed Ngarrindjeri leaders are building the infrastructure for future generations of the Ngarrindjeri nation and challenging the very foundation of the state of South Australia.

Diane Bell writes as an insider who is clear about the bases of her engagement with her Ngarrindjeri friends and colleagues. The story will continue to unfold. There is unfinished business.

Diane Bell is Professor Emerita of Anthropology at The George Washington University, DC, USA and Writer and Editor in Residence at Flinders University, South Australia. She has written of matters concerning Aboriginal society with particular emphasis on land rights, native title, law reform, women's rights, violence against women, religion and the environment.

Christine Nicholls writes in *Times Higher Education*: “Bell's greatest achievement in *Ngarrindjeri Wurruwarrin* lies in her truthful rendering of the complexities and internal contradictions of the current Ngarrindjeri position, without underplaying the hard questions ... magisterial work.”



## Let the Land Speak

*Let the Land Speak*

By Jackie French

October 2013

HarperCollins

ISBN: 9780732296759

RRP: \$39.99, e-book available

Storyteller, historian and ecologist Jackie French's exploration of our country's past has taken 50 years to write and encompasses thousands of year's worth of knowledge. French has spent decades listening to and living from the land. She grows 272 kinds of fruit in her garden, sings to wombats and knows how to build an earth oven, a roof out of stringybark and find water in the desert.

Through her understanding of our land and the way our ancestors lived, French shows how we can predict floods and bush fires before they happen and why boats will continue to arrive on our shores – just as they have for the last 60,000 years.

Reinterpreting the history we think we all know – from Terra Incognita to Eureka, from Federation to Gallipoli and beyond, French shows us how the land has been instrumental in creating our nation.

*Let the Land Speak* is a rich insight into our past, and a glimpse into what we can do to shape Australia's future.



## The Green Leaf

*The Green Leaf / La Feuille Verte*

Mariette Perrinjaquet-Spertini

Classic Press, 2013, Melbourne

ISBN 978-0-646-56875-1

Review by Linda Delory

Is it possible to feel related to the environmental cause when our lives are daily so disconnected from nature? The painter, sculptor and illustrator Mariette Perrinjaquet-Spertini, born in Switzerland and having worked in Australia since 1961, shares some inspiring visions in her poetic and spiritual production *The Green Leaf / La Feuille Verte*, combining insightful drawings and text in both English and French.

In a modern parable, using simple text accompanying the gentle and pastel tones visions drawn with a clean line, the artist shares her love for nature and her desire to pass it on to the next generation. She also draws a harsh picture of our current system alienating individuals and producing a deep lack of connection to our own nature.

The book starts with the androgen universal character, Humanus, discovering in the mirror 'the face of his own alienation', in a cold, polluted, mechanical world. The spiritual awakening is then symbolised by the observing self, Spiritus, breaking free from the cage that was willingly created, and then left with a barren land, growing an inner seed which will take time and hope.

The simplicity of the text, leaving just the necessary, gives a refreshing space for the mind to wander in the powerful illustrations and gives the pure and striking impression of a Japanese Haiku. This book is a deep, conscious breath, to share with everyone and especially kids.

*The book can be bought in Rewadings book store in Melbourne.*

## Earth Jurisprudence: Private Property and the Environment

*Earth Jurisprudence: Private Property and the Environment*

By Peter D. Burdon

Routledge

2014

Hardback \$125, also available as an e-book  
978-0-415-63317-8

The idea of human dominion over nature has become entrenched by the dominant rights-based interpretation of private property. Accordingly, nature is not attributed any inherent value and becomes merely the matter of a human property relationship. *Earth Jurisprudence: Private Property and the Environment* explores how an alternative conception of property might be instead grounded in the ecocentric concept of an Earth community. Recognising that human beings are deeply interconnected with and dependent on nature, this concept is proposed as a standard and measure for human law.

This book argues that the anthropocentric institution of private property needs to be reconceived; drawing on international case law, indigenous views of property and the land use practices of agrarian communities, Peter Burdon considers how private property can be reformulated in a way that fosters duties towards nature. Using the theory of earth jurisprudence as a guide, he outlines an alternative ecocentric description of private property as a relationship between and among members of the Earth community.

Peter Burdon is a Senior Lecturer at the Adelaide Law School, deputy chair of the International Union for the Conservation of Nature Ethics Specialist Group, and a member of Friends of the Earth, Adelaide.

More information: [www.taylorandfrancis.com/](http://www.taylorandfrancis.com/)

## The Coral Battleground

*The Coral Battleground*  
Judith Wright

Spinifex Press [www.spinifexpress.com.au](http://www.spinifexpress.com.au)

ISBN: 9781742199061

RRP: \$29.95, eBook: \$19.99

May 2014



Just as in the late 1960s when the Great Barrier Reef was threatened with limestone mining and oil drilling and a small group of dedicated conservationists battled to save the Ellison Reef, today we must again fight to save the Reef. The Reef is again facing threats from mining, government and corporate interests. Once again a battle looms to protect this unique world heritage environment from vested interests that only seek commercial gain.

Therefore it is timely that Spinifex has republished Judith Wright's *The Coral Battleground* which includes a foreword by Margaret Thorsborne AO, conservationist and environmental activist. *The Coral Battleground* shows how a small group of dedicated activists can change history and will hopefully inspire a new generation to join the fight to save the Great Barrier Reef.

Judith Wright is one of Australia's best known poets. She was also an ardent conservationist and activist. Over a long and distinguished literary career, she published poetry, children's books, literary essays, biographies, histories and other works of non-fiction. Her commitment to the Great Barrier Reef began in 1962, when she helped found the Wildlife Preservation Society of Queensland. She went on to become a member of the Committee of Enquiry into the National Estate and life member of the Australian Conservation Foundation.

Germaine Greer writes: "It will come as a surprise to most people that so many of the issues confronted in the 1960s by the doughty campaigners against drilling for oil on the barrier reef are still alive. We will have to be as determined and as persistent as they if we are to protect what is now a World Heritage Site from pollution, dredging, dumping, coral bleaching and pest species."

Bob Brown writes: "Where is the fire in their belly? Judith Wright asked me of the millions who claim to be environmentalists but do nothing or, worse still, vote for the wreckers. Her *Coral Battleground* is a call to action from last century to save the Great Barrier Reef from ending up as a barren ruin this century. This book is a classic of ecological literature."



## Poisoned Planet

*Poisoned Planet*

*How constant exposure to man-made chemicals is putting your life at risk*

Julian Cribb

Published: June 2014

RRP: \$27.99

ISBN: 9781760110468

We want things to be cheap, convenient and useful. Our food arrives contaminated with pesticides and wastes, wrapped in plastic made of hormone-disrupting chemicals. We bathe and dress our children in petrochemicals. Even our coffee contains miniscule traces of arsenic, cup by cup adding to the toxins accumulating in our bodies.

Man-made chemicals are creating a silent epidemic. Our children are sicker; cancer, obesity, allergies and mental health issues are on the rise in adults; and frighteningly, we may be less intelligent than previous generations.

A poisoned planet is the price we pay for our lifestyle, but Julian Cribb shows we have the tools to clean it up and create a healthier, safer future for us all.

Julian Cribb is a distinguished science writer with more than thirty awards for journalism. He was a newspaper editor, founder of the influential ScienceAlert website and author of eight books, including *The Coming Famine*.

Academic Clive Hamilton says: "How could one species poison an entire planet, from the poles to the stratosphere and down to the ocean floor? In this meticulously researched yet highly readable book Julian Cribb tells us how it happened, and what we might do about it."

[www.allenandunwin.com/default.aspx?page=94&book=9781760110468](http://www.allenandunwin.com/default.aspx?page=94&book=9781760110468)

## Banning landmines one step at a time

*One Step At a Time*

Jane Jolly (author) and Sally Heinrich (illustrator)

MidnightSun Publishing

February 2015

Review by Helen Stranger

At first glance a young elephant injured by a landmine might seem an unlikely topic for a picture book for young children; certainly there would be little or no competition for such a niche. Yet this book is highly engaging rather than scary.

This touching story begins with a baby elephant foraging for bananas in a jungle clearing. The peaceful scene is violently disrupted by the explosion of a hidden landmine. Such a situation is a fact of life in many areas of historic conflict such as South-East Asia, where borders have been disputed and remnants of war still contaminate the land, causing hazards for people and wildlife.

How can young children be informed sensitively of such dangers, without inducing terror? In this picture book, author Jane Jolly and illustrator Sally Heinrich succeed in bringing a comforting message of courage, bravery and love. The text and delightful illustrations combine to show the characters coping with adversity and coming at length to a happy ending. They are assisted by the community and watched over by benign Buddhist monks.

This uplifting book celebrates the close relationship between the young elephant Mali and the boy Luk who cares for her so tenderly as she is returned to health and supported to walk once more – one step at a time.

Author Jane Jolly has had three picture books in the Children's Book Council Australia Book of the Year Awards. Jane strongly believes in the fight to rid the world of landmines and cluster munitions, and in teaching empathy to



children through stories so that future generations may live more peaceful lives. Jane has promised 50% of her Royalties to SafeGround (formerly known as the Australian Network to Ban Landmines), which seeks to reduce the impacts of war.

Illustrator Sally Heinrich has been recognised through fellowships from the Asialink Foundation, the May Gibbs Children's Literature Trust, Varuna – the Writers' Centre, Arts SA and the Ian Reed Foundation. Her original artwork and linoprints have been exhibited in Australia and Asia. Sally believes that picture books are a powerful tool to communicate ideas and build bridges of understanding between people from different cultures and backgrounds.

Publication of the book was made possible by a Pozible Crowdfunding campaign, and the funding exceeded the \$10,000 target initially set for printing and shipping expenses. The surplus is enabling Jane and Sally to travel to schools and regional centres for author visits, and will also go towards translation into the languages of the region where the book is set.

*One Step at a Time* is published by Anna Solding of MidnightSun Publishing. It is currently in production, and the launch in Adelaide is planned for February 2015. For further information, keep up to date with the blog: [www.lukandmali.wordpress.com](http://www.lukandmali.wordpress.com)

*Helen Stanger is the South Australian Coordinator on the SafeGround Committee, which has warmly embraced the project to fund and publish this book.*  
[www.safeground.org.au](http://www.safeground.org.au)



# Nuclear Disaster at Fukushima Daiichi: Social, Political and Environmental Issues

*Edited by Richard Hindmarsh*

*Routledge*

2013

*Also available as an e-book*

[www.routledge.com/books/details/9780415527835/](http://www.routledge.com/books/details/9780415527835/)

## Fukushima

*Mark Willacy*

ISBN: 9781742612959

2013

RRP \$32.99, also available as an e-book

*Macmillan Australia*

[www.panmacmillan.com.au/display\\_title.asp?ISBN=9781742612959](http://www.panmacmillan.com.au/display_title.asp?ISBN=9781742612959)

*Fukushima* is the story behind the twin catastrophes of the March 2011 tsunami and nuclear meltdowns, seen through the eyes of witnesses and victims – from the mother patiently excavating the mud and debris left by the tsunami as she looked for the remains of her daughter; to the prime minister of the day, Naoto Kan; to the TEPCO plant director of Fukushima Dai-Ichi and his senior engineers; to the elite firefighters who risked their lives to avert the ultimate nuclear nightmare. The book is written by Mark Willacy, a Tokyo-based correspondent for the Australian Broadcasting Corporation.

Villains are identified, including the “nuclear village” of power companies, politicians and bureaucrats, aided by a compliant media. And heroes are identified, including the nuclear plant’s manager, the ‘Fukushima 50’ who stayed behind and the ‘samurai firemen’ who worked to prevent an even bigger disaster, along with the individual officials, scientists, journalists and others who battled against a complacent establishment.

“There’s this view that you’re either pro- or anti-nuclear in covering this disaster, and I’m not either,” Willacy told *Japan Times*. “My reporting is about exposing official corporate and regulatory failings. The government ignored repeated warnings from their own panel members, their own seismologists and their own committees. I find it horribly ironic that TEPCO of all people had the closest, most accurate simulation of anyone – their 15.7-metre tsunami wave forecast was the closest anyone got to what actually happened on March 11.”

Willacy argues that Japan has much to learn from the nuclear disaster, including the need for independent regulators, an end to jobs for bureaucrats in nuclear companies and reform of the ‘kisha club’ media system that helped prevent scrutiny. He warns that another Fukushima is possible if the lessons of the disaster are ignored.

Informed by a leading cast of international scholars, including Japanese scholars on the ground as the disaster unfolded, this collection of essays sets the Fukushima disaster against the background of social, environmental and energy security and sustainability. It provides insights into its background and the disaster management options taken and the political, technical and social reactions as the accident unfolded, and critically reflects on both the implications for managing future nuclear disasters and the future of nuclear power itself.

Contributors note that a history of pro-nuclear government policies led to safety, siting and construction of nuclear reactors compromised in a number of areas that inadvertently invited natural disaster. Post-disaster, the book probes the flawed disaster management options taken as radioactive pollution began spreading; and the political, technical, and social reactions as the meltdown unfolded.

The book is edited by Assoc. Prof. Richard Hindmarsh, an Australian academic and co-founder of the Asia-Pacific Science, Technology and Society Network.

The essay titles are as follows:

- Nuclear Disaster at Fukushima Daiichi: Introducing the Terrain
- Social Shaping of Nuclear Safety: Before and After the Disaster
- Social Structure and Nuclear Power Siting Problems Revealed
- Megatechnology, Siting, Place and Participation
- Environmental Infrastructures of Emergency: The Formation of a Civic Radiation Monitoring
- Post-Apocalyptic Citizenship and Humanitarian Hardware
- Envirotechnical Disaster at Fukushima: Nature, Technology and Politics
- Nuclear Power after 3/11: Looking Back and Thinking Ahead
- The Search for Energy Security After Fukushima Daiichi
- The Future Is Not Nuclear: Ethical Choices for Energy after Fukushima
- Nuclear Emergency Response: Atomic Priests or an International SWAT Team?

# Maralinga: a chilling exposé

*Maralinga: the chilling exposé of our secret nuclear shame and betrayal of our troops and country*

Frank Walker

Hachette Australia [www.hachette.com.au](http://www.hachette.com.au)

August 2014

RRP \$32.99

ISBN 9780733631900

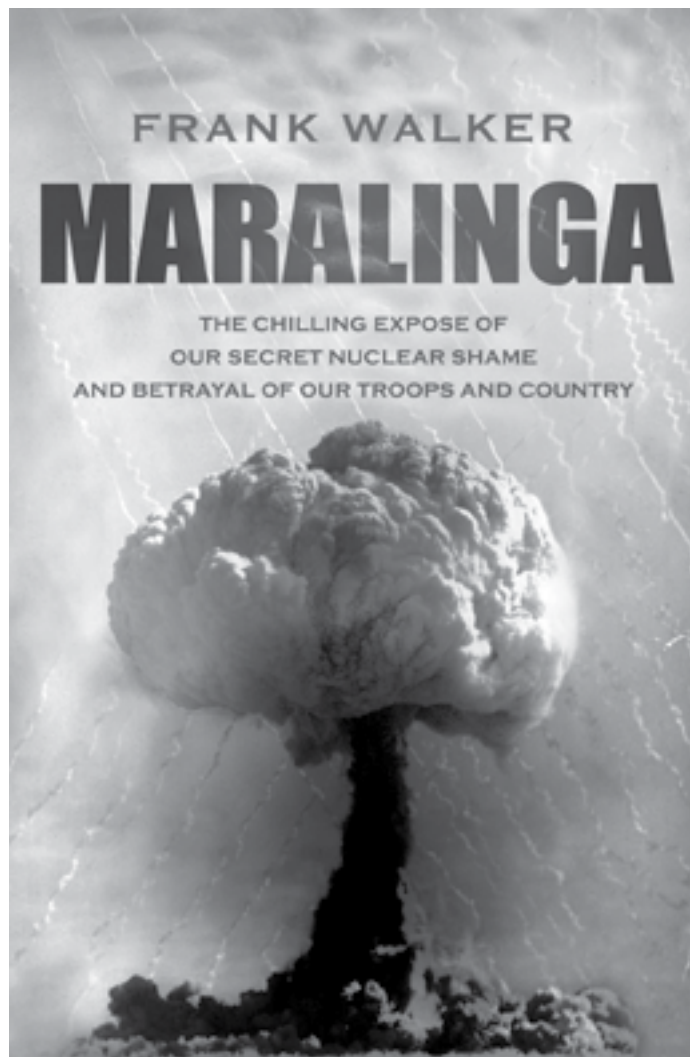
Nine atomic bombs were detonated at Maralinga and Emu Field in South Australia by the British, with the full support of the Menzies Government, between 1952 and 1957. Another three were detonated at the Monte Bello Islands off the coast of WA. After being asked to provide media assistance to a legal firm attempting to win compensation for victims affected by radiation, veteran investigative journalist Frank Walker became intrigued with the scale of the injury done to servicemen and women, Aboriginal people and the landscape.

The crimes and cover-ups discussed in Walker's book include:

- Aborigines had their traditional lands stolen from them and poisoned, and were left in the test region to be killed by the fallout.
- Around 22,000 corpses of children and young people were pilfered for bones and tested for strontium-90. Families were not told, autopsy workers were bribed, results were not revealed – all with the acquiescence of the Australian government.
- Australian airmen were ordered to fly repeatedly through the mushroom clouds of atomic bombs, with no protection.
- Australian soldiers were ordered to march into ground zero minutes after explosions, even roll in radioactive dust, with no protection.
- Australian officers were placed in shelters as close as 1600 m from a nuclear explosion. (The goal was to show that soldiers in a nuclear war could be near a blast and still be fit for battle.)
- Clouds of radioactive material drifted across the continent to drop 'radioactive rain' on Queensland farms, country towns and Brisbane.

On the broad objectives of the British, Walker writes: "What the British wanted to know was could a nation survive an atomic war? ... Could they grow food? Could the people survive? Would the children grow up to be adults? This was what they wanted to know and this was why the instructions were to have men positioned at certain distances from the blast to see whether they could function afterwards."

Australia gained nothing from the tests yet Australians lost a great deal: "Britain controlled everything – from the scientific knowledge to having overall military authority over the tests and the testing ground. Australians were there simply to provide the labour, the bodies needed to get the tests done, the



land to explode the bombs on, and, as it was later revealed, to function as lab rats for the British scientists."

Walker writes in the Prologue:

*File number DEFE 16/808 exposes in chilling scientific language that the agenda of the British on that bright sunny spring day was to turn the whole of Australia into one giant nuclear laboratory. They wanted to use the Australian population as human guinea pigs for decades to come.*

*First, the scientists agreed that in order to find out the amount of fallout the nine atomic bombs had already caused on Australia they needed to collect samples of soil from pasture regions near the five mainland cities – Perth, Sydney, Brisbane, Melbourne and Adelaide.*

*Second, they would test vegetation and thirdly, they wanted samples of dairy cows' milk. The reason was simple – radioactivity spread through the air from atomic tests falls on soil, grass grows in soil, cows eat grass, cows produce milk and, finally, humans – particularly children – drink the milk. ...*

*"Animal samples," said [British nuclear scientist Ernest] Titterton. "We have to have bones from animals to see if Strontium-90 is getting into domestic animals."*

*After some discussion of the mechanics of the sampling, the scientists decided to take samples from twelve sheep stations 200 to 300 miles (482 to 804 kilometres) along the path the radioactive clouds would be expected to drift in the prevailing winds. Not satisfied with that, they decided to increase the sampling all the way to the east*



coast to see what happened when radioactive clouds reached the most populated areas of Australia.

Titterton looked around at his fellow scientists. So far so good. No objections to where this was going. No questions about the morality of what they were doing to the people of Australia.

Never one to be squeamish or subtle, he spelled out the next step. "We have to find out if Strontium-90 is entering the food chain and getting into humans."

The biggest consumers of milk are babies, infants and young children. Milk was handed out free at Australian schools. If the scientists got bones from babies and Aussie kids, they'd quickly and efficiently know how much fallout was getting into the food chain. Babies and kids would be best for the test as their bones were still growing and Strontium-90 collects in the bones.

None of the scientists questioned what they were about to embark on. The group nodded to each other. This was science. They were all professionals. The group agreed they needed to take the bones of dead Australian babies to test for Strontium-90.

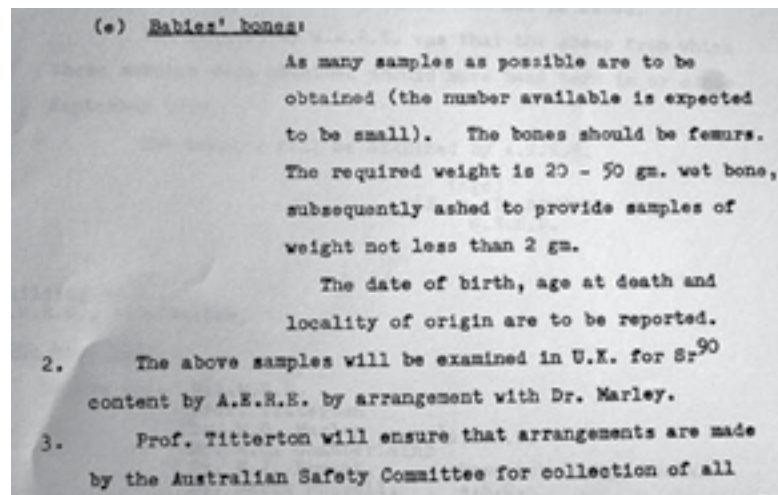
How many bones wasn't up for discussion. It was simple. The more bones from dead babies the better. There were no questions. It was all written down.

"As many samples as possible are to be obtained," the official minutes of the meeting recorded. The minutes noted, as though this might be a problem, that the number of dead babies would probably be small.

The scientists didn't discuss the morality of taking baby bones from grieving Australian families. They didn't think it necessary to ask Australians whether they could rob graves for bones. ...

Professor Titterton said he would make arrangements for the Australian Safety Committee to collect all the samples and dispatch them to the UK. Titterton would make it happen. He was supposed to be representing the interests of Australians on the Atomic Safety Committee. In reality he was running the experiments and the atomic tests solely for Britain.

The scientists' concern that the number of dead baby bones they could get would be low proved to be unfounded. They underestimated the enthusiasm of



Above: File number DEFE 16/808.

Below: Maralinga veteran and whistle-blower Avon Hudson.

Photo by Jessie Boylan.



*pathologists, morticians and autopsy attendants for a quick buck.*

*Workers were more than happy to extract thigh bones from baby corpses in a cash-in-hand deal with the collectors for the atomic scientists. Distraught parents were not to be asked for permission. They weren't to be told what was happening to their lost loved ones. It was to be done in a clandestine operation that would last for decades.*

*Over the next twenty-one years a staggering 22,000 corpses of babies, infants, children, teenagers and younger adults were pilfered for bones and tested for Strontium-90. It was the longest experiment of its kind in the world. The data gleaned by the body snatchers went not to Australia, but to nuclear authorities in the UK and the US. It was used to further both the nuclear industry and the development of nuclear weapons.*

*This is the story of how the people of Australia were unknowingly used as guinea pigs in bizarre nuclear tests. It is the story of the betrayal of a nation and its people by its political leaders.*

*It is the continuing disgrace of thousands of servicemen being lied to and treated like dirt by successive governments.*

*It began with the worst act of betrayal against Australians*

Maralinga Village, 2011.

Photo by Jessie Boylan.



*by their Prime Minister, Robert Menzies. Robert Menzies couldn't say yes quickly enough when Britain asked if they could explode their atom bombs in Australia. The Australian prime minister received the polite and rather casual request on a Saturday. He said yes on Monday.*

*A longer extract can be downloaded at:  
[www.bachette.com.au/books/detail.  
page?isbn=9780733631900](http://www.bachette.com.au/books/detail.page?isbn=9780733631900)*



## Album Review

### The Yearlings, All the Wandering

Review by Anthony Amis

*"This pancake land / the dust and the sand / white picket crosses / scattered over our land."*

I reckon what hooks me most when listening to music these days is mystery. The lingering possibility of something undefined, either good or bad, that could unravel at anytime when you least expect or want it to occur.

*All the Wandering*, by Adelaide duo The Yearlings, is full of mystery. It evokes all kinds of emotions in me that I can't exactly pin down. The first and ninth songs would make Emmylou Harris proud and the rest of the album verges on impressive cosmic country-tinged blues that would make Gram Parsons, or even Nick Drake smile - if they could.

The Yearlings' sound absorbs Australian landscapes like a sponge, allowing fragile harmonies to mix perfectly +with sly lyrical observations backed by spare use of electric and acoustic guitars. Horns also come into play on some tracks and some of the guitar playing is really cool, particularly on tracks like *What Becomes of Love*, *Breathless Eric* and perhaps the best track on the album *Way Out East*, which features excellent desert-fried lead guitar.

The album reminds me in part of the best country album I've heard in the past decade, the hauntingly beautiful *Between Here and the Night* by The Hired Guns, another band rooted in the often parched



South Australian environment.

Neil Murray also comes to mind on a couple of tracks.

This is the Yearlings fifth album in a dozen years and the band has toured extensively through Australia and overseas. Robyn Chalklen and Chris Parkinson have chalked up another winner here. This album is probably at the top of my heap for 2014. Get on board!

[www.theyearlings.net](http://www.theyearlings.net)

# Friends of the Earth Australia contacts

## 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*  
email: Wendy Flannery  
wendy.flannery@foe.org.au  
phone: 0439 771 692

### FoE Southwest WA

address: PO Box 6177,  
South Bunbury, WA, 6230.  
phone: Joan Jenkins (08) 9791 6621,  
0428 389087.  
email: foeswa@gmail.com

### Bridgetown Greenbushes Friends of the Forest

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

### 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

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

*Barmah-Millewa Collective:*

Sam Cossar-Gilbert, Collective Coordinator  
email: sam.cossargilbert@foe.org.au  
phone: 0435 844 084  
Will Mooney, Community Campaigner  
email: will.mooney@foe.org.au  
phone: 0404 163 700.

*Dirt Radio:*

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

*Food co-op*

email: food@foe.org.au  
phone: (03) 9417 4382

*Quit Coal:*

phone: 0432 328 107 (Chloe Aldenhoven)  
email: chloe.aldenhoven@foe.org.au  
email: csgfreepoowong@hotmail.com  
website: www.quitcoal.org.au  
facebook: www.facebook.com/quitcoalvic

*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))

### FoE Kuranda

address: PO Box 795, Kuranda, Qld, 4881  
email: info@foekuranda.org  
phone: 0499 207 492 (John Glue)  
website: www.foekuranda.org

## National Liaison Officers:

National Liaison Office: ph (03) 9419 8700.  
PO Box 222, Fitzroy, Vic, 3065.  
Cam Walker (Melb)  
cam.walker@foe.org.au, 0419 338 047  
Shani Tager (Bris)  
shani.tager@foe.org.au, 0432 050 809

## International Liaison Officers

Derec Davies (Bris)  
derec.davies@foe.org.au 0421 835 587  
Sam Cossar-Gilbert (Melb)  
sam.cossargilbert@foe.org.au 0435 844 084  
Nick McClean (Syd)  
nick.mcclean@foe.org.au 0415 775 531

## Affiliate members

### Market Forces

email: Julien Vincent  
contact@marketforces.org.au  
website: www.marketforces.org.au  
twitter: @market\_forces  
facebook: facebook.com/MarketForces

### CounterAct

CounterAct supports communities with training for  
effective, creative, civil disobedience, nonviolent  
action, capacity building and campaigning skills.

Email: Nicola Paris  
nicola@counteract.org.au  
Facebook: www.facebook.com/counteractive  
Twitter: @CounterActOz  
Website: www.counteract.org.au

### Food Irradiation Watch

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

### In Our Nature

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

### Katoomba Area Climate Action Now

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

### Climate Action Blue Mountains

email: info@climateactionbm.org.au  
website: www.climateactionbm.org.au

### Mukwano Australia

Supporting health care in organic farming  
communities in Uganda.  
website: www.mukwano-australia.org  
email: Sam Le Gassick  
sam\_neal13@hotmail.com  
Kristen Lyons, kristen.lyons@uq.edu.au

### Reverse Garbage Co-op (Bris)

address: 20 Burke St, Woolloongabba.  
postal: PO Box 5626,  
West End, Qld, 4101  
phone: (07) 3891 9744  
email: info@reversegarbage.com.au  
website: www.reversegarbage.com.au  
Office days: Mon to Fri

### 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

### Tulele Peisa (PNG) –

‘sailing the waves on our own’  
website: www.tulele-peisa.org

### West Mallee Protection (SA)

email: westmallee@gmail.com

### No Fracking Way (Perth)

email: info@nofrackingway.org.au  
nofrackingway.org.au

## Financial contributions

Gaye McCulloch, finance@foe.org.au  
(03) 9418 8700 (Tues–Thurs)  
Freecall 1300 852 081

## Membership issues

Melbourne: Sam Cossar-Gilbert  
sam.cossargilbert@foe.org.au, 0435 844 084  
Other states – see Local Group contacts.

## National campaigns, active issues, projects and spokespeople

### Anti-Nuclear and Clean Energy (ACE):

phone: 0417 318 368 (Jim Green (Melb))  
email: jim.green@foe.org.au

phone: 0411 118 737 (Robin Taubenfeld (Bris))  
emmail: robintaubenfeld@hotmail.com

### Australian Indigenous Issues:

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

### Carbon Trading:

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

### Climate Justice:

phone: 0419 338 047 (Cam Walker (Melb))  
email: cam.walker@foe.org.au  
phone: 0415 775 531 (Nick McClean (Syd))  
email: nick.mcclean@foe.org.au

### Coal & Coal Seam Gas:

phone: 0432 328 107 (Chloe Aldenhoven)  
email: chloe.aldenhoven@foe.org.au  
phone: 0419 338 047 (Cam Walker (Melb))  
email: cam.walker@foe.org.au  
phone: 0428 487110 (Drew Hutton (Bris))  
email: drew.hutton@foe.org.au  
phone: 0402 337 077 (Shaun Murray (Melb))  
email: shaun.murray@foe.org.au,

### Food:

phone: 0435 589 579 (Louise Sales (Tas))  
email: louise.sales@foe.org.au  
phone: 0400 376 974 (Jeremy Tager (NSW))  
email: jeremy.tager@foe.org.au

### Forests:

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

### Indigenous Communities Campaign – food sovereignty – No Multinationals – Mt Nancy town camp:

phone: 0422 389 831 (Marisol Salinas (Melb))  
email: marisol.salinas@foe.org.au

### Murray-Darling Basin Plan:

phone: 0404 163 700 (Will Mooney (Melb))  
email: will.mooney@foe.org.au,

### Emerging Tech:

phone: 0435 589 579 (Louise Sales (Tas))  
email: louise.sales@foe.org.au  
phone: 0400 376 974 (Jeremy Tager (NSW))  
email: jeremy.tager@foe.org.au  
website: www.emergingtech.foe.org.au

### Nature: Not Negotiable –

Stop the Commonwealth handing over environmental  
approvals powers to state governments:  
website: foe.org.au/nature-not-negotiable,  
facebook: facebook.com/NatureNotNegotiable,  
Twitter: @NatureNotNeg

### Pacific & Torres Strait Islands Climate Justice:

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

### Pesticides & Water:

Anthony Amis (Melb) ajamis50@gmail.com

### Renewable Energy:

phone: 0406 316 176 (Leigh Ewbank (Melb))  
email: leigh.ewbank@foe.org.au

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

# NO NUCLEAR WASTE DUMP IN THE NT



**Congratulations from everyone  
at Friends of the Earth!**

