

chain reaction

Issue #126 | April 2016

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The National Magazine of Friends of the Earth Australia

www.foe.org.au

CLIMATE CAMPAIGNING AFTER THE **U.N. COP21** CONFERENCE



- The Paris Climate Agreement: A step forward?
- Food irradiation
- Climate Wise Women at COP21
- Creative self-destruction and the climate
- We can achieve sustainability – but not without limiting growth
- Climate change and drinking water
- Fukushima Fallout: Updates from Japan

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presents

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**Friends of
the Earth
Australia**

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1

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

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

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

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

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Make the switch to renewable energy and help Friends of the Earth!

Friends of the Earth has partnered with Ethical Switch for a fundraising campaign to focus on the impact that a household's energy choices can make on the environment. Ethical Switch presents a comparison of all electricity providers within an area in terms of carbon emissions, renewable energy investment and customer satisfaction. By choosing one of their high rated providers, customers are directly supporting investment in renewable energy in Australia.

Our partnership with Ethical Switch promotes investment in renewable energy and it also directly benefits conservation. Send a message to our government and to big energy and for each person that switches to one of the Ethical Switch recommended companies, Ethical Switch will donate \$50 to Friends of the Earth. So get behind renewable power and get switching!

Start the switch at www.ethicalswitch.com/friendsoftheearth

Market Forces

Friends of the Earth affiliate Market Forces reports:

The structural decline of the coal industry is about to claim a major scalp. US-based Peabody Energy is facing bankruptcy after its share price has fallen over 99% in recent years. For those of us wanting a transition away from dirty fossil fuels to a clean energy future this is a good sign but we also have to ask: how much are we exposed to the demise of the coal sector? Fairfax has reported how ANZ has written off another \$100 million in bad debts - including to Peabody - and we've recently published a piece pointing out how most of us - through our super - will be wrapped up in all this as a part-owner of Peabody.

We've been making a big deal about how banks and super funds that have custody of our money shouldn't use it to support companies and projects that harm the environment. Well, we need to amend that concern to how institutions that have custody of our money shouldn't squander it away on companies and projects that harm the environment.

Closer to home, Wangan and Jagalingou traditional owners are keeping up their determined fight against Adani's horror Carmichael coal mine proposal, despite reprehensible government support for the project. At the same time, Adani are continuing their search for financial backers, and with ANZ, CommBank and Westpac all still in the mix, we need to keep up the pressure until those banks categorically rule out funding the mine and its associated infrastructure.

We're also looking for help applying pressure to the fossil fuel industry and its supporters at a number of important annual general meetings coming up soon. Please check out our list of upcoming AGMs online, and let us know if you are able to attend or would be willing to authorise a proxy to go in your place. If you have shares in CIMIC (Leighton Holdings), Woodside, QBE, Santos, Rio Tinto, AMP or Oil Search, we'd love to hear from you.

www.marketforces.org.au

contact@marketforces.org.au

ph 03 9016 4449

A changing climate in northern Victoria

FoE has recently launched a campaign to alert people to the changes in the climate that are already happening in northern Victoria and southern NSW. Recent research from the Australian Export Grains Innovation Centre reveals that the region is already experiencing a new climate, one that has become noticeable since about 2000. This is most noticeable in the shift of rainfall patterns.

The analysis shows that rainfall zones have moved - in some cases up to 400 km. Parts of the Mallee, North Central and Riverina are now designated as being 'uniform' rainfall zones, where rain is equally distributed over summer and winter seasons. This has significant implications for cropping in the region, which has traditionally relied on a winter rainfall pattern. As a trend, annual rainfall has significantly decreased in the region and the average temperature since 1950 has already increased by between 1 and 1.5 degrees Celsius.

More information:

www.melbourne.foe.org.au/Bendigo

2015 was a big year for FoE Melbourne's River Country Campaign. Some highlights included:

- Working with local communities and Traditional Owners to coordinate an open day to celebrate the five year anniversary of the declaration of Victoria's Red Gum Parks.
- Lobbying the Victorian government on management of Red Gum forests, including adequate funding, environmental water allocations and pest and weed problems.
- Highlighting the value of Indigenous Protected Areas (as well as some of the challenges they face) through engaging info-graphics, research and advocacy.
- Petitioning the Victorian government to meet its promise to achieve co-management of National Parks with Traditional Owners.

In 2016, we will implement a coordinated plan to ensure that proper conservation and Indigenous rights are recognised in the management of the Red Gum forests, wetlands and waterways of the Murray-Darling Basin. We will work hard toward getting more funding for Parks into the next State budget.

A key focus for next year is building on our relationship with the Wadi Wadi Traditional Owners to secure adequate funding and Indigenous Joint-Management of the Nyah-Vinifera Park, near Swan Hill in North Western Victoria. Nyah-Vinifera Park received \$0 funding last financial year!

The Wadi Wadi Nation were promised co-management in 2010 and have been fighting to secure it ever since. In December we were successful in securing a grant from the Victorian government to conduct threatened species works in the Nyah-Vinifera Park. We will also support local community to bring their concerns and aspirations to Government, so that the natural and cultural values of this special Red Gum forest can survive and thrive.

This is part of our ongoing solidarity work with Traditional Owners, supporting Indigenous people's aspirations to sustain culture and Country. In 2016 we will:

- Work with the Nari Nari Tribal Council, based near Hay, NSW, to support protection of cultural sites and Indigenous natural resource management.
- Build on our advocacy work on Indigenous Protected Areas (IPAs) by producing an in-depth report on challenges and opportunities for the IPA program in South Eastern Australia.
- Work with Aboriginal organisations such as the Murray Lower Darling Rivers Indigenous Nations (MLDRIN) to advocate for proper management of the life-giving waters of the Murray, Darling and Murrumbidgee rivers.

- Morgana Russell, River Country Campaign Coordinator

Strzelecki koala surveys start on private land

Friends of the Earth has started koala surveys on private land in the Strzelecki and South Gippsland regions of Victoria. Two surveys were conducted on the weekend of March 5 and 6, in the Jeeralangs and Middle Tarwin. Access to properties was gained through the circulation of FoE's koala poster (see back cover of Chain Reaction) which is being distributed, emailed and hung throughout the region. Landholders were happy to have positive koala sites on their property and look forward to a public meeting about the findings of the research, tentatively booked for May. On a more disappointing note, Hancock Victorian Plantations has applied to the Latrobe City Council to clear old growth trees in plantation coupes in the region.

Climate change speaking tour

FoE is helping to organise a speaking tour on the climate change driven relocation of atoll peoples in Papua New Guinea, and the implications for climate justice in an Australian context. The visiting speakers will be Ursula Rakova, director of Tulele Peisa, the Carteret Islands relocation program in Bougainville, PNG, and Pais Taehu, a representative of the Nukumanu (Tasman Islands) community of far eastern PNG. The tour, scheduled from 9-22 April, will include speaking events in Sydney, Melbourne and Brisbane, as well as networking, engagement with politicians and media activities.

*More information: Wendy Flannery
wendy.flannery@foe.org.au, 0439 771 692*

A diary of FoE's 2015 campaigning work around Australia is online, with short summaries of campaign work along with photos and videos. It isn't comprehensive but is still well worth a look: www.foe.org.au/articles/2015-12-18/2015-visual-diary



Baaaaan Gas!

Two thousand sheep have run to the top of their spelling class near Hamilton in south-west Victoria – spelling out 'BAN GAS' – as a reminder to the Victorian government that rural communities across Victoria oppose development of an onshore gas industry on their prime agricultural land. A group of local farmers came up with the idea and were able to convince the sheep to form the message across a paddock south of Hamilton.

Mal Rowe, who manages the farm and the sheep, said it was worth the effort in order to encourage the state government to decide against allowing an unconventional gas industry to develop in Victoria: "The risks to the environment, to agriculture, to human health and social harmony were deemed to be too great. We want the Premier Daniel Andrews to give us certainty."

Final push for Victorian Renewable Energy Target

FoE Melbourne's *Yes 2 Renewables* campaign has been leading the charge for a Victorian Renewable Energy Target since February 2014. And we've entered the home straight. The Victorian Andrews government's upcoming 'Renewable Energy Action Plan' will set targets for 2020 and 2025. Victoria can become a safe-haven for renewable energy, but only if the targets are ambitious.

Please send a message to Premier Daniel Andrews, Deputy-Premier James Merlino, and Treasurer Tim Pallas today. You can use our online email tool: www.melbourne.foe.org.au/bring_on_the_vret

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.

Friends of the Earth International Online

Web: www.foei.org

Social media:

www.facebook.com/foeint

www.twitter.com/FoEint

www.youtube.com/user/friendsoftheearthint

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

www.flickr.com/photos/foei

Action alerts:

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

www.foei.org/take-action

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

www.radiomundoreal.fm



Berta Cáceres, 1973-2016.

Honduran activist Berta Cáceres murdered

Berta Cáceres, 2015 Goldman Environmental Prize winner, was murdered in her home on March 3. As the leader of the Council of Popular and Indigenous Organizations of Honduras, Berta rallied her fellow indigenous Lenca people and waged a grassroots campaign that successfully pressured the world's largest dam builder to pull out of the Agua Zarca Dam.

Since the 2009 coup, Honduras has witnessed an explosive growth in environmentally destructive megaprojects that would displace indigenous communities. Almost 30% of the country was earmarked for mining concessions, creating a demand for cheap energy to power future mining operations. To meet this need, the government approved hundreds of dam projects around the country, privatizing rivers, land, and uprooting communities. Among them was the Agua Zarca Dam.

In December 2013, Berta said: "The army has an assassination list of 18 wanted human rights fighters with my name at the top. I want to live, there are many things I still want to do in this world but I have never once considered giving-up fighting for our territory, for a life with dignity, because our fight is legitimate. I take lots of care but in the end, in this country where there is total impunity I am vulnerable ... when they want to kill me, they will do it."

Gustavo Castro Soto, director of Otros Mundos Mexico (Friends of the Earth

Mexico) was staying at Berta's house on the night she was killed. He was wounded in the attack. Soto said in a March 18 statement: "I am in pain for my wounds, although they are getting better, but I am more in pain for my dear Honduran people, who don't deserve this, none of us do. We've always admired this noble, brave people who are fighting for a dignified life for all, where there's room for all, without distinction and with justice. That was Berta's struggle."

Please sign an online petition to:

- call for an independent investigation into the murder of Berta Cáceres
- call for witness Gustavo Castro to be safely returned to Mexico
- demand protection of Honduran environmental and human rights defenders
- support their demand to cancel the Agua Zarca dam

The online petition is posted at: www.foei.org/news/sign-petition-stop-bloodshed-honduras

More information:

www.foei.org/features/concerns-safety-witness-bertha-caceress-murder

www.foei.org/news/letter-gustavo-people-honduras

www.foei.org/features/high-profile-honduran-activist-bertha-caceres-murdered

Dialogue for Forest Protection in Malaysia

On January 22, Friends of Earth Malaysia organised the Roundtable Discussion on Timber Certification with Indigenous Peoples' Representatives of Peninsular Malaysia in Kuala Lumpur. More than 25 representatives from logging-affected indigenous communities participated, along with more than 20 representatives from the forestry department and various other authorities and bodies responsible for indigenous peoples' affairs, timber exportation, timber export promotion, timber plantation development and forest certification. The programme sought to provide the communities with the opportunity to directly inform the various authorities on how current governance conditions and the timber certification process have been failing to protect their rights.

Colombo port city will destroy fishing grounds

The China Communication Construction Company has started filling the sea next to the Colombo Harbor in order to create a 266 hectare modern city with high-rise buildings, casinos and even a Formula 1 racing track. The project will have serious negative environmental social and economic impacts, and in mid-2015 FoE Sri Lanka filed a lawsuit and the project stopped temporarily. It will mine 65 million cubic meters of sea sand in the fishing grounds between Colombo and Negombo in an area of more than 100 square kilometres, putting the livelihood of more than 15,000 fishers in trouble. The controversial Colombo port project is part of China's political, business and security strategy of rebuilding the "Silk Route" and the "One Road One Belt" connecting Asia and Europe. Although the new regime promised to dump the project during the election 2015, they are now going on the same track.

- Hemantha Withanage, Centre for Environmental Justice / FoE Sri Lanka

FoE Russia activist imprisoned but now released

Evgeny Vistishko, a member of a regional organisation of Russian Social-Ecological Union / FoE Russia, has been released after an ordeal stemming from environmental activism concerning the 2014 Winter Olympics in Sochi. He was detained from February 2014 to December 2015.

In November 2011, activists uncovered evidence of illegal tree felling and illegal work carried out within the public shoreline of the Black Sea. Information about the activities was sent to law enforcement authorities and to the Russian President. However, law enforcement agencies took no action against those responsible for illegal activities and instead pursued the activists.

Evgeny Vistishko was arrested, charged and imprisoned for allegedly damaging a fence. He was recognised as a political prisoner by the Human Rights Center in February 2014.

Vistishko had co-authored a detailed report chronicling the impacts of the construction of Olympic facilities in Sochi. www.foei.org/news/environmental-campaigner-evgeny-vistishko-freed

www.foe.org.au



Tell Nordic Mining to drop lawsuit against peaceful activists

Eighty Norwegian protesters, including a number from FoE Europe, face legal action for their peaceful protests. For three weeks in February, they blockaded machinery to prevent drilling on top of a mountain which could become an open-pit titanium mine. They were trying to get the Norwegian government to stop the controversial mine, which plans to dump more than 250 million tonnes of waste and chemicals into the nearby Førdefjord. The fjord is a national wild salmon sanctuary, spawning ground for a number of endangered species and an endless supplier of food and sustainable jobs. The mining company has now announced that they will file a lawsuit against the peaceful activists, some of them as young as 16.

Please sign the petition calling on the company to drop the lawsuit:

www.foei.org/take-action/actions/tell-nordic-mining-drop-lawsuit-peaceful-activists

More information: www.savethefjords.com, www.foei.org, #SaveTheFjords

Corporate vision of food promoted at the UN

At the opening of an international symposium on agricultural biotechnologies convened by the Food and Agriculture Organization (FAO) of the United Nations in Rome in February, FoE International joined more than 100 civil society organizations issuing a statement denouncing the latest attempt by multinational agribusiness to redirect the policies of the UN toward support for genetically-engineered crops and livestock.

In convening the biased symposium, FAO is bowing to industry pressure, which has intensified following international meetings on agroecology hosted by the FAO in 2014 and 2015. The agroecology meetings were a model of openness to all viewpoints, from peasants to industry. But the biotech industry apparently prefers now to have a meeting they can control.

"We are alarmed that FAO is once again fronting for the same corporations, just when these companies are talking about

Transnational corporations and financiers and human rights violations

Activists from Friends of the Earth International, along with human rights and environmental defenders and other international organisations that are part of the Global campaign to Dismantle Corporate Power, were in Geneva from March 8-15 during the 31st Session of the UN Human Rights Council. They demanded UN member states support the process towards a binding treaty on transnational corporations and other businesses with respect to human rights.

Anne van Schaik, Accountable Finance Campaigner for Friends of the Earth Europe, said: "We call on the Dutch development bank FMO and Finnfunnd to withdraw from the Agua Zarca Dam project [in Honduras]. EU member states should ensure there are binding rules for European financiers which will stop these kind of financial services."

More information: www.stopcorporateimpunity.org/

further mergers amongst themselves, which would concentrate the commercial seeds sector in even fewer hands" the joint statement says.

It is clear, according to the statement, that industry wants to use FAO to re-launch their false message that genetically engineered crops can feed the world and cool the planet, while the reality is that nothing has changed on the biotech front. GMOs don't feed people, they are mostly planted in a handful of countries on industrial plantations for agrofuels and animal feed, they increase pesticide use, and they throw farmers off the land.

More information:

www.foei.org/news/biotechnology-un-causes-alarm

Joint statement:

www.viacampesina.org/en/images/stories/pdf/2016-02-12%20Joint%20Statement%20for%20FAO%20Biotech%20Conference-EN-edited.pdf

The Paris Agreement: A huge step forward?

Chloe Aldenhoven

Last December, 196 countries signed an agreement to limit global warming to 1.5 degrees – something the climate movement had been hoping for since the UNFCCC process began in Kyoto in the early 1990s.

But on the ground in Paris during the final day of the negotiations, rather than popping champagne, 10,000 climate activists from across the world held an illegal protest. In defiance of the French government, they took over the Champs Elysees and blockaded streets outside the Eiffel tower. Their message: this agreement is not what it looks like.

George Monbiot neatly summed it up in *The Guardian*: “By comparison to what it could have been, it’s a miracle. By comparison to what it should have been, it’s a disaster.”

The agreement is undoubtedly a feat of diplomacy. For the first time in history 196 countries have come together to acknowledge the science: any target more than 1.5 degrees would set us up for serious environmental collapse.

And many have celebrated the outcome, saying that while the agreement is not binding, and does not set up a solid pathway to 1.5 degrees, the acknowledgement of the target itself is a huge step forward.

Economist Joseph Stiglitz for instance, says the deal has sent a strong signal to the world that “fossil fuels are over”: “By itself, the agreement is far from enough to limit the increase in global warming to the target of 2°C above the pre-industrial level. But it did put everyone on notice: the world is moving, inexorably, toward a green economy. One day not too far off, fossil fuels will be largely a thing of the past.”

What about the science?

Tempting as it may be to join the celebrations and trust that the new international climate pact will hold global warming to 1.5 degrees, the world’s ability to address climate change depends on science at least as much it does on politics. So what do the climate scientists say?

Most eminent climate scientists have made it clear that while the Paris agreement talks the talk, science suggests it simply can’t walk the walk.

As they currently stand, the nationally indicated targets proposed by the 196 nation states (a kind of ‘what are you willing to throw into the hat’ approach to national contributions to emissions

reduction) won’t meet the 1.5 degree target. Instead, they will commit the world to approximately 2.7 degrees: still an incredibly dangerous amount of warming.

But wait, there’s more. UK climate scientist Kevin Anderson says that this 2.7-degree estimation may not even be an accurate estimate of how much countries can scale down and phase out fossil fuels with existing technologies over the coming decades. The figure also includes significant emissions ‘reductions’ from technologies for extracting carbon from the atmosphere that may not come online until 2050-2070.

If you take out these ‘fairy godmother’ technologies, the warming predicted from the Paris agreement increases to 4 degrees. And 4 degrees is what will trigger runaway global warming as various climate ‘tipping points’ accelerate warming beyond 7 degrees.

So, it’s difficult to see what the on-the-ground effects of the Paris agreement will be. It may or may not initiate a shift in the political and business consciousness around the transition to renewable energy that will get us somewhere near under 2 degrees. In the meantime, it creates an interesting dilemma for the social movement.

Social movements and institutional failure: Don’t we need hope?

Many commentators have praised the Paris agreement as a sign of hope: hope that we can keep warming under safe levels, and that we can change our societies fast enough to avoid the worst-case warming scenarios.

But history suggests that big institutions are rarely capable of drastic change, and that it is not just hope that draws people into social movements, but an understanding that action is your only option.

Bill Moyer, veteran American civil rights and anti-nuclear activist, is also famous for writing a useful analysis of social movements called the ‘Movement Action Plan’. The plan, or ‘MAP’, outlines what he has observed are the 8 ‘stages’ of successful social movements.

One absolutely essential initial stage is a widespread recognition of institutional failure. A recognition that the institutions that are supposed to protect our basic safety have let us down. And a realization that, now, it is up to us.

The anger that comes with this recognition gets people to stand up, get out of their comfort zones to seize power, or risk all they have trying.

While the Paris agreement may look like the UN is finally realizing its potential to bring all nations together to act in their collective self-interest and protect humanity, unfortunately it’s not that simple. The task of phasing out fossil fuels and moving our society towards sustainability remains momentous.

The illusion of the Paris agreement as a savior, the simulacrum created by the states, journalists, commentators and some NGOs, will most likely hit the wall over the coming decades as the reality of climate change hits us hard.

So how do we take this knowledge on, as the climate movement?

The challenge ahead

First of all, it’s important for us to be real about the challenge. We need to be real with our communities, and ourselves, however scary the situation looks. As a movement we have the responsibility to reflect the reality of the situation, while at the same time giving people a course for action.

Luckily, we already know what will give us our best chance for a safe climate. Community movements can achieve amazing things. They're already achieving exactly what we need them to.

At Friends of the Earth, we have already had significant wins from developing community power – just in the last year. Here are some highlights:

Keeping it in the ground: In the coming months, the Victorian Government will be making a decision whether or not to ban unconventional gas. After a 5-year community campaign we have managed to keep this potentially climate devastating fossil fuel in the ground.

Growing renewables: Communities across the state have successfully come together to reverse the worst anti-wind farm laws in the world, and in their place secure a state-based renewable energy target. They were fighting not only for climate solutions, but also for stable employment in their communities.

Alternatives to growth: If we're going to ensure a safe climate, we need to change our existing capital and growth based economy to one that respects environmental systems, as well as the needs of workers and their communities. Alternatives to growth already exist. Eight out of 10 Australians are a member of a co-operative of some kind. Our own food coop serves as a model for providing local, organic food at reasonable prices. The Earthworker cooperative is leading the way for creating green manufacturing jobs in communities previously reliant on the fossil fuel industry.

Phasing out coal fired power: As renewables grow, we need to shut down existing coal-fired power stations. Last year the



Protest in Paris, December 2015.

community of Anglesea and Surf Coast Air Action showed how a determined local campaign for the health and safety of the local community can shut down existing coal fired power infrastructure.

Fighting false solutions: Geoengineering and Nuclear Energy, for instance, are not the solutions we need. Australia does not need to provide Uranium for the third world; we need to provide affordable renewable energy. For more information see FoE's Anti-Nuclear and Clean Energy and Emerging Tech campaigns (www.foe.org.au).

Whatever the effects of the climate agreement, and however you may want to celebrate or condemn it, it is no excuse for complacency. The Paris agreement is not a roadmap to a safe climate. Only a social movement can create that.

Chloe Aldenboven is a campaigner with Friends of the Earth's Quit Coal campaign. www.quitcoal.org.au

Climate Wise Women at COP21

In an interview with Wendy Flannery, Ursula Rakova recounts her experience at the UN's COP21 climate conference in Paris in December. Ursula is Director of Tulele Peisa, the Carteret Islands relocation program in Bougainville, PNG, and an affiliate of Friends of the Earth Australia.

Ursula, you've been to many UNFCCC COP meetings, and the last few times under the umbrella of Climate Wise Women (CWW). What's your relationship with the group?

My relationship with CWW goes way back to 2009 when I got invited by Oxfam US, Greenpeace and the Mary Robinson Foundation to participate in some activities in New York that were connected with UN Security Council meetings. At the time, some leaders from the Pacific and other places were trying to get the Council to recognise climate change as a security

threat. Mary Robinson facilitated the gathering. I became a founding member of CWW along with Thilzeema Hussain from the Maldives and Constance Okolett from Uganda. We all know Mary Robinson personally and always feel assured of her support.

CWW has been organising delegations to the COP meetings for some years. What were the aims of their advocacy efforts at the Paris COP?

The aims were to get CWW women to share stories of their work with other women around the globe doing similar work, to build upon one



another's efforts through shared learning, and to translate this learning into practical applications. Recently, and during the Paris COP, arrangements were made for CWW delegates to be introduced to and interact with official delegates – women government leaders and foreign dignitaries representing their countries. These took place mostly in breakfast sessions. In one of these we met with Mary Robinson and Christiana Figueres.

At big UN meetings like this, civil society and other major groups organise side events to try to influence the political process. In Paris, what events or other activities of this kind were you involved in?

I was involved in events organised by the Women's Constituency Group called Momentum for Change. It included sessions on: women leading local solutions; TV and radio interviews; landscaping and land management; women and land management systems; women creating change led by Ugandan woman Foreign Affairs Minister and some other Civil Society Observers (CSOs); and young people's demonstrations to get world leaders to sign on to a fair, ambitious and binding agreement of and keeping the rise of greenhouse gas emissions to 1.5C degrees.

Which other organisations did Climate Wise Women link up with as part of its activities in Paris?

CWW was also linked to the Alaska Indigenous lobby group, the Centre for International & Environmental Law (CIEL), the International Environment Centre, Caritas New Zealand and the Women's Constituency Group mentioned above.

What direct contact did you have, if any, with politicians or the political process, for example the PNG delegation? Or other Pacific leaders or delegations?

I had direct contact with the French Foreign Minister, Foreign Ministry of Germany, Head of the UN Human Rights Council, delegates from Tuvalu and Fiji, and PNG's Secretary to the South Pacific Commission.

There have been many efforts to analyse the outcome of the Paris negotiations. Do you think anything was achieved that will be of benefit to

the people of the Carteret Islands or others in similar situations? Anything that will benefit Tulele Peisa's relocation program?

Yes, I do believe the Paris talks were better than the other COPs as the agreement was signed by all the nations represented. Although it could have been better, the countries signed up to aim for cutting emissions to a rise of no more than 1.5C degrees above 1990 levels. Recognising the human rights dimension of climate change was also a component of the agreement. It was unfortunate, however, that Loss and Damage was struck off the agreement and I hope it is a clause the leaders of the very vulnerable countries fight to get included in future negotiations.

Travelling from Bougainville to Paris and back is not easy. What made your trip to Paris worthwhile? What were some of the highlights of your time in Paris?

I have refused invitations to a number of international events with a focus on climate change, but this trip to Paris gave me hope. Friends I met as CSO participants in the other COPs were now negotiators in Paris. I could relate easily to them and often conversed with them on how the discussions were going. I also made some presentations and took part in peaceful demonstrations organised by CSOs where I stood representing the voices of my people.

Thinking about the future as the impact of climate change becomes more and more evident, what was the most important realisation that you took away from your time in Paris?

What I realised most of all is that local solutions to climate change are most successful because they are being led by the communities themselves, and financially supported by their own governments. Support from government is critical. My relocation program in Bougainville is not supported by the government and this makes my work very difficult. The PNG government delegation to the COPs use Tulele Peisa and the suffering of the Carterets people to advocate on the issues of climate change, but don't support us. It's like using my people as window dressing to benefit themselves.

Hopes and dreams for a fragile homeland

Torres Strait Island Elder Auntie Rose Elu reports on her time in Paris during the first week of the COP21 climate change negotiations. The trip was sponsored by the Australian Anglican Board of Mission and the Climate Frontlines collective of Friends of the Earth Brisbane.

Rose Elu

I thank those who supported my trip and my activities in Paris. It was a thrilling yet scary experience to present to thousands of people, passing on stories and information about the impacts of climate change in the Torres Strait. I drew strength from the fact that I wanted the world to know what's happening in my local area. It was an honour to be able to point out that what people are worrying about in remote parts of the world, like our brothers and sisters in the Marshall Islands, is actually happening right now in our own backyard.

In Paris, I had the opportunity to deliver a Powerpoint presentation about climate change in the Torres Strait and attended many events. Some highlights of my week at COP21 include:

- holding a private lobby meeting with Australian Environmental Minister Greg Hunt to discuss Torres Strait and climate change issues. This meeting saw the Minister commit to new Torres Strait island research and an ongoing partnership,
- delivering the keynote speech at a press conference for affected communities,
- attending meetings of official Australian climate negotiating team and asking questions about impacts on the Torres Strait,
- speaking at the Citizen Climate Conference on climate impacts on the Torres Strait and Indigenous peoples,
- participating in meetings and events of the Friends of the Earth International delegation,
- an interview with Real World Radio (www.radiomundoreal.fm),
- attending sessions and networking with interfaith groups present at COP21,
- participating in Paris Cop21 mobilisations, included the human chain for climate action on 29 November, and
- attending COP21 official negotiations and side events on Indigenous rights at the COP 21 venue during the five days of the conference.

The pictures in my Powerpoint of the impacts in the Torres Strait were very shocking to many who saw them. I am happy to report that the Australian federal environment minister Greg Hunt commented on the shocking nature of



Rose Elu in Paris.

the photos and made personal comments to me. Those comments were heart-warming. It was encouraging to see a personal, emotional response from one of our own politicians who actually has the power to respond. The question now is: what will it take to get the response needed to address the following:

- our trees failing to bear any more fruit because the soil is now too salty,
- other foods not growing healthy anymore on my home island of Saibai and other places in the TSI, and
- loss of grave sites and land to the sea when we get storm surges.

I'll be waiting to see what action our government's words will produce. The test from my perspective will be how well they recognise that some of us Australians are losing our homes, our land, grave sites, sacred sites, and ancient historical places of great importance to the people of Australia.

So far the government has thrown a few thimblefuls of cash at a gigantic problem, giving us false hope. We need seeds of hope that can grow into trees producing real fruit. As an Indigenous woman from the Torres Strait I am conscious of how small and fragile my hopes and dreams are. We need to see the seeds of hope grow and multiply to compete with the hopelessness and powerlessness many feel in this battle for the wellbeing of the planet we all call home.

On the theft of power

Kat Moore

Power is a funny concept. We refer to those “in power” as though it is something to be reviled and held in contempt. But what Paris confirmed for me was that power is held within all of us. It is up to us to step into it or to give it away- and this is a choice we make daily. I have long understood this as a theory, but it was Paris that forced me to recognise it within myself.

When I stand in front of a line of cops, resolutely nonviolent and refusing to move, I stand in my power. I stand against destruction- of civil liberties, of the environment, of human lives. It is partly this refusal to capitulate to those who hold sanctioned power that cements my own.

Usually, when I am in this situation, the right course of action seems obvious. I am standing with friends and comrades in opposition to the state or a corporation, which is abusing its power to benefit the wealthy few at the expense of the people and planet. What happened in Paris was not so clear-cut at the time, and we are still coming to grips with exactly what happened and how.

I was in Paris for three weeks during the COP21 climate negotiations, with the Whistleblowers, Activists and Citizens Alliance and the Climate Guardian Angels. Despite the stringent State of Emergency laws in place following the Paris attacks, clearly being taken advantage of to shut down and scare off protesters, we made our presence known in no uncertain way. We helped to shut down the false “Solutions” expo, housing some of the most culpable greenwashing corporations. With some American friends, we shut down Engie (formerly GDF Suez) for an afternoon, calling for accountability for the deaths of 11 people in the Latrobe Valley as a result of the 2014 Hazelwood mine fire. We met activists from around the world, and laid some serious groundwork for the battle to come.

The final day of the negotiations was Saturday December 12 - or D12. The revamped plan for D12, following lengthy negotiations with local police, was a rally on the Avenue de la Grande Armée, near the Arc de Triomphe. I was a Climate Guardian Angel on the day, and we were stationed at the far end of the blockade, facing away from the Arc de Triomphe. A snap decision led the whole crowd of 15,000 or so to begin to march down the road, toward the Eiffel Tower. With no sign of marshals or event organisers, the Climate Guardians led the way through police lines, onto the road, and to the Pont d'Iéna, the bridge leading across the Seine directly in front of the Eiffel Tower. Thanks to some quick thinking and miraculous organising, and with people still filing down the stairs from the Jardins du

Trocadéro, hundreds if not thousands of people sat down and occupied that bridge. Up to this point, there had apparently been no leaders, and decisions were made according to the moment, where we were, and what felt strategic.

Having effectively started an autonomous sit-in, it remained to communicate with those further back in the crowd what was happening and why. Fairly soon after we arrived, we received news that an agreement had been signed at the negotiations - in the words of George Monbiot, “by comparison to what it could have been, it’s a miracle. By comparison to what it should have been, it’s a disaster.” Those sitting on the bridge were disgusted with the weak agreement, and the decision was made that we wanted to stay there.

The accepted method of communication in large groups like this is the human mic, as exemplified by the Occupy movement. This approach not only ensures that everyone involved has access to the information, it further provides an opportunity for those relaying the message to withdraw their consent at any moment by ceasing to speak it. It is conditional on those holding the potential for greater power consenting to this shared responsibility.

This process was unashamedly destroyed when a small group of organisers decided to override the process of consent and bring in a conventional microphone. Suddenly there were people standing in front of the crowd telling them they had to get up, and doing so in an authoritarian manner that allowed no discussion or consent.

Pressure was coming from outside the space we had created communally for the Climate Guardians to stand up and move off the bridge - ironically, the lack of leadership so far had elevated us, as the physical leaders of the march, to a position of perceived leadership within that space. It fast became apparent that, whilst we as Climate Guardians said that we would not leave until the crowd did, the reality was that the crowd would follow us.

When dressed as an angel, facing a crowd of thousands, it is nigh on impossible to communicate with those around you. I didn’t know why we were being commanded to end the sit-in, and I found out afterwards that there had been some heated discussions and negotiations “backstage” leading to this hugely detrimental decision. Activists from around the world were looking to us, asking whether we wanted to stay or go. Without knowing any more than they did, but in this strange position of authority, we said “stay”. In the end, we folded to a combination of extreme pressure from the hitherto invisible organisers,

When I stand in front of a line of cops, resolutely nonviolent and refusing to move, I stand in my power. I stand against destruction- of civil liberties, of the environment, of human lives.

and a complete lack of information regarding the reason for the “request”. What happened next left a small group of us wandering, dangerously exposed to police, and unable to join the group we had been directed towards.

What we experienced on D12 was hundreds of people claiming their power, sitting in, then being totally and completely undermined. When a conventional microphone replaced the human mic, the consensus decision-making process was demolished. The capacity of the people to be actively involved, and to actively withdraw their consent, was taken away from us. Active participants were instantly turned into soldiers. What was an enormously strong statement, hundreds if not thousands of people sitting in on the bridge in response to the woefully inadequate agreement reached by delegates inside COP21, was almost instantly destroyed by those on the left who decided that their opinion was more important than that of the collective and who, through manipulative and underhanded means, forced the end of the sit-in.

This not only physically shattered the space, but it destroyed spirits and left many feeling powerless in the face of those who were supposed to be allies. To me, having a feeling of power relies on my autonomy, consent, and voice. Once these were taken away from me - or I gave them away due to insecurity that stemmed from a lack of access to the relevant information - my power was stripped. I was no longer a strong, autonomous being connected with the thousands around me. I was a soldier, a pawn, a prop, being used to sabotage the collective. And once my power - all of our power - was taken from us, the power of us as a collective was diffused. What remained was a lot of individuals, confused, angry, and alone in a crowded place.

The learnings from this experience are already profound, and we have not even begun to fully deconstruct what happened. Whilst we laugh and say “as if we’ll ever be in that position again, accidentally leading thousands of people to a surprise sit-in,” I have no doubt that the lessons learnt in Paris will influence how we operate during any action from now on.

Paris, December 2015.



International climate solidarity is more than plane fares and conferences

Nic Maclellan

For much of the Australian climate movement, efforts towards international solidarity have focused on travelling to the UNFCCC Conferences of the Parties (COPs), or financing delegates from Indigenous communities and the Asia-Pacific region to participate in global summits.

I want to suggest that there are other practical ways that we can work with our counterparts in the Pacific islands region, without just focusing on the COPs.

With the Paris agreement creating the framework for climate action over the next decade, there will be increasing focus by Pacific Island Countries (PICs) on implementation, and on ensuring Organization for Economic Cooperation and Development (OECD) member countries meet their pledges. This will see increased pressure on Australia through the Pacific Islands Forum.

The final Paris agreement includes several crucial elements for the Pacific region, including a long-term goal of holding global temperatures to 1.5 degrees Celsius above pre-industrial levels, a strengthened mechanism for loss and damage, and the provision for scaled up and simplified access to climate finance for small-island developing states.

There are, however, significant qualifications to each of these components of the deal (especially given that the current voluntary national pledges still guarantee temperature increases of 2.7 to 3.4 degrees Celsius).

1.5 degrees and action on emissions

While '1.5 degrees' will enter popular consciousness as an outcome of Paris (a significant change in the Australian context), Pacific governments have few illusions about the Paris agreement. Most recognise that there is an ongoing challenge to force industrialised nations to address their greenhouse gas emissions.

In Paris, Anote Tong was asked if the Paris agreement would be enough. He replied: "No, I don't think so. Even with 1.5 degrees, we would still have a problem."

In Paris, Fiji Minister Voreqe Bainimarama said: "While this agreement was probably the best we could negotiate among so many countries, we must remain very clear-headed about the fact that our work is just beginning. An agreement is only as good as its implementation, and it will be up to us to make sure that all nations live up to this agreement."

Post-Paris, Espen Ronnenberg, the key technical climate advisor with the Secretariat of the Pacific Regional Environment Program (SPREP), said: "What is on the table will only get us to 2.7 degrees."

Australia remains a key part of the problem. During the recent talks in Paris, countries such as Germany, Denmark, Sweden, Britain and the Netherlands all announced plans to cancel emission reduction credits from the Kyoto protocol, which covers the period until 2020. In contrast, Australia is relying on these credits to justify its claims to have achieved Kyoto targets. According to Environment Minister Greg Hunt, Australia's announcement that it is ratifying the Kyoto 2 protocol "allows us to make use of any additional or surplus outcomes from the first Kyoto period."

Despite jumping on the "Higher Ambition" bandwagon at the last minute in Paris, Australia's pre-summit target for 2030 (26-28 reduction in greenhouse gas emissions below 2005 levels) remains unchanged. Under the new global agreement, countries like Australia and India that have promised emissions reductions by 2030 will be "requested" to do a 2020 review. But speaking in Paris, Prime Minister Turnbull said "the targets that we're committed to for 2030 are there and we're not proposing to review those in two years' time," when Australia conducts a domestic policy review.

"Loss and Damage" is a core issue for Pacific countries concerned that they can't adapt to many disasters or slow-onset changes. While Paris agreed on an ongoing Loss and Damage mechanism, the key section of the Paris agreement includes an explicit clause stating that "Article 8 of the Agreement does not involve or provide a basis for any liability or compensation."

Adaptation funding coming from aid budget

A central pillar of the UNFCCC negotiations has been to guarantee the funds required by developing countries for their transition from fossil-fuel energy systems to renewable energy, and to provide vital resources for adaptation. The global target to assist vulnerable nations, dating from the Copenhagen COP in 2009, is US\$100 billion of public and private finance each year by 2020. (In a non-binding "decision text," not the actual Paris agreement, COP21 agreed to review this financing target by 2025 - a decade from now.)

For Kiribati President Anote Tong, the key test is to see "how committed wealthy countries are to providing the promised funds."

Last September, in the lead up to COP 21, the OECD released its progress report on climate financing. The report claimed that developed countries had committed US\$64 billion in climate finance in 2014, nearly two-thirds of the way towards the global pledge of US\$100

billion by 2020. However, this report was sharply critiqued by G77 nations for double counting and misdirection of resources.

For the first year of the Abbott government, Australia abandoned the new Green Climate Fund (GCF). Australia quit its role on the GCF board and refused to contribute funds to the new global mechanism. This decision has now been reversed, and in December 2014 at COP 20 in Lima, Foreign Minister Julie Bishop made a pledge to contribute A\$200 million over four years to the GCF.

At COP21 in December 2015, Prime Minister Malcolm Turnbull pledged A\$1 billion over the next five years in climate financing, but this includes the funds already pledged in 2014. Before he was moved on from his post in the latest reshuffle, Australia's Minister for International Development and the Pacific Steven Ciobo confirmed (emphasis added): «The announcement of \$1 billion over five years announced by the Prime Minister will be *funded from the current aid program budget* and includes Australia's pledge of A\$200 million to the Green Climate Fund made in December 2014.»

Under the Abbott government, Australia's overseas aid fell to 0.26% of gross national income, the lowest level in decades. Last year's aid budget was cut by nearly one billion dollars, which was an unprecedented 20% reduction in just one year, and meant the abandonment of initiatives across Africa and Asia. So taking all of our public climate funding from the aid budget simply re-badges existing development

funds without making any “new and additional” commitments. This also comes at a time, in an election year, when the aid budget is likely to be cut again in the May 2016 Federal budget.

With the GCF now operating from its headquarters in Seoul, Julie Bishop stated in Paris that: “as co-chair of the Green Climate Fund, Australia will ensure vulnerable countries and communities can continue to access support”. However, even as GCF co-chair, Australia can't guarantee GCF funds will flow for adaptation in the islands. In December, I obtained a statement from then Pacific Minister Steven Ciobo who acknowledged (emphasis added): «While it is not possible to earmark funds in the GCF, Australia clearly outlined its priorities for the GCF as part of our Contributions Arrangement, and requested that *our contribution should promote private-sector led economic growth in the Indo-Pacific region.*”

This is a worrying sign, given that private venture capital will be reluctant to fund the adaptation work that is so crucial in the islands (preferring to invest in “clean coal” technology in China, India and other emerging capitalist economies). Another worrying sign for the Pacific is the September 2015 OECD climate financing report which notes: “Japan and Australia consider that financing for high efficiency coal plants should also be considered as a form of climate finance.”

The myth that coal will help alleviate poverty

Australia's role as a major exporter of coal and other fossil fuels creates a structural divide in

Aftermath of
Cyclone Pam,
Vanuata,
March 2015.



our relations with neighbouring island states. This gap will only get wider if the government continues with plans to expand coal exports from Queensland's Galilee Basin.

In the lead up to COP21, Kiribati President Anote Tong rejected the excuse by Australian politicians that coal is necessary to lift people out of energy poverty: "I keep hearing this argument that it's about the poor. Well, we are the poor and we will disappear. I don't think it's about the poor, it's about the rich."

Before Paris, Tong wrote to world leaders asking them to back a global moratorium on new coal mines and coal mine expansions. The climate movement needs to amplify perspectives like this in the Australian debate, at a time that Indian corporation Adani is struggling to get finance for new mines in the Galilee basin.

Practical work with Pacific climate networks

There are a number of practical things that Australian climate activists can do, in collaboration with our counterparts in the Pacific, including information sharing, joint campaigns, funding, and networking.

A preliminary challenge is to change our mindset about the Pacific, to present islanders as actors, not victims. We should bring perspectives from islanders into the Australian debate, like in the article I wrote for *The Guardian* in 2014, "Young Pacific islanders are not climate change victims - they're fighting". Beyond this, statements about "drowning" islanders ignore basic climate science. By the time the Pacific drowns, so will most of the world's coastal and riverine ecosystems. It is important to debate migration policy and climate displacement with a sense of perspective: the fate of 10,000 Tuvaluans will mean little as we face climate displacement on a global scale. Just think about European - and Australian - reactions to the current Syrian refugee crisis.

Any climate justice movement must acknowledge that for decades, Pacific governments and communities has been advancing much stronger policies (on targets, loss and damage, and so on) than ever adopted by mainstream Australian climate networks like the Southern Cross Coalition, let alone Australian governments. Australian climate action groups should inform themselves about Pacific perspectives, data and policies. For those who can afford to travel and meet our counterparts in the islands, that's great. But groups can also invite Pacific delegates to their meetings and summits. Anyone with a computer can download detailed news, reports and data from websites like the Pacific Climate Change Portal.

The climate justice network needs to have a strategic debate about how to mobilise groups involved in aid and development, to address the question of Australia's climate financing. This will involve discussion with aid agencies, churches, the Australian Council for International Development and Pacific diaspora communities. A crucial question, in the current climate of debates about tax reform, GST, negative gearing and the like, is: how do we raise the issue of climate financing in an election year? By 2020, how can Australia move from an annual contribution of \$200 million of public funding to our fair share of the global target (which would be at least \$2 billion per annum - a ten-fold increase.)

We can and should support the Pacific civil society groups that are engaged in lobbying their own governments to hold firm in the face of the inevitable diplomatic and financial pressures that come from OECD nations and the carbon lobby. There are also activist groups like the Pacific Climate Warriors who were involved in the October 2014 blockade of Newcastle coal port. And there is a regional umbrella body of climate groups, the Pacific Islands Climate Action Network, which is active in raising awareness and lobbying Pacific governments and regional organisations. Through faith networks, we can support the Pacific Conference of Churches, which is playing a key role in debates on climate displacement.

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Creative self-destruction and the climate

Clive Hamilton

In his 2006 landmark report on how we should respond to the climate crisis, Nicholas Stern characterised global warming as an 'externality', a damage to others due to market activity whose cost is not met by those who cause it.¹ Indeed, Stern characterised climate change as 'the largest ever market failure'. In other words, the problem of global warming arises because the market system is not working well enough, and if we could find a way to correct the fault then the problem would be solved.

It was a geophysicist, Brad Werner, who in 2012 argued precisely the opposite case – that we are in this mess not because the market system is not working well enough but because it is working too well.² Werner's startling presentation to the annual conference of the American Geophysical Union was titled *'Is the Earth F**ked?'* and he posed in public the question climate scientists and others who follow their work had been asking in private. His answer was bleak, or just possibly inspirational.

Building on the fact that humans now constitute a force of nature so powerful that we have caused the Earth to enter a new geological epoch, Werner approaches the question of the sustainability of humankind through a dynamic model known as a global coupled human-environmental system.

The activities of humans are captured in a module called 'the dominant global culture', which essentially describes the globally integrated market system of resource-use and waste generation driven by the relentless need to grow. He also included a representation of the political institutions that facilitate the smooth operation of the system.

The essential problem, Werner argued, is that there is a mismatch between the short time-scales of markets, and the political systems tied to them, and the much longer time-scales that the Earth system needs to accommodate human activity, including soaking up our carbon dioxide and other wastes.

Technological progress and globalization of finance, transport and communications have oiled the wheels of the human components of the planetary system allowing it to speed up. But the pace of the natural system carries on as it always has. The problem is not Stern's market failure but market success.

System compatibility

Brad Werner's conclusion is that the Earth is indeed f**ked, unless somehow the market system can be prevented from working so well. What we urgently need is friction; sand must be thrown into the machine to slow it down. Only resistance to the dominant culture will give some hope of avoiding collapse.

For Werner, prevailing political customs, including system-compatible ideas like cost-benefit analysis, global agreements and carbon prices, are embedded in the established structure of the human component of the planetary system.

Only activism that disrupts the dominant culture - including 'protests, blockades and sabotage' - provides an avenue for a negative answer to his rude question. It is a kind of geophysical model of Naomi Klein's recent call to arms.



In an important new book, *Climate Change, Capitalism and Corporations*, Christopher Wright and Daniel Nyberg, both academics with the University of Sydney, give us a detailed and fascinating analysis of what global corporations do to keep the wheels of the system spinning; a phenomenon they term 'creative self-destruction'.³

This extends beyond how business activities contribute to the climate crisis, to how the 'dominant global culture' persuades those inclined to throw sand in the wheels to express their anger in more system-compatible ways. That is, they show how critique of corporate responsibility is incorporated and converted to the continuation of 'business as usual'.

The stakes could not be higher, on both sides.

When Bill McKibben calculated that limiting global warming to 2°C above pre-industrial levels requires that 80% of proven reserves of coal, oil and natural gas be left in the ground untouched, but that doing so would destroy the balance sheets of several of the world's largest and most powerful corporations, he showed us in the starkest possible way the fundamental incompatibility of the current structure of economic power and the survival of the world as we know it.⁴

The hard truth is that these corporations would sooner see the world destroyed than relinquish their power. As Wright and Nyberg show in fascinating detail, it is not that the executives who run them are evil; they simply function the way the system dictates and the system, as we find over and over, is structured to keep the global capitalist system growing.

The executives have no choice: if they cannot stomach it then they must leave and be replaced by people with fewer scruples or an enhanced ability to deceive themselves, to believe the stories their own PR people make up.⁵

Corporate governmentality

Wright and Nyberg seek 'to outline the *processes* through which corporations are shaping humanity's response to the climate crisis'.

Their analysis is revolutionary in a way because it explains to us that these shaping processes are much deeper and subtler than we realised, and include how corporations manipulate our very identities and emotional responses to the predicament we face.

The rhetoric about sustainable business practices, green consumerism and green growth churned out by the clever people in marketing has proven highly effective. Even some environmental organisations believe we can somehow consume our way out of the crisis and persuade themselves that the only way to change the system is by working with it (and taking corporate money in the process).

References:

1. www.webcitation.org/5nCeyEYJr
2. <http://thinkprogress.org/climate/2012/12/09/1306051/agu-scientist-asks-is-earth-fkcd-surprising-answer-resistance-is-not-futile/>
3. <https://creativeselfdestruction.wordpress.com>
4. www.rollingstone.com/politics/news/global-warmings-terrifying-new-math-20120719
5. <http://littleblackrock.com.au>

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Ecologists and conservation biologists have been convinced that they have to speak the language of the market to be heard and so busy themselves with 'putting a price on the environment' so that the externalities can be internalised.

Governments fall over themselves to laud corporations as 'wealth creators' who must be allowed to get on with the job (political donations help oil the wheels of that machine too), even if the job in question is killing our world.

It is astonishing how gullible we all are. In the history of greenwash rarely has there been a more cynical corporation than the oil company BP, which in July 2000 rebranded itself 'Beyond Petroleum', announcing it would over time transition out of fossil fuels and into renewable energy.

Today it has sold out of its small investments in wind power and solar energy and is investing heavily in the development of shale gas, oil sands in Alberta (the worst kind of fossil energy), and, we must not forget, new oil fields under the melting Arctic.

Climate Change, Capitalism and Corporations is a very welcome corrective to the beguiling world of mistaken ideas we carry around, ideas that have us sleepwalking into disaster.

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We can achieve sustainability – but not without limiting growth

Mark Diesendorf

In an article on *The Conversation*, Steve Hatfield-Dodds argued that sustainability was possible in Australia without sacrificing economic growth.¹ He also argued the necessary policy changes would not require fundamental changes to Australians' values. This research was based on a detailed paper² in *Nature* and modelling undertaken for CSIRO's recent National Outlook Report.³

Contrary to this pro-growth outlook, I will argue that sustainability would be almost impossible to achieve in practice without ending growth in population and consumption per person. I'll also argue that the claim that we don't need to change our values cannot be proven (or disproven) by the method used by Hatfield-Dodds and colleagues. Recent experience suggests we may need to change our values. This debate is important, because the argument that sustainability is compatible with growth is likely to be misused by those who have vested interests in endless economic growth.

Growth and sustainability are rarely compatible

The *Nature* paper upon which Hatfield-Dodds' article is based offers new, valuable, quantitative insights. Unfortunately the qualitative result, that growth and sustainability are compatible, is only true under very restrictive conditions.

This can be seen from considering the well-known identity for environmental impact I , derived by Paul Ehrlich and John Holdren: $I = PAT$, where P is population, A is "affluence" (which can be measured by GDP per person) and T is technological impact I/GDP . Breaking down impacts into the three factors is useful, because each factor can be addressed with separate policies.

Using this formula we can see that in the special case that technological impact T is zero, environmental impact is zero even if GDP continues to grow.

For example, in the energy sector, if all energy generation came from renewable sources and if all renewable energy technologies could be made with renewable energy, then the environmental impact of CO₂ emissions would be zero.

Although it is now technologically possible to transition to an energy sector based entirely on renewable electricity, with zero CO₂ emissions during operation^{4,5,6}, continuing GDP growth and energy consumption would still expand industries that are not carbon-free.

Hatfield-Dodds and colleagues do not make the extreme assumption of zero technological impact. However it's clear from $I = PAT$ that to continue with economic growth and reduce

environmental impact, the technological impact T has to decrease faster than growth in PA which is GDP. To my knowledge, the only successful examples are at a local scale for limited periods of time for the energy sector alone, for example the town of Guessen in Austria.⁷

In practice, this is extremely difficult under circumstances where vested interests such as the fossil fuel industry are resisting the necessary transition towards clean technologies in the US, Australia and many other countries.⁸

Hence there is no guarantee that environmental policies that allow continuing growth in the global economy and population will be sufficient, or implemented rapidly enough, to be compatible with ecologically sustainable development.

So while sustainability and growth are theoretically compatible in a special case, combining them does not offer a low-risk future. To be safer, we must cease global growth in both population and economic activity per person, and transition from polluting, resource-intensive technologies to clean ones.

Can value changes be dismissed?

The second claim is that we won't have to change our values to achieve sustainability. However, the modelling used does not, and cannot, model values directly. Instead the argument appears to be an indirect one based on the unsupported assumption that major extensions to policies, that exist only to a modest degree in a few places around the world, do not require value changes.

To see how unlikely this is, let's take climate-energy policies as an example. There are very few countries with policies and associated institutions and mechanisms capable of transitioning to a zero carbon energy future: Denmark, Germany, Iceland and Scotland (not yet a country) spring to mind.

But Australia and the UK⁹ as a whole are going backwards. A paper by one of Hatfield-Dodds' co-authors, Heinz Schandl, finds little evidence for significant decoupling of economic growth from biophysical growth in Australia, China and Japan over 1970-2005.¹⁰

On the basis of the current environmental crisis¹¹ (which goes beyond climate change), it can be argued¹² that the only way these major policy changes could be accepted by governments and implemented would be by much greater pressure on governments and other power-holders from citizens and consumers than exists at present. This pressure is necessary to obtain effective sustainability policies and their implementation.

It seems unlikely that such a necessary, massive growth in the social movement for ecologically sustainable and socially just development could come about without a substantial change in societal values. So, contrary to the article's assumption, effective policies and value changes are not alternatives. Instead it is societal value changes that drive effective policies.

What needs to change?

Some of the more difficult value changes, that may be required to attempt to increase environmental protection while economic growth continues, include widespread community support for:

- a carbon price of A\$50 per tonne of CO₂¹³
- more generally, environmental tax reform that taxes polluting products severely¹⁴
- tight mandatory energy efficiency standards for all buildings, appliances and equipment
- major expenditure on railways
- greatly increased densification of cities around public transport routes and nodes (to stop loss of habitat for biodiversity from urban sprawl and to reduce transport energy use)¹⁵

- plantings over huge areas
- a ban on nitrogenous fertilisers
- a shift to low-meat diets¹⁶ (the opposite of the current trend in rapidly developing countries)
- much greater overseas aid, to assist poor countries to participate in the sustainable development process.

These are all major extensions of policies that exist to limited degree in some places in the world. They require collective action as well as individual, as Hatfield-Dodds acknowledges.

References:

1. <https://theconversation.com/study-australians-can-be-sustainable-without-sacrificing-lifestyle-or-economy-50179>
2. www.nature.com/nature/journal/v527/n7576/full/nature16065.html
3. www.csiro.au/nationaloutlook/
4. <http://web.stanford.edu/group/efmh/jacobson/Articles/l/CombiningRenew/combining.html>
5. <http://zerocarbonbritain.org/zcb-latest-report>
6. www.globalenergyassessment.org/
7. www.youtube.com/watch?v=H1WsbQQNsV0
8. www.naomiklein.org/main
9. www.theecologist.org/News/news_analysis/2986324/lights_out_amber_rudds_disastrous_absence_of_an_energy_strategy.html
10. <https://publications.csiro.au/rpr/download?pid=csiro:EP105807&dsid=DS3>
11. www.stockholmresilience.org/21/research/research-programmes/planetary-boundaries.html
12. www.newsouthbooks.com.au/books/climate-action_a-campaign-manual-for-greenhouse-solutions/
13. www.ies.unsw.edu.au/sites/all/files/profile_file_attachments/LeastCostElectricityScenariosInPress2013.pdf
14. www.acfonline.org.au/sites/default/files/resources/tela04_environmental_tax_reform.pdf
15. <http://islandpress.org/book/resilient-cities>
16. www.theguardian.com/environment/2012/apr/13/less-meat-prevent-climate-change
17. www.ies.unsw.edu.au/sites/all/files/DelinaDiesendorf_EnergyPolicy-v2%5B1%5D.pdf

But they are very unlikely to be implemented by governments without a massive change in community values and practices leading to a powerful social change movement.

A really effective response to the climate crisis alone may require very radical policies and institutional changes¹⁷ similar to those used by combatant countries in World War II. Unfortunately governments would not consider, let alone implement, such measures in peace-time without value changes leading to widespread community support.

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Chernobyl's health impacts

Global 2000 / Friends of the Earth Austria has released an updated dated version of an important report on the health impacts of the 1986 Chernobyl nuclear disaster. Written by radiation biologist Dr Ian Fairlie, the report incorporates the findings of many relevant studies produced in the 10 years since the original report was published.

The subject matter is inordinately complex but Fairlie explains a host of technicalities in language that anyone can understand. Thus the report is not only an up-to-date, expert report on the health effects of the Chernobyl disaster, but it also doubles as a primer on the radiation/health debates.

Fairlie summarises the main impacts:

- 5 million people in Belarus, Ukraine and Russia still live in highly contaminated areas, and 400 million people in less contaminated areas.
- 37% of Chernobyl's fallout deposited on western Europe; 42% of western Europe contaminated.
- Initially, about 116,000 people were evacuated, and later an additional 230,000 people were resettled.
- 40,000 fatal cancers predicted across Europe (based on an estimated collective dose of 400,000 person-Sieverts and a linear no-threshold derived risk estimate of 0.1 fatal cancers per person-Sievert).

- 6,000 thyroid cancer cases to date, 16,000 more expected.
- Increased radiogenic thyroid cancers now seen in Austria: 8–41% of increased thyroid cancer cases after 1990 in Austria may be due to Chernobyl.
- Increased incidences of leukemia well established among the clean-up workers in Ukraine and Russia with very high risk factors. Slightly lower leukemia risks were observed among residents of seriously contaminated areas in Ukraine and Belarus.
- Increases in solid cancers were observed among clean-up workers in Belarus and Ukraine but their relative risks (20% to 50%) were considerably lower than the 700% increases observed for thyroid cancer, and the 200% to 500% increases observed for leukemia.
- Several new studies have confirmed increased risks of cardiovascular disease and stroke after Chernobyl. It is recommended that further studies be funded and carried out on radiogenic cardiovascular diseases. As current radiation dose limits around the world are based on cancer risks alone, it is recommended that they should be tightened to take into account cardiovascular disease and stroke risks as well.
- A recent very large study observed statistically significant increases in nervous system birth defects in highly contaminated areas in Russia, similar to the elevated rates of such birth defects observed in highly contaminated areas in Ukraine. The International Agency for Research on Cancer should be funded to carry out a comprehensive study of birth defects, particularly nervous system defects and Down Syndrome after Chernobyl.

*Ian Fairlie, March 2016, 'TORCH-2016: An independent scientific evaluation of the health-related effects of the Chernobyl nuclear disaster', www.global2000.at/en/node/4417
www.global2000.at/sites/global/files/TORCH%20-%20The%20other%20Report%20of%20Chernobyl.pdf*

Royal Commission recommends international high-level nuclear waste dump for South Australia

The Royal Commission established by the government of South Australia to investigate options for nuclear expansion has released its interim report.¹ Australia's role in the nuclear fuel cycle is currently limited to uranium mining and export. The Royal Commission is negative about almost all of the proposals it is asked to consider. It concluded that uranium conversion, enrichment and nuclear fuel reprocessing will not be economically viable for the foreseeable future. It found that conventional nuclear power and small modular reactors will not be economically viable for the foreseeable future.

Significantly, the Royal Commission has dealt a blow to advocates of 'integral fast reactors' (IFR). The Commission faced a major co-ordinated lobbying exercise promoting a plan to import spent fuel and to convert it (well, a small fraction of it) to fuel for IFRs. The illogical nature of the waste-to-fuel plan is neatly debunked in an important recent report by the Australia Institute.²

The Royal Commission could not be clearer on the topic of fast reactors. Its interim report states: *"Fast reactors or reactors with other innovative designs are unlikely to be feasible or viable in South Australia in the foreseeable future. No licensed and commercially proven design is currently operating. Development to that point would require substantial capital investment. Moreover, the electricity generated has not been demonstrated to be cost-competitive with current light water reactor designs."*

So the waste-to-fuel IFR fantasies are dead and buried ... for the time being.

The Royal Commission promotes a plan for South Australia to accept nuclear waste from power plants around the world for storage and disposal – 138,000 tonnes heavy metal of spent nuclear fuel and 390,000 cubic meters of intermediate-level waste – over about 100 years. It makes absurd claims about the potential profits to be made, claims echoed by the state's one mass circulation newspaper – a Murdoch tabloid.

However the revenue estimates have no basis in reality. There is no comparable overseas model of commercial trade of nuclear waste for disposal. No real idea how many countries might avail themselves of the opportunity to send nuclear waste to Australia for disposal, or how much they might send, or how much they might pay. So there's no way of knowing whether revenue would exceed costs.

The estimated construction costs for a deep underground repository for high level waste are in the tens of billions of dollars. For example the construction cost estimate in France is US\$27.8 billion (-25 billion)³ while in Japan the estimate is US\$31 billion (-28 billion).⁴

Of course, there are significant additional costs associated with operating and monitoring repositories. The US governments estimates that to build a repository and operate it for 150 years would cost US\$96 billion.⁵ The Royal Commission provides a similar figure: costs of \$145 billion over 120 years for construction, operation and decommissioning.

But the above timeframes – 150 years in the U.S. report and 120 years in the Royal Commission study – are nothing compared to the lifespan of nuclear waste. It takes 300,000 years for high level waste to decay to the level of the original uranium ore.⁶ The Royal Commission report notes that spent nuclear fuel (high level nuclear waste) "requires isolation from the environment for many hundreds of thousands of years."

Economist Prof. Richard Blandy commented: "We are bequeathing a stream of costs to our successor generations. They will be poorer as a result, and will have reason to curse their forebears for selfishly making themselves better off at their expense."⁷

Despite the best efforts of the mainstream political parties and the Murdoch press, public opinion is strongly against the plan for a nuclear waste dump in South Australia, and the proposal faces fierce opposition from Aboriginal Traditional Owners.

More information:

– 'Australian push to become the world's nuclear waste dump', Nuclear Monitor #808, 18 Aug 2015, www.wiseinternational.org/nuclear-monitor/808/australian-push-become-worlds-nuclear-waste-dump

– Friends of the Earth, Australia: www.foe.org.au/royal-commission and www.foe.org.au/waste

References:

1. <http://nuclearrc.sa.gov.au/tentative-findings/>

2. www.tai.org.au/content/free-nuclear-power-fantasy-report

3. www.world-nuclear-news.org/WR-Minister-sets-benchmark-cost-for-French-repository-1801165.html

4. www.world-nuclear.org/info/Country-Profiles/Countries-G-N/Japan--Nuclear-Fuel-Cycle/

5. www.world-nuclear-news.org/WR-Yucca_Mountain_cost_estimate_rises_to_96_billion_dollars-0608085.html

6. <https://theconversation.com/the-case-for-nuclear-power-despite-the-risks-41552>

7. Richard Blandy, 23 Feb 2016, 'Nuclear waste dump confounds cost-benefit analysis',

www.adelaidenow.com.au/news/opinion/the-advertiser-editorial-february-23-people-must-decide-fate-of-nuclear-plan/news-story/4745e6085016085165be7967001377c0

Aboriginal people seek support in nuclear waste dump battle

Aboriginal Traditional Owners in Australia are asking organisations in Australia and around the world to endorse a statement to help prevent their land being used as an international high-level nuclear waste dump. Organisations can endorse the statement online at: www.anfa.org.au/sign-the-declaration

This is the statement:

'The Poison - Leave It'

A group of politicians and business-people are developing a plan to build an international high-level nuclear waste dump in South Australia. The plan is strongly opposed by many South Australians and by an overwhelming majority of Aboriginal people.

The Australian Nuclear Free Alliance, representing Aboriginal people from across Australia, calls on nuclear nations NOT to dump nuclear waste in Australia. The nuclear industry has a track record of Aboriginal dispossession and environmental pollution – from the atomic bomb tests to uranium mining to nuclear waste dump proposals.

We call on nuclear nations NOT to dump nuclear waste in Australia.

Statements from many Aboriginal people and organisations are posted on the same website.

The Aboriginal Congress of South Australia resolved in an August 2015 meeting:

"We, as native title representatives of lands and waters of South Australia, stand firmly in opposition to nuclear developments on our country, including all plans to expand uranium mining, and implement nuclear reactors and nuclear waste dumps on our land. We ask that the Royal Commission recommends against such plans, thoroughly and respectfully considering our views and the views of other Aboriginal groups, individuals and key stakeholders to prevent dirty and dangerous nuclear projects being imposed on our lands and on the lives of our people now and for future generations.

"Many of us suffer to this day the devastating effects of the nuclear industry and continue to be subject to it through extensive uranium mining on our lands and country that has been contaminated. We view any further expansion of industry as an imposition on our country, our people, our environment, our culture and our history. We also view it as a blatant disregard for our rights under various legislative instruments, including the founding principles of this state."

Aboriginal Traditional Owners and supporters in Port Augusta, South Australia, May 2015.



Nuclear waste nightmares: USA, Germany, France

On Valentine's Day 2014, a drum of packaged waste from the Los Alamos National Laboratory (LANL) ruptured 2,150 feet (655 metres) underground in New Mexico's nuclear waste repository known as the Waste Isolation Pilot Plant (WIPP) which is carved from ancient salt beds. The incident was described as a heat-generating chemical reaction – the US Department of Energy (DOE) called it a deflagration rather than an explosion.

Explosion or not, the chemical reaction compromised the integrity of a barrel and spread contaminants through more than 3,000 feet of tunnels, up the exhaust shaft, into the environment, and to air monitoring equipment approximately 3,000 feet north-west of the exhaust shaft. The accident resulted in 21 workers receiving low-level internal radiation exposure.

It later transpired that LANL had improperly packaged hundreds of waste drums with a combustible mix of nitrate salts – a byproduct of nuclear weapons production – and organic cat litter, causing a hot reaction in one drum that cracked the lid. The rupture released americium and plutonium into the deep salt mine and, in small amounts, into the environment.¹ The repository is still closed two years later, and a March 2016 date for re-opening has been pushed back to later this year.

“These accidents during the first 15 years of operation really illustrate the challenge of predicting the behavior of the repository over 10,000 years,” said Rod Ewing, the Frank Stanton Professor in Nuclear Security at Stanford and a senior fellow at the Center for International Security and Cooperation.

The Stanford experts also suggest more attention should be paid to how the buried materials may interact with each other, particularly with salty brine, over centuries. A single storage drum may contain a variety of materials, such as lab coats, gloves and laboratory instruments; thus, the chemistry is complex. Ewing said that the complacency that led to the accidents at WIPP can also occur in the safety analysis. Therefore, he advises, it is important to carefully review the safety analysis as new proposals for more plutonium disposal are considered.²

Asse, Germany

Now, 500 metres beneath the forests of northern Germany, in an old salt mine, another nightmare is playing out, according to Fred Pearce in the *New Scientist*. Enough plutonium bearing radioactive waste is stored here to fill 20 Olympic swimming pools. When engineers backfilled the chambers containing 126,000 drums in the 1970s, they thought they had put it out of harm's way forever.

But now, the walls of the Asse mine are collapsing and cracks forming, thanks to pressure from surrounding rocks. So the race is on to dig it all up before radioactive residues are flushed to the surface. It could take decades to resolve. In the meantime, excavations needed to extract the drums could cause new collapses and make the problem worse.³

Some 300,000 cubic metres of low and intermediate-level waste, including the waste dug from the Asse mine, is earmarked for final burial at the Konrad iron mine in Lower Saxony. But Germany still has no plan for dealing with high-level waste and spent fuel. Later this year, a Final Storage Commission of politicians and scientists will advise on criteria for choosing a site where deep burial or long-term storage should be under way by 2050.

But its own chairman, veteran parliamentarian Michael Muller, says that timetable is unlikely to be met. “We all believe deep geology is the best option, but I'm not sure if there is enough [public] trust to get the job done,” he says. Many anti-nuclear groups are boycotting the Commission. The problems at the Asse salt mine have led to further distrust of engineers and their solutions.

The problems at Asse became public knowledge in 2008. Despite hurried backfilling of much of the mine, the degradation continues. Brine seeps in at a rate of around 12,000 litres a day, threatening to flush radioactive material to the surface. In 2011, the Federal Office for Radiation Protection (BfS) ruled that the waste had to be removed. But this is likely to take decades.

Just checking the state of the 13 chambers holding the waste drums is painfully slow. Engineers drilling to reach them through 20 metres of rock don't know whether the drums have leaked, and of course they cannot risk a release of radioactivity. And unless care is taken to keep clear of the geological barrier, the excavations risk allowing more water in, and flooding of the mine can't be ruled out.

Nothing will be moved until at least 2033. Meanwhile the bill keeps rising. It costs -140 million a year just to keep the mine safe for work to continue. The final bill will run into many billions. Is it worth it? Many experts fear that digging up the drums, with consequent risks of radioactive leaks, could create a much greater hazard than leaving them where they are.

Tunnel collapse and fatality at French repository site

Meanwhile one worker has been killed and another injured in a tunnel collapse at France's planned nuclear waste repository at Bure, in north-eastern France. According to French waste management agency Andra, geophysical surveys were being carried out at the time of the collapse and the rockfall is believed to have happened as drilling was taking place. Scheduled for an authorization decree in 2018 and industrial commissioning in 2025, the facility – if approved – is expected to bury France's highly-radioactive nuclear waste.⁴

Reprinted from nuClearn news with minor editing, nuClearn news, No.82, February 2016, www.no2nuclearpower.org.uk/nuclearnews/NuClearnNewsNo82.pdf

References:

1. Albuquerque Journal, 19 October 2015, www.abqjournal.com/661954/news/safety-top-dog-innew-wipp-culture.html
2. Stanford News, 15 Jan 2016, <http://news.stanford.edu/news/2016/january/waste-nuclear-material-011516.html> and Nature 13 Jan 2016, www.nature.com/news/policy-reassess-new-mexico-snuclear-waste-repository-1.19135
3. New Scientist, 29 Jan 2016, www.newscientist.com/article/2075615-radioactive-wastedogs-germany-despite-abandoning-nuclear-power/
4. Cumbria Trust, 27 Jan 2016, <https://cumbriatrust.wordpress.com/2016/01/27/at-least-1-killed-intunnel-collapse-at-frances-planned-nuclear-waste-storage-site/> WNN, 26 Jan 2016, 'Fatal rockfall at planned French repository site', www.world-nuclear-news.org/RS-Fatal-landslide-at-planned-French-repository-site-2601165.html

COP that: nuclear lobbyists on the offensive

Jim Green

The nuclear industry and its supporters were busily promoting nuclear power – and attacking environmentalists – before and during the COP21 UN climate conference in Paris in December. All the usual suspects were promoting nuclear power as a climate-friendly energy source: the World Nuclear Association, the International Atomic Energy Agency, the International Energy Agency, the OECD's Nuclear Energy Agency, the U.S. Nuclear Energy Institute, and so on.¹

The Breakthrough Institute has been promoting its pro-nuclear “paradigm-shifting advocacy for an ecomodernist future” and arguing against the “reactionary apocalyptic pastoralism” of anyone who disagrees with them.² In reality the Breakthrough Institute is anything but ‘paradigm shifting’. A glowing endorsement in the right-wing *National Review* states: “Ecomodernists are pro-fracking. They advocate genetically engineered crops (GMOs) ... Most distinctively, the ecomodernists are pro-growth and pro-free markets. “The Kardashians are not the reason Africans are starving,” chides Alex Trembath, a senior researcher at the Breakthrough Institute ...”³

Bill Gates was in Paris to announce the formation of the Breakthrough Energy Coalition. Gates was promoting ‘clean energy’ but it seems likely the capital the Coalition attracts will be directed disproportionately to nuclear R&D.⁴

Robert Stone, director of the *Pandora's Promise* pro-nuclear propaganda film⁵, launched a ‘resource hub’ called Energy For Humanity, promoting “more advanced, mass-producible, passively safe, reactor designs”.⁶

Rauli Partanen and Janne Korhonen, members of the Finnish Ecomodernist Society, were attacking environmentalists for opposing nuclear power. Rebutting⁷ a rebuttal⁸ by Michael Mariotte from Nuclear Information and Resource Service, Partanen and Korhonen offer this gem: “even the much-maligned Olkiluoto 3 nuclear project [in Finland] turns out to be very fast way of adding low-carbon energy production when compared to any real-world combination of alternatives.” A single reactor that will take well over a decade to build (and is three times over budget) is a “very fast way” of adding low-carbon energy? Huh?

Partanen and Korhonen authored a booklet called *Climate Gamble: Is Anti-Nuclear Activism Endangering Our Future?*, and crowdfunded the printing of 5,000 copies which were distributed for free at the COP21 conference.⁹

James Hansen and three other climate scientists were in Paris to promote nuclear power. Hansen

attacks the “intransigent network of anti-nukes” that has “grown to include ‘Big Green,’ huge groups such as the Natural Resources Defense Council, Environmental Defense Fund and World Wide Fund for Nature. They have trained lawyers, scientists, and media staff ready to denounce any positive news about nuclear power.”¹⁰

By way of sharp contrast to ‘Big Green’, the impoverished U.S. nuclear industry could only rustle up US\$60 million to lobby Congress and federal agencies in 2013–14.¹¹

So is there an undercurrent of grassroots pro-nuclear environmentalism waiting to burst forth if only their voice could cut through Big Green hegemony? Perhaps Nuclear for Climate¹², promoted as a “grassroots organization”¹, is the environmental network to take on Big Green? Well, no. Nuclear for Climate isn't a network of grassroots environmentalists, it's a network of more than 140 nuclear societies. It isn't grassroots environmentalism, it's corporate astroturf. And the list of 140 ‘societies’ includes 36 chapters of the ‘Women in Nuclear’ organisation and 43 chapters of the ‘Young Generation Network’.¹³ One wonders whether these organisations have any meaningful existence. Does Tanzania, for example, really have a pro-nuclear Young Generation Network?

Nuclear for Climate has a website, a hashtag, a twitter handle and all the modern social media *sine qua non*. But it has some work to do with its messaging. One of its COP21 memes was: *The radioactive waste are not good for the climate? Wrong!* So radioactive waste *is* good for the climate?

Has the nuclear lobby achieved anything?

The nuclear industry's hopes for the COP21 conference were dashed. Michael Mariotte from the Nuclear Information & Resource Service wrote:¹⁴

“The international Don't Nuke the Climate campaign had two major goals for COP 21: 1) to ensure that any agreement reached would not encourage use of nuclear power and, preferably, to keep any pro-nuclear statement out of the text entirely; and 2) along with the rest of the environmental community, to achieve the strongest possible agreement generally.

“The first goal was certainly met. The word “nuclear” does not appear in the text and there are no incentives whatsoever for use of nuclear power. That was a clear victory. But that is due not only to a global lack of consensus on nuclear power, but to the fact that the document does not specifically endorse or reject any technology (although it does implicitly

reject continued sustained use of fossil fuels). Rather, each nation brought its own greenhouse gas reduction plan to the conference. “Details,” for example whether there should be incentives for any particular technology, will be addressed at follow-up meetings over the next few years. So it is imperative that the Don’t Nuke the Climate campaign continue, and grow, and be directly involved at every step of the way – both inside and outside the meetings.

“As for the strongest possible agreement, well, it may have been the “strongest possible” that could be agreed to by 195 nations in 2015. By at least recognizing that the real goal should be limiting global temperature rise to 1.5 degrees Centigrade rather than the 2 degrees previously considered by most nations to be the top limit, the final document was stronger than many believed possible going into the negotiations. That said, the environmental community agrees that the agreement doesn’t go far enough and, importantly, that the commitments made to date do not meet even this document’s aspirations.”

There is a strong push from the nuclear lobby for nuclear power to be included in the UN’s Green Climate Fund. This would enable subsidies for nuclear power – subsidies that would come at the expense of renewables and other climate change mitigation programs.

So the nuclear industry didn’t make any gains at COP21, but is it making any progress in its broader efforts to attract public support? It’s hard to say, but there’s no evidence of a shift in public opinion. A 2005 IAEA-commissioned survey of 18 countries found that there was majority opposition to new reactors in all but one of the 18 countries.¹⁵ A 2011 IPSOS survey of nearly 19,000 people in 24 countries found 69% opposition to new reactors, and majority opposition to new reactors in all but one of the 24 countries.¹⁶

References:

1. Nuclear Energy Institute, 3 Dec 2015, ‘Pro-Nuclear Voices Raised at Paris Climate Talks’, www.nei.org/News-Media/News/News-Archives/Pro-Nuclear-Voices-Raised-at-Paris-Climate-Talks
2. Will Boisvert 18 Sept 2014, ‘The Left vs. the Climate’, <http://thebreakthrough.org/index.php/programs/energy-and-climate/the-left-vs.-the-climate>
3. Julie Kelly, 2 Dec 2015, ‘A New Breed of American Environmentalists Challenges the Stale Dogma of the Left’, www.nationalreview.com/article/427855/new-breed-greens-pro-capitalism-pro-fracking-patriotic
4. Tina Casey, 3 Dec 2015, ‘COP21 Gets a Spark of Nuclear Energy from Breakthrough Energy Coalition’, <http://cleantechnica.com/2015/12/03/cop21-gets-spark-nuclear-energy-breakthrough-energy-coalition/>
5. ‘Pandora’s Propaganda’, Nuclear Monitor #773, 21 Nov 2013, www.wiseinternational.org/nuclear-monitor/773/pandoras-propaganda
‘Pandora’s Promise’ Propaganda, Nuclear Monitor #764, 28 June 2013, www.wiseinternational.org/nuclear-monitor/764/pandoras-promise-propaganda
6. <http://energyforhumanity.org>
7. Rauli Partanen and Janne M. Korhonen, 2 Dec 2015, ‘Don’t Nuke the Climate: A Response’, <http://energyforhumanity.org/featured/dont-nuke-the-climate-a-response/>
8. Michael Mariotte, 30 Nov 2015, ‘When a campaign strikes a nerve’, <http://safeenergy.org/2015/11/30/when-a-campaign-strikes-a-nerve/>
9. <http://climategamble.net>
10. Jarret Adams, 26 Nov 2015, ‘No Climate Solution Without Nuclear, Experts Say’, www.theenergycollective.com/jarretadams1/2293694/no-climate-solution-without-nuclear-experts-say
11. Daniel Stevens, 17 Feb 2015, ‘Platts’ Nuclear Conference Attended by Companies Spending Millions on Lobbying’, <http://maplight.org/content/platts-nuclear-conference-attended-by-companies-spending-millions-on-lobbying>
12. <http://nuclearforclimate.org>
13. www.sfen.org/sites/default/files/public/atoms/files/nuclear4climate_press_release.pdf
14. Michael Mariotte, 12 Dec 2015, ‘The Paris Agreement on climate – a good start, but ...’, <http://safeenergy.org/2015/12/15/the-paris-agreement-on-climate/>
15. Globescan, 2005, ‘Global Public Opinion on Nuclear Issues and the IAEA: Final report from 18 countries’, prepared for the IAEA, <https://ideas.repec.org/p/ess/wpaper/id362.html>
16. IPSOS, June 2011, ‘Global Citizen Reaction to the Fukushima Nuclear Plant Disaster’, www.ipsos-mori.com/Assets/Docs/Polls/ipsos-global-advisor-nuclear-power-june-2011.pdf
17. Greenpeace International, September 2015, ‘Energy [R]evolution: A sustainable world energy outlook 2015’, www.greenpeace.org/international/en/publications/Campaign-reports/Climate-Reports/Energy-Revolution-2015/



Is the nuclear industry having any success winning over environmentalists? Around the margins, perhaps, but the ranks of ‘pro-nuclear environmentalists’ are very thin. As James Hansen complained in the lead-up to COP21, the Climate Action Network, representing all the major environmental groups, opposes nuclear power. ‘Big Green’ opposes nuclear power, and so does small green. Efforts by nuclear lobbyists to split the environment movement have failed.

And the nuclear lobby certainly isn’t winning where it matters. One of the recurring claims in the pro-nuclear propaganda surrounding COP21 is the claim that renewables can’t be deployed quickly enough whereas nuclear can. But nuclear power has been stagnant for the past 20 years and costs are rising, whereas the growth of renewables has been spectacular - 783 gigawatts of new renewable power capacity were installed in the decade from 2005–2014¹⁷ - and costs are falling.

The nuclear lobby didn’t even win the battle of the celebrities at COP21. James Hansen, Bill Gates and other pro-nuclear celebrities put up a good fight against pro-renewable celebrities such as conservationist David Attenborough. But the pro-renewable celebrities raising their voice during COP21 included Pope Francis ... and he’s infallible.

The control room of the stricken #4 reactor at Chernobyl.

Source: © Gerd Ludwig’s photo-book *The Long Shadow of Chernobyl*. www.gerdludwig.com, www.longshadowofchernobyl.com

Fukushima Fallout: Updates from Japan

Jim Green

Five years have passed since the meltdowns, fires and explosions at the Fukushima nuclear power plant in Japan. Cleaning up the Fukushima plant – and in particular the stricken reactors – will take several decades, at least. “If I may put this in terms of mountain climbing, we’ve just passed the first station on a mountain of 10 stations,” said TEPCO’s Akira Ono in February.¹

TEPCO hopes to begin removal of reactor fuel, and melted fuel fused to other materials, in five years or so. But little is known about the state of the fuel – one of many problems is that camera’s fail due to the intense radiation.²

TEPCO has little idea how it might remove the nuclear fuel and associated debris. To put the situation in a positive light, the problem will drive innovation in robotics since current technology is not up to the task. Akira Ono says the aim of decommissioning the plant in 40 years may be impossible without a giant technological leap: “There are so many uncertainties involved. We need to develop many, many technologies.”³

TEPCO has no idea what it might do with the nuclear fuel and debris if and when it is removed from the reactor buildings. There is no repository for high level nuclear waste. The Japanese government is considering building a repository under the seabed, about 13 km off the Fukushima coast. The repository would be connected to the land by a tunnel so it arguably would not contravene international regulations on disposing of nuclear waste into the sea. There is staunch opposition from the fishing industry and many others to the idea of burying nuclear waste at sea in a seismically active area.⁴

Nuclear Regulatory Authority (NRA) Commissioner Toyoshi Fuketa recently questioned whether the plan to remove all fuel and debris will be possible and whether it is the best course of action. “I wonder if the situation would be desired that work is still underway to extract fuel debris 70 or 80 years after,” he said, adding that it may be preferable to remove as much fuel and debris as possible and solidify the rest.⁵

Off-site clean-up

As of the end of September 2015, a total of about nine million cubic meters of contaminated solid and other waste were being stored in about 115,000 locations around Fukushima. Government officials estimate that a total of 22 million cubic meters of contaminated soil will eventually be collected.⁶

The off-site contamination work has been punctuated with revelations of sloppy work. The latest was the revelation in early February that 310 cubic meters of contaminated wood waste was illegally dumped in a riverbed in the Shiga Prefecture city of Takashima.⁷

Last September, as many as 439 bags containing contaminated soil, grass and tree branches were swept away when torrential rains hit Iitate Village, Fukushima Prefecture.⁸ Environment Ministry officials said that nearly 400 bags were recovered but many were empty.⁹

The government hopes to secure about 16 sq km to build interim storage facilities for the contaminated soil in the Fukushima towns of Okuma and Futaba. But less than 1% of the land needed for the facilities has been acquired. The plan is to leave contaminated soil at the interim facilities for a maximum of 30 years before processing it somewhere outside of Fukushima Prefecture.⁶

Another plan being considered is to recycle the material. The government believes that as radioactive decay reduces the hazard posed by contaminated soil, it will eventually be possible to recycle it as construction material for public works projects. In the coming months the Environment Ministry will begin development of the technology and model projects for recycling contaminated soil.¹⁰

Contaminated soil exceeding 8,000 Bq/kg is called ‘designated waste’ under the Law on Special Measures Concerning Contamination by Radioactive Materials. For this waste, the original plan was to build one disposal site in each of five prefectures – Tochigi, Miyagi, Ibaraki, Gunma, and Chiba. But the plans have met opposition and are a long way from being realised.^{8,11}

In Kami, Miyagi Prefecture, residents forcibly blocked Environment Ministry officials from entering a potential storage site. “What is causing our anxiety is that it remains unclear who will take ultimate responsibility in solving this problem and how,” said one local resident.¹²

Evacuees

About 100,000 people are still living as evacuees as a consequence of the Fukushima disaster, comprising about 82,000 who previously lived in designated evacuation zones, and about 18,000 evacuees who acted on their own initiative and fled from the 23 municipalities in Fukushima Prefecture that are outside government-designated evacuation zones.¹³

According to *Japan Times*, of the 100,000 evacuees (down from 122,000 in January 2015), 56% moved elsewhere in Fukushima Prefecture and the rest moved beyond the Prefecture. The 100,000 evacuees include those staying in temporary housing facilities or taking shelter at relatives’ houses and other places; the figure does not include those who have bought houses and settled elsewhere or who have settled in public housing for disaster victims.¹⁴

The *Asahi Shimbun* newspaper reported in January on the payment of compensation to victims of the disaster:¹⁵

“Compensation payments to victims of the nuclear disaster, such as evacuees and affected businesses, come out of a 9 trillion yen [US\$80 billion; -73 billion] treasure chest provided by the government to TEPCO.

“With its management priority placed on its own early recovery from the consequences of the accident, however, the electric utility has been trying to terminate the payments as soon as possible and keep the amounts within the framework set by the guidelines. The company’s compensation policy has been criticized for failing to make the benefit of residents a primary consideration.



“About 10,000 evacuees are involved as plaintiffs in damages suits filed with 21 district courts and branches around the country. This points to the high level of discontent with the compensation payments that have been paid out.”

The government’s evacuation order is still in place for nine Fukushima municipalities, and the government is expected to lift evacuation orders for three of those municipalities in the first half of 2016.¹⁵ The government hopes to lift other evacuation orders by March 2017 provided that the annual air dose rate is no greater than 20 mSv/yr¹¹, but concedes that “difficult-to-return zones” will still be subject to evacuation orders beyond then.¹⁶ Associated with the lifting of evacuation orders comes the reduction and cessation of housing

subsidies. Evacuees have to decide whether to return to their former towns or to rebuild their lives elsewhere; some will have little choice but to return because of their financial situation. Voluntary evacuees will be the first to face the cessation of housing subsidies.¹⁷

The Fukushima-related suicide toll continues to rise, with 19 such suicides in Fukushima Prefecture from Jan–Nov 2015. Police determine if a suicide was related to the Fukushima disaster and subsequent evacuation after talking to bereaved family members. As of February 2016, a total of 154 suicides have been linked to the disaster in the three prefectures most heavily hit by the nuclear disaster – Fukushima, Miyagi and Iwate.¹⁸

35,000 people attended an anti-nuclear protest in Tokyo on 26 March 2016.

References:

1. Yoko Wakatsuki and Elaine Yu, 11 Feb 2016, ‘Japan: Fukushima clean-up may take up to 40 years, plant’s operator says’, <http://edition.cnn.com/2016/02/11/asia/japan-inside-fukushima-cleanup/>
2. Kiyoshi Ando, 19 Feb 2016, ‘Long road ahead for Fukushima clean-up’, <http://asia.nikkei.com/Tech-Science/Tech/Long-road-ahead-for-Fukushima-cleanup>
3. 27 March 2015, ‘Japan faces 200-year wait for Fukushima clean-up’, www.thetimes.co.uk/tto/news/world/asia/article4394978.ece
4. Anna Fifield, 10 Feb 2016, ‘How is Fukushima’s cleanup going five years after its meltdown? Not so well’, www.washingtonpost.com/world/asia_pacific/five-years-after-nuclear-meltdown-no-one-knows-what-to-do-with-fukushima/2016/02/10/a9682194-c9dc-11e5-b9ab-26591104bb19_story.html
5. Kyodo, 20 Feb 2016, ‘NRA commissioner suggests plan to remove all fuel debris at Fukushima plant may not be best option’, www.japantimes.co.jp/news/2016/02/20/national/nra-commissioner-suggests-plan-remove-fuel-debris-fukushima-plant-may-not-best-option/
6. Yu Koitubo and Yoshitaka Ito, 14 Feb 2016, ‘Little progress made in securing land for interim storage facilities for radioactive soil’, <http://ajw.asahi.com/article/0311disaster/fukushima/AJ201602140022>
7. 8 Feb 2016, ‘5,300 tons of radioactive wood waste taken into 5 prefectures besides Shiga’, <http://mainichi.jp/english/articles/20160208/p2a/00m/0na/004000c>
8. Kazuhide Sueda, 30 Nov 2015, ‘Selection of disposal sites for radioactive materials from the Fukushima nuclear plant and designation of some areas as candidate sites should be retracted’, Nuke Info Tokyo No. 169, www.cnic.jp/english/?p=3204
9. 25 Sept 2015, ‘Radioactive soil bags to be moved to high ground’, <http://www3.nhk.or.jp/nhkworld/english/news/nuclear.html>
10. 22 Dec 2015, ‘Government estimate: Almost 100 percent of contaminated soil can be recycled’, <http://ajw.asahi.com/article/0311disaster/fukushima/AJ201512220042>
11. Yukio Yamaguchi, 2 Feb 2016, ‘Fukushima Daiichi NPS today- 5 years since the disaster began’, Nuke Info Tokyo No. 170, www.cnic.jp/english/?p=3271
12. Yusuke Fukudone, 24 Nov 2015, ‘Radioactive waste mounts up as residents resist post-Fukushima disposal plans’, <http://ajw.asahi.com/article/0311disaster/fukushima/AJ201511240005>
13. 20 Feb 2016, ‘Editorial: Extent of suffering key to compensating Fukushima evacuees’, <http://ajw.asahi.com/article/views/editorial/AJ201602200024>
14. 9 Jan 2016, ‘Fukushima nuclear evacuees fall below 100,000’, www.japantimes.co.jp/news/2016/01/09/national/fukushima-nuclear-evacuees-fall-100000/
15. 2 Jan 2016, ‘100,000 still displaced 5 yrs after nuclear crisis’, http://www3.nhk.or.jp/nhkworld/english/news/20160102_02.html
16. 18 Feb 2016, ‘Speakers raise issues haunting Fukushima in finance panel public hearing’, <http://ajw.asahi.com/article/0311disaster/recovery/AJ201602180062>
17. Jun Sato, 8 Feb 2016, ‘“Voluntary” Fukushima evacuees denounce end of free housing, new assistance plan’, <http://ajw.asahi.com/article/0311disaster/fukushima/AJ201602080054>
18. Mana Nagano, 28 Dec 2015, ‘Suicides rise among Fukushima nuclear disaster evacuees’, <http://ajw.asahi.com/article/0311disaster/fukushima/AJ201512280026>

Who wants to keep Aussies in the dark about food irradiation?

Robin Taubenfeld

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

FSANZ is undertaking a review of mandatory labelling requirements for irradiated food to assess the need for the mandatory labelling requirement for all irradiated food to continue, and to assess whether there is a more effective approach to communicate the safety and benefits of irradiation to consumers.

The words are telling. Labelling is identified as an impediment to “uptake” of food irradiation, a process unfamiliar to most Australians and New Zealanders, which the government deems to be safe. Safe or not, global standards require irradiated food to be labelled.

In fact, removing labelling would make Australia the odd-ball amongst its trading partners – and possibly increase costs for food producers who need to ensure their export products are labelled appropriately for overseas markets.

In its consultation paper, FSANZ states:

“FSANZ has reviewed the requirements for food irradiation label information in a number of countries. Most of the countries reviewed appear to have based their requirements on the Codex Standard, although some variations occur.

“For irradiated whole foods that are packaged, it is common for a mandatory statement to indicate that the food has been irradiated. ...

“For packaged foods that contain an irradiated ingredient(s), most countries require that the ingredient(s) be identified on the label, usually in the list of ingredients. ...

“Most countries require specific signage for unpackaged foods that have been irradiated (e.g. whole produce) and are sold in bulk.”

If labelling is the norm and no-one else is considering getting rid of it, why is there a push to do so in Australia and New Zealand? Who wants to keep us in the dark about irradiation?

The irradiation of fruits and vegetables typically involves their exposure to the energy equivalent of between 1.5 and 10 million x-rays. Now promoted as a fruit fly “treatment”, food irradiation also extends shelf life, sanitises, and alters the nutritional value of the treated foods. The changes made cannot be discerned with our ordinary senses.

At best, scientific opinion around irradiation remains divided. Irradiation causes vitamin and amino acid depletion in food. It changes the molecular structure of food potentially forming toxic chemicals linked to cancer, organ damage, genetic mutations, immune system disorders, tumours, stunted growth, reproductive problems and nutritional deficiencies.¹

Even the Australian government acknowledges that irradiation has adverse effects (while claiming that other processing methods and technologies may have similar effects). The Department of Agriculture and Water Resources states: “It is now well established that irradiation does affect certain vitamins and other nutrients and does produce peroxides and other radiolytic by-products, some of which may be toxic and/or carcinogenic, and that these effects are dose related.”²

There is no data to support the claim that irradiated food is safe as no long-term studies of human consumption of irradiated food have been carried out. In fact, a recent document produced by FSANZ in support of irradiating 12 fruits states clearly that “consumption data are not available.”³ With no consumption data available, a statement as to the safe consumption is insubstantial.

The “safety and benefits” that FSANZ want to “communicate” are also unspecified.

“Safety” may refer to the safety of the industry – which in Australia is a nuclear industry carrying its associated risks around the transportation, use and storage of radioactive materials.

Or safety may refer to the inferred “wholesomeness” of irradiated foods – which is at best questionable.

Or safety may refer to the decontamination aspects of some irradiation – which can neutralise but not remove some pathogens from food. The fact is that for the most part, irradiation in Australia has not been authorised for food safety reasons – which could call for higher doses of radiation exposure – but for trade/quarantine purposes which, while possibly beneficial to local environments, are ultimately aimed at increasing profit for food producers, not at benefitting the consumer.

Most Australians and New Zealanders have little experience with irradiated food as little has been put on the market. Australian consumer acceptance cannot be assumed, while their resistance to the technology is well documented.

In recent polling in New Zealand - where irradiated Australian produce is being marketed – 72% of respondents expressed concern.⁴

Under proposals being considered by FSANZ, it may be impossible to tell whether food has been irradiated.



Research commissioned by irradiation supporters themselves reveals little public awareness about irradiation and consumer's desire to be informed through labelling. FSANZ's consultation papers confirm this.⁵

"In October 2001, FSANZ commissioned qualitative research to examine Australian and New Zealand consumer understanding and use of various label elements ... the general consensus was that even though the word was alarming and off-putting, that it should be used on packaging rather than a symbol, again because people had a right to know what has been done to their food ..."

"Tomatoes NZ (the industry body that represents the fresh tomato sector) commissioned a telephone poll of 1000 New Zealand adults in April 2015. Poll participants were asked if they would like:

- the fruit and vegetables they buy that have been treated with irradiation to be clearly labelled as irradiated. (Eighty-five per cent of participants responded that they would).*
- to know if a dish they ordered in a restaurant, café or takeaways includes irradiated food. (Seventy-eight per cent of participants responded that they would)."*

The public wants irradiated food to be labelled. To date, all irradiation approvals have been premised on the statement that irradiated foods would be labelled.

Industry sees the use of irradiation as a fruit fly control and shelf-life extender. And industry understands that people have an aversion to food exposed to radiation. At a 2012 Horticulture Australia Limited Forum in Sydney, Paul Harker, head of produce at Woolworths, said the industry needed a united voice on the subject before it proceeds.

"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," Harker said.⁶

"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."

In its review document, FSANZ and the Ministerial Council clearly link labelling to the low "uptake" of irradiation foods.

Should labelling be removed so that people will buy irradiated food?

Australian and New Zealand labelling standards already fall short of world standards. Rather than being removed, labelling should be improved to prescribe clear and accurate statements such as "Irradiated", or "Treated with irradiation".

In a free market economy, 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 increasing 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.

Take action! The public comment period on FSANZ's labelling review "consultation paper" has ended. However each state and territory has representatives on the Ministerial Council who have the power to determine what happens next. Let them know that you care:

<https://friendsoftheearthmelbourne.good.do/keep-labels-on-irradiated-foods/emailsanznow/>

More information:

www.foodirradiationwatch.org

www.facebook.com/notofoodirradiation

Robin Taubenfeld is a national nuclear spokesperson for Friends of the Earth, Australia.

References:

1. Public Citizen, Questioning Food Irradiation, April 2003, www.citizen.org/cmep
2. www.agriculture.gov.au/biosecurity/risk-analysis/reviews/final-animal/gamma-irradiation/questions-and-answers
3. FSANZ A1092: SD1, p.3
4. www.nzherald.co.nz/opinion/news/article.cfm?c_id=466&objectid=10892295
5. FSANZ Review document, p.14-15
6. www.theland.com.au/news/agriculture/horticulture/general-news/irradiation-pros-and-cons/2665981.aspx?storypage=0

Australia's nuclear weapons hypocrisy

Tim Wright

Among those most vociferous in condemning North Korea's nuclear test in January and its rocket launch in February were the leaders of nations that themselves possess nuclear weapons. Nations that, over half a century, mastered the art of mass destruction by exploding atomic and hydrogen bombs off Pacific atolls and in the Australian outback.

Were these nations now on the path to disarmament, in full compliance with their obligations under the Nuclear Non-Proliferation Treaty, one might overlook their double standard. But all are instead bolstering their nuclear forces – “refurbishing” old warheads and developing new missiles, submarines and bombers to deliver them.

While North Korea may be the only nation to have conducted a full-scale nuclear test this century, the United States, Russia and China continue to conduct sub-critical nuclear tests – where no chain reaction occurs – allowing them to enhance their nuclear forces without violating the global norm against nuclear testing.

In the world of nuclear diplomacy, it's do as we say, not as we do. The deal to curtail Iran's nuclear program is another illustration of this. When the agreement was struck last July, five nuclear-armed nations and Germany, which hosts US nuclear bombs on its soil, sat opposite Iran at the negotiating table – all demanding of Iran what they will not accept for themselves.

To be sure, it was a diplomatic triumph: membership of the “nuclear club” remains at nine, a potentially catastrophic military intervention has been averted, and crippling economic sanctions have been lifted. But the Iran deal does nothing to diminish the grave threat to humanity from the 15,800 nuclear weapons that already exist in the world. On the iconic Doomsday Clock, we remain just three minutes from midnight.

Among the largest nuclear stockpiles is that of the United States, a chief architect of the Iran deal. It maintains some 7,200 warheads, amassed during the Cold War, and is now trialling new “low-yield” warhead designs, with the purported aim of minimising “collateral damage”. Yet experts warn that this development will serve only to lower the threshold for initiating a nuclear strike.

In the words of General James E. Cartwright, a retired vice-chairman of the Joint Chiefs of Staff,

“what going smaller does is to make the weapon more thinkable”. Smaller, though, is perhaps an inapt term. With an explosive yield of up to 50 kilotons, these new weapons could be three times more destructive than the atomic device detonated over Hiroshima seven decades ago, killing 140,000 people.

A ‘rogue state’ such as North Korea – with its much feared, reviled and mocked leader, Kim Jong-un – provides useful cover for alarming developments of this kind. So long as the spotlight shines elsewhere, few will worry about, let alone protest against, the actions of the more ‘responsible’ nuclear powers – nations that, truth be told, have time and again brought us within a hair's breadth of catastrophe.

Most governments, however, do accept that there are “no right hands for wrong weapons”, to use a phrase of the United Nations secretary-general, Ban Ki-moon. Regrettably, Australia is not yet among them. While the foreign minister, Julie Bishop, was swift to condemn North Korea's test, her department claims that US nuclear weapons protect Australia from attack and even “guarantee our prosperity”.

This longstanding policy, known as extended nuclear deterrence, implies that nuclear weapons are legitimate, useful and necessary war-fighting instruments. It incites proliferation and undermines disarmament. It renders Australia an outcast in our immediate region, where all other nations have rejected the bomb outright.

Over the past year, 122 nations have formally pledged to work together to prohibit nuclear weapons through a new treaty. To place them on the same legal footing as other indiscriminate, inhumane weapons – from chemical and biological agents to anti-personnel landmines and cluster munitions.

If we are to succeed in eliminating the nuclear threat, we must begin by challenging the double standards that, throughout the nuclear age, have so plagued disarmament efforts. We must declare nuclear weapons unacceptable not just for North Korea and Iran, but for Australia and its allies, too.

Tim Wright is Asia-Pacific director of the International Campaign to Abolish Nuclear Weapons (ICAN).

Among the largest nuclear stockpiles is that of the United States, a chief architect of the Iran deal. It maintains some 7,200 warheads, amassed during the Cold War, and is now trialling new “low-yield” warhead designs, with the purported aim of minimising “collateral damage”.

The world's forests will collapse if we don't learn to say 'no'

Bill Laurance

An alarming new study has shown that the world's forests are not only disappearing rapidly, but that areas of "core forest" - remote interior areas critical for disturbance-sensitive wildlife and ecological processes - are vanishing even faster.

Core forests are disappearing because a tsunami of new roads, dams, power lines, pipelines and other infrastructure is rapidly slicing into the world's last wild places, opening them up like a flayed fish to deforestation, fragmentation, poaching and other destructive activities. Most vulnerable of all are forests in the tropics. These forests sustain the planet's most biologically rich and environmentally important habitats.

The collapse of the world's forests isn't going to stop until we start to say "no" to environmentally destructive projects. Those who criticise new infrastructure projects are often accused of opposing direly needed economic development, or - if they hail from industrial nations - of being hypocrites. But when one begins to look in detail at the proposed projects, an intriguing pattern appears: Many are either poorly justified or will have far greater costs than benefits.

For example, in a recent essay in the journal *Science*, Amazon expert Philip Fearnside argues that many of the 330-odd hydroelectric dams planned or under construction in the Amazon will be more trouble than they're worth. Many of these dams will have huge environmental impacts, argues Fearnside, and will dramatically increase forest loss in remote regions. Fearnside asserts that mega-dams planned for the Congo Basin and Mekong River will also cause big problems, with limited or questionable benefits.

The explosive expansion of roads into the world's last wild places is an even more serious problem. Indeed, Eneas Salati, one of Brazil's most respected scientists, once quipped that "the best thing you could do for the Amazon is to blow up all the roads". Current projections suggest that by 2050, we'll have nearly 25 million kilometres of additional paved roads - enough to encircle the Earth more than 600 times.

I have led three major studies of planned road expansion, for the entire planet and for the Brazilian Amazon and sub-Saharan Africa. All

three show that many planned roads would have massive impacts on biodiversity and vital ecosystem services while providing only sparse socioeconomic benefits. In Africa, for example, our analyses reveal that 33 planned "development corridors" would total over 53,000 km in length while crisscrossing the continent and cutting into many remote, wild areas. Of these, we ranked only six as "promising" whereas the remainder were "inadvisable" or "marginal".

There is a very active coalition of pro-growth advocates - including corporate lobbyists, climate-change deniers, and die-hard proponents of "economic growth" - that immediately decry any effort to oppose new developments. Added to this are those who argue reasonably for economic development to combat poverty and disparity in developing nations. Such advocates often assert that an added bonus of development is greater sustainability, because impoverished people can be highly destructive environmentally. The denuded nation of Haiti is one such example.

Yet the on-the-ground reality is often far more complex. For instance, the heavy exploitation and export of natural resources, such as minerals, fossil fuels or timber, can cause nations to suffer "Dutch Disease" - an economic syndrome characterised by rising currency values, economic inflation and the weakening of other economic sectors, such as tourism, education and manufacturing.

Dutch Disease tends to increase economic disparity, because the poor are impacted most heavily by rising food and living costs. Further, the national economy becomes more vulnerable to economic shocks from fluctuating natural-resource prices or depletion. The Solomon Islands - which relies heavily on timber exports that are collapsing from overexploitation - is a poster-child for Dutch Disease.

On top of this is the toxic odour of corruption that pervades many big infrastructure projects. One would need an abacus just to keep track of the allegations.

The bottom line is that many big infrastructure projects are being pushed by powerful corporations, individuals or interests that have much to gain themselves, but often at great cost to the environment and developing societies.

Globally, the path we're currently following isn't just unsustainable. It's leading to an astonishingly rapid loss of forests, wildlife and wilderness. From 2000 to 2012, an area of forest two and half times the size of Texas was destroyed, while a tenth of all core forests vanished. If we're going to have any wild places left for our children and grandchildren, we simply can't say "yes" to every proposed development project.

More information: www.sciencedaily.com/releases/2016/01/160128113837.htm

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Abridged from The Conversation: <https://theconversation.com/the-worlds-forests-will-collapse-if-we-dont-learn-to-say-no-53979>

Political parties urged to halt the erosion of Australia's democracy: new report

Australia's political parties must stop eroding many of the vital foundations of Australia's democracy, the Human Rights Law Centre said in a new report launched in Canberra in February. Civil society leaders joined the launch to highlight the critical role that civil society plays in a healthy and robust democracy.

"Open government, a free press, a strong and diverse civil society and the rule of law are some of the vital foundations of our democracy. Yet we are witnessing an unmistakable trend in Australia of governments eroding these foundations with new laws and practices that entrench secrecy and stifle criticism and accountability," said Hugh de Kretser, Executive Director of the Human Rights Law Centre.

The *Safeguarding Democracy* report documents how federal and state governments are adopting new laws and practices that undermine critical components of Australia's democracy like press freedom, the rule of law, protest rights, NGO advocacy and courts and other institutions. It presents 38 recommendations to stop the erosion and strengthen Australia's democracy.

A short excerpt from the 42-page report is published below.

Despite Australia's strong democratic history, there is a clear and disturbing trend of new laws and practices eroding many of these foundations. Federal and state governments have stepped up efforts to avoid scrutiny, reduce transparency and limit accountability in order to expand government power, advantage political elites and advance the interests of business. Governments are using a range of funding levers to stifle advocacy by non-government organisations that represent vulnerable minorities.

Environmental groups who challenge the fossil fuel industry are facing threats to their financial viability though attempts to remove their charity tax concessions. A number of states have enacted excessive and unnecessary anti-protest laws that prioritise business and political interests over protest rights.

Whistleblowers who expose even the most serious human rights abuses against children now face unprecedented risks of reprisals including prosecution and jail.

Press freedom is being eroded by new laws and policies jeopardising journalists' ability to maintain the confidentiality of sources and to report on matters of public interest. All the while,

in critical areas governments are undermining or sidelining the courts and institutions like the Australian Human Rights Commission, the nation's human rights watchdog, that were created to keep them in check.

The success of Australia's democracy relies on much more than the ability of adults to cast a free vote on election day. For our democracy to thrive, we need free speech, the free flow of information and a free press to hold government accountable and to inform peoples' voting decisions. We need to be able to organise and protest on issues that concern us. We need an environment in which civil society can effectively participate.

We need institutions, organisations and practices to prevent and expose misconduct and abuse of power; to ensure that government and elected representatives act in the best interests of the Australian public instead of prioritising powerful business and political interests; and to ensure that the interests of vulnerable minority groups are represented in policy debates.

Attacks on advocacy by non-government organisations

Direct and indirect attacks by government on civil society using a range of financial levers have undermined the ability of non-government organisations to advocate and threatened their independence.

Peak bodies and other non-government organisations that advocate for legal and policy reform have been defunded. A parliamentary inquiry threatens to remove the charity tax concessions of outspoken environmental organisations. Governments have amended funding agreements to either prohibit the use of government funding to undertake advocacy work or prohibit advocacy outright.

Ignoring strong evidence of the public value of advocacy activities, governments have created false distinctions between "frontline services" (which are deemed worthy of government funding) and "advocacy" (that, apparently, is not).

The rationale for the attacks is varied. Some attacks on environmental organisations reflect the power and influence of the fossil fuel industry. Other attacks seek to bolster the power of the executive arm of government by stifling criticism of government policy.

The attacks threaten the viability of many organisations and the spectre of further funding cuts and reprisals has generated an atmosphere of self-censorship among some government-funded organisations. Community organisations are being given a clear message: if you speak out against government you risk losing your funding.

Attacks on the right to peaceful protest

Australian people's movements have secured many of the rights and privileges that we take for granted. The suffragist movements led to women's voting rights.

The Gurindji walk-out played a key role in securing Aboriginal land rights. Environmental protests saved the Franklin River and a decade-long movement to celebrate "Sorry Day" preceded the official 2008 apology to the Stolen Generations.

However, State governments have passed far-reaching and dangerous laws that undermine our right to peaceful protest. Tasmania and Western Australia have introduced or proposed laws aimed at restricting protest in order to protect commercial interests, particularly forestry or mining operations. Queensland passed excessive anti-protest laws in connection

with the G20 summit. These laws get the balance wrong – unduly favouring the government and vested business interests at the expense of the democratic right to protest.

Attacks on whistleblowers and press freedom

New laws and practices have unjustifiably increased government secrecy, particularly in the areas of national security and immigration. The Australian Government now refuses to make available basic and timely information about immigration matters of intense public interest that it previously routinely provided. The Australian Government tightly controls journalists' access to immigration detention centres in Australia including the content of any reporting. Journalists are all but prevented from visiting the offshore detention centre on Manus Island or even entering Nauru.

The 2015 Border Force Act intensified this suffocating culture of secrecy. It threatens immigration workers and contractors with two years in jail for recording or disclosing information about events that they witness. The Act has inspired protest from medical staff who say they are unable to act in accordance with their ethical duties without risking prosecution.

New ASIO laws have criminalised the disclosure of information about 'special intelligence operations' regardless of the public interest in exposing any potential wrongdoing by ASIO. Increased secrecy has meant that whistleblowing - insiders exposing misconduct and illegality - has become even more important.

Yet whistleblower protections are complex, unwieldy and inadequate to protect those who

wish to disclose abuses. Worse, the Australian Government has responded to whistleblowers with increasingly aggressive reprisals including referrals to the Australian Federal Police for investigation and potential prosecution. This response increases the chilling effect on others who might consider exposing wrongdoing.

Separately, new laws have mandated the stockpiling of huge rafts of metadata generated by individuals, giving law enforcement agencies the tools to expose journalists' confidential sources.

The cumulative effect of these changes has made it far harder for the Australian media to do its job informing the Australian public and holding government accountable. Numerous senior journalists and media organisations have spoken out against them with the Media, Entertainment and Arts Alliance calling the national security law reforms "the greatest assault on press freedom in peacetime."

Seizing the opportunity to renew our democracy

The new report from the Human Rights Law Centre identifies a range of measures that are eroding Australia's democracy. The measures are not isolated. They are occurring across a range of policy areas and at both the state and federal level. There is a clear trend and it is corroding our democracy and human rights. This report seeks to highlight this trend in order to stop it.

Encouragingly, the work of stopping the regression has already begun in some states, with new state governments repealing excessive move on powers that threatened protest rights in Victoria and removing gag clauses from funding agreements with non-government organisations in Queensland.

However, more than simply arresting this trend, we must use this opportunity to truly strengthen our democracy. We need to protect and promote fundamental human rights from government intrusion, including the rights to free speech, freedom of association and peaceful protest. We need to respect the rule of law and encourage, rather than diminish, oversight by our independent court system. We need properly resourced and mandated institutions capable of holding government accountable. We need an environment in which civil society is resourced and empowered to speak on behalf of its constituencies.

The full report is online:

Human Rights Law Centre, February 2016, 'Safeguarding Democracy', <http://brlc.org.au/safeguardingdemocrac>



Lizards Revenge protest, Olympic Dam uranium mine, Kokatha land, 2012. The next Lizards protest at Olympic Dam is taking place from July 1-3, 2016. Search facebook for 'Lizard Bites Back'.

The latest from the Leard State Forest

Phil Evans

Two years after construction began, Whitehaven Coal's Maules Creek mine continues to expand into the critically endangered woodlands of the Leard, but not without resistance. Both the miners have been given approval to clear the forest - but only in a six-week window from February 15 to March 31. This short period is to protect the 34 threatened or endangered species in the forest from clearing during breeding or times of torpor - a hibernation like state during the colder months. Another condition is that clearing must not happen if the temperature rises above 35 degrees. Local ecologist Phil Spark explains that, "The 35 degree C limit was set because when it is too hot the animals hide in their hollows to conserve energy. Clearing during this heat results in higher mortality."

Once the bulldozers started up, breaches of the 35 degree condition became apparent according to Front Line Action on Coal - a group set up against the destruction of the Leard State Forest for coal. The claims were taken to the NSW Environmental Defenders Office who wrote to Whitehaven and the NSW Department of Planning, calling for an immediate investigation of the alleged non-compliance and stricter measures to prevent Whitehaven coal ignoring the rules.

This kind of 'green policing' and regulation watch remains critical to the campaign alongside concerted non-violent direct action seeking to slow the work and raise the awareness of regulation breaches which see the embattled miners in even more financial and political strife than what they already find themselves.

In early 2014, a protection treaty between the Leard Forest Alliance and Gomeroi traditional custodians was signed on Gomeroi / Gamilaraay country. The campaign to protect Leard State Forest from Whitehaven Coal and Idemitsu Resources bulldozers was just about to reach

fever point - and farmers, greenies and traditional custodians were closer than ever to speaking with one voice on the issue.

The Gomeroi mounted a formidable campaign based on legal and political strategies to protect sacred sites and use existing legislation to ensure that their cultural heritage was protected. In the years preceding this latest round of forest clearing by Whitehaven, no Gomeroi / Gamilaraay traditional custodian was arrested in the parallel campaign of non-violent direct action prosecuted by farmers and greenies.

Over two years ago, as so many other sacred sites were being destroyed and desecrated, the Gomeroi put in a section 9 and 10 under the Aboriginal and Torres Strait Islander Heritage and Protection Act to save the sacred site, Lawler's Well. That application has sat on the desk of the Environment Minister Greg Hunt without decision, and understandably this has frustrated Elders who have played by the rules for so long.

This summer, with clearing currently just a few hundred metres from Lawler's Well, Gomeroi / Gamilaraay traditional owners decided that they have had enough and took part in an act of civil disobedience to express their frustration.

On March 2, two Gamilaraay men, Paul Spearim and Allen Talbot and a Githabul man, Laurence Miles, locked themselves to concrete barrels at the entrance to the Maules Creek coal mine.

Paul Spearim said he undertook the action because, "for me personally this about the protection of our sacred lands, water, animals, song, dance, knowledge and culture of the Gamilaraay nation."

Dolly Talbot, a Gomeroi woman and spokesperson, said: "We are asking Greg Hunt to commence an independent report including oral evidence to make an informed decision. We are asking him to do his job right and protect our Lawler's Well. It is so hard seeing the destruction of our country. The elders have been waiting too long for answers. It is completely unacceptable that Hunt dragged his feet on the protection of Lawler's Well. We reasonably expect the respect of an timely assessment and our rightful opportunity to have protection enacted."

Githabul man Laurence Miles spoke of the growing alliances amongst first nation and non-indigenous groups against destructive, extractive industries. "We come from the east to support the Gamilaraay in their fight to save mother earth," he said. "We are one in this fight."

Front Line Action on Coal has issued a call for people to contact Greg Hunt urging him to show respect to Elders and give them a decision regarding Lawler's Well. He can be contacted on (02) 6277 7920 - check out frontlineaction.org for more details.



Traditional Owners at the entrance to the Maules Creek coal mine, March 2016.

Earthworker Cooperative installing solar hot water systems on community housing

After a campaign spanning from December 2015 to late February, the Earthworker Cooperative's #GiveTanks crowdfund raised \$24,328. It's inspiring to see so many individuals and organisations prepared to open their hearts and wallets in answering the call to install solar hot water systems on community housing.

Significant donations included \$5,600 from the Electrical Trade Unions Victorian branch, whose Victorian state secretary Troy Gray said: "Unions have always been a force for collective and positive social change - for looking out for the vulnerable, and of course for dignified and fair workplaces. We're proud to contribute to a project that does these things, whilst also dealing with the question of climate change".

Even before the crowdfund had ended, installations of solar hot water systems had already begun, with the first crowdfunded installation being made in January on the property of an elderly tenant managed by Aboriginal Housing Victoria.

Des Rogers, Director of Operations at Aboriginal Housing Victoria, said: "This opportunity to crowdfund for the installation of hot water systems into some of our properties is very very exciting. Most of our tenants are on low income, and many have disabilities. So building and providing appropriate, affordable and sustainable accommodation for our tenants, who are in vulnerable situations a lot of the time, is really important to us and obviously to our tenants as well."

Earthworker Cooperative is pleased with the outcome of the crowdfund, with organiser Melissa Corbett saying: "What makes an Earthworker Cooperative solar hot water system special is that the tanks will be manufactured locally in a unionised worker-cooperative. Through the #GiveTanks crowdfund we are both generating orders for the still in forming Eureka's Future Workers Cooperative, while meeting Earthworker Cooperative's social justice commitments to addressing climate change, and ensuring that low-income households are benefiting from access to renewable energy technologies. We're looking forward to getting on with the job of installing these hot water systems on properties managed by Aboriginal Housing Victoria and Common Equity NSW thanks to funds that we have raised."

All in all the #GiveTanks crowdfund has been a win, win, win for the community, jobs and



climate. Earthworker Cooperative would like to say Tanks Mate to everyone who donated and supported the #GiveTanks campaign!

Looking into the future, there are many exciting developments happening in Earthworker Cooperative. Recently Earthworker received an invitation to become involved with the establishment energy consumer cooperative, an initiative that the National Union of Workers is currently looking into the feasibility of.

Godfrey Moase from the National Union of Workers first spoke publicly about the idea for an energy consumer cooperative at the recent 'Hot Jobs - Clean Energy' forum that was held as part of the Sustainable Living Festival in Melbourne. This initiative aims to increase the amount of renewable energy generation feeding into the power grid, while lowering the energy bills of members of the cooperative, many of whom will have joined through their industry union.

Another key part of our commitment to a just transition has been our long term goal of establishing a factory manufacturing renewable energy technologies in Morwell, at the centre of the Latrobe Valley's coal fired power industry. Due to the unfortunate closure of Everlast Hydro Systems, the small manufacturer in Dandendong that Earthworker had partnered with to establish Eureka's Future, Earthworker is now considering ways of moving to the valley sooner than had previously been envisioned. If our current negotiations prove successful, this could mean that Earthworker Cooperative's flagship Eureka's Future factory could be operating in Morwell in the not too distant future.

Eureka's Future is not the only worker-owned cooperative that Earthworker is helping to establish. Hedge Row Farm will be a large farm containing a mosaic of small scale farmers, rural businesses and other compatible activities; with members of Earthworker currently involved in establishing their own cooperatives as part of this rural business incubator.

Earthworker Cooperative is always looking for more active members and organisers who are keen to be a part of the initiatives that we have mentioned here, so please get in touch!

contact@earthworkercooperative.com.au

<http://earthworkercooperative.com.au>

www.facebook.com/Earthworkercoop

www.twitter.com/Earthworkercoop

From 'good girl' to serial felon:

The radicalising of Friends of the Earth veteran June Norman

Liz Conor



When a young bride swaps her grandmother's bed for her husband's you could be forgiven for thinking she lived a life enfolded in tenderness. Not so for June Norman. She shared her grandmother's bed from nine months having lost her mother to a backyard abortion.

June was arrested in February 2016 for blocking Santos' entrance to its Leewood facility in the NSW Pilliga State forest. By now she's a veteran felon. She was the first to be arrested protesting coal seam gas – 'only in Australia', she quibbles. She has clocked up over 8000 kms in protest walks in Europe and Australia. She once encroached on a US military training ground outside Rockhampton and camped for four days during live fire.

She's won an U.N. award for her work in peace and the environment. She drew international attention in December 2015 when *National Geographic* photographed her as a Climate Guardian Angel, defying the protest ban in Paris at the COP21 climate talks. Her other-worldly incarnation of guardianship of the earth reached over 40 million followers and was liked over 200,000 times. She has become one of Australia's best-known dissenters.

'Don't make a big deal of it', June insists as we settle in. I've 'angeled' with June many times now, first at the G20 in Brisbane when we orbited its perspex periphery in 40 degree heat until we chanced upon a 'caterer's entrance' – in fact the delegates' entrance – and staged a sit-in.

I can vouch for her unassuming, quiet resolve. Together with her slight frame, crescent cheek bones and bluefire eyes, June's 75 years lend her an uncultivated gravitas. As an Angel she carries a rare kind of moral authority that has landed front pages around the world.

But by putting herself forward she defies decades of ingrained humility. For 50 years, she explains, 'I was a good little girl. I did exactly as I was told'. It was drummed into June to 'know your place and don't get high and mighty'.

Early years

Born in a small country town in New England, June grew up knowing very little about her mother's death. It was off limits in family conversation yet whenever she walked into a room she was pointed out as 'Betty's little girl' before everyone was shooshed. Little and confused June felt she must have been 'the cause of her death'.

It wasn't until June was 15 that she was told how her mother had died. Yet she didn't think of her as a victim of an unjust law. Where was a married woman, with three sons already and pregnant again when June was only six months old, to turn? 'The circumstances were so bad she didn't have a choice.'

In a small country town in the 1940s a mere visit to the chemist raised suspicions, let alone purchasing condoms. June remembers it wasn't men's responsibility yet they also had to agree 'and I don't think my father would have'. Four decades after Marie Stopes' *Married Love* on birth control was published, girls like June were kept so in the dark about their bodies she thought she was 'dying' and had 'done something wrong' when she started her periods.

Her grandmother raised her on a widow's pension during the war, withstanding the strain of four missing sons. Three were imprisoned in Changi, where one lost his life. Another died soon after his return. June recalls 'his organs were found to be those of an old man', the war had aged him so. June's older sister had already died of diphtheria at only two years and her grandmother was also caring for frail elderly parents. Within this whirl of loss the death of her 27-year-old daughter was 'such a stress to her'. And because June's mother had died aborting her pregnancy, police appeared at the funeral, interviewing people who may have assisted her.

So it is with pride that June recounts her grandmother 'working her guts out' to provide her with enough clothes and food. 'She was a beautiful woman but she was just worn out. I was kind of put in the corner, I don't think there was any energy left for me emotionally and physically.'

At seventeen June found affection from a fitter and turner, a 'good hard worker', who did his best, but also struggled. June waitressed to subsidise their yearly bills but as soon as they were paid 'I had to stop, he didn't want me out in the world, he'd say, "I'm the provider"'.

June had little recourse to the elucidations of feminism. These were 'strange women who didn't like men, that's how it was portrayed'. Feminists 'looked high and mighty'. She ran away at first but went back to him. 'I couldn't understand how I could survive without him. I was married at 19. I had no career. You didn't educate girls because they got married and had children.'

Her grandmother had counselled, 'the way to keep your husband, stop him from straying - have sex with him.' They had five kids and when the littlies went to school June studied childcare. 'That's when it started to change'. At college all day and the only mature-age student in her cohort June was coming home 'talking about worldly things'. When June started 'bucking the system' and standing up to him he hit her. She finally told him to leave as he wavered between June and his mistress.

After the marriage dissolved June started working at Barnardos in Canberra, realising that she 'would never have been allowed to if I'd stayed married to him because going out and picking up kids from the police station at 2am would've interfered in his life'.

East Timor

She moved north and read John Martinkus' *A Dirty Little War*, and felt she owed the Timorese people, after our government's treatment of them. 'I made a vow. That's the place I need to go.'

In an orphanage June learnt first-hand of atrocities during war. Of a boy seeing his father's throat slit before his eyes. Of a girl whose heavily pregnant mother fell fleeing the Indonesians, gave birth and died in the dirt. The grandmother plucked up the newborn and ran with the girl. She'd spit on her finger and put it in the baby's mouth to quieten it so they wouldn't be found.

'How do you live through that? They were starving, turning family against family.' Shaking her head June raises her hands and turns away.

On her return the US military were training Australian soldiers outside Rockhampton, at a base they nicknamed War Games. June was 'incensed'. She'd spent over three years 'picking up the pieces after a war and I did not want my grandchildren to ever go through what those children went through. How dare they call war a game!'

It was then that June joined Friends of the Earth and headed up to the base. They broke into the grounds and blockaded the road with a list of all the civilians including children who'd been killed in the Iraq troop surge of 2007. June was arrested.

Undeterred they soon returned 'upping the anti'. They camped on the grounds for four days during live fire but were not found. Running out of food they had to walk into their camp. June quipped to the press, 'how do they expect to find Bin Laden when they can't find four activists'.

Soon after June cycled from Rockhampton to Lismore holding meetings in the towns earmarked for nuclear reactors, but she decided walking was more her thing and got involved in Footprints for Peace. She walked from London to Geneva, zig-zagging through French and German nuclear reactors. 'When you walk into that town and you've come 400 or 1000kms you get people's interest. It inspires them. It's walking the talk.'

Lock the Gate and Climate Guardians

June joined Lock the Gate at its inception in 2010 and was the first person arrested protesting coal seam gas. She organised the Reef Walk, and over 10 weeks broke down the resignation she was hearing in little towns: 'yeah we know what's happening, but this is government, this is big business, there's nothing we can do'.

Elders were involved in all of June's walks. She was given a message stick that was hand carved and painted with ancestors' footsteps and her walkers, to deliver to the Prime Minister. 'Along with the Timorese people they are people who have been so abused and disempowered and they are the First Nation people here and they've looked after their country for millennia and knew how to survive.' There are lessons in this, June feels, 'we could all be learning.'



June Norman, Climate Angel

When the Climate Guardians arrived in Brisbane for the G20, June heard through Friends of the Earth that they were a few Angels down and soon found herself being strapped into the wing harness in the YHA. From the Brisbane G20 sit-in to the protest bans in December in Paris, to the Pilliga blockade, June has stood on the front line of international protest.

In Paris on the first day of COP21 June stood amongst the shoes of the people who had been denied the right to march sensing 'a person was there, I was very careful not to tread on them'. Feeling the terrorist attacks were bad enough, without punishing Parisians by taking away their right to have their say on climate, June 'was proud to be there showing solidarity'.

But being invited to lead the D12 march at the end of the COP21 talks was both 'frightening and elating'. Breaking through the police blockade and leading tens of thousands out on to the street, 'that was just something unbelievable'.

Images of a grandmother in furiosa makeup and angel wings blockading the bridge before the Eiffel Tower circled the globe and came back to her nephews and nieces. Their friends described her as 'the idol of their families'. It's not a comfortable fit for June. She cringed when, at the U.N. award ceremony, Queensland Governor General - ex-military - read out the careful wording that honoured her protest at the Talisman Saber war games. 'It was hilarious!'

She is embarrassed when people tell her she's inspired and empowered them to stand up and act - mostly women she notes.

'All my life until now I felt helpless to do anything, whether it was how I was treated as a child, or following my dreams. Those negative things we say to girls, pride comes before a fall, don't be vain ... When my marriage was struggling I fantasised that if I was famous my husband would see that I was a good person, that I was someone special. Now I'm through all that, but it's happened! But I don't need it now!'

If there is one lesson for us in the indefatigable elder stateswoman of Direct Action that is June Norman it comes in the saying by the philosopher Henri Frederic Amiel, 'There is no respect for others without humility in one's self'. But when that humility is disproportionately levied on women, obstructing their participation in civil society, it needs to be balanced with defiance. It is more than long distances June has walked in her lifetime. She has crossed the barriers erected across women's guardianship of our earth. For June her resistance started when she stood up to her husband. It continues unabated.

Liz Conor is an ARC Future Fellow at La Trobe University and the founder of the Climate Guardians.

A longer version of this article is available from chainreaction@foe.org.au

Climate change and drinking water

Anthony Amis

Climate change is already impacting on the quality of water supplies across Australia. For example, costly desalination plants worth billions of dollars have been rolled out across Australia since 2005 to deal the envisaged future water shortages.

Water supplies to both urban and regional centres have also been threatened by a series of climate change related events. The biggest threats to drinking water posed by climate change are unusually long droughts, followed by fire and then flooding rains.

Flooding rain occurring after extended dry periods can stir up nutrients in reservoirs and surrounding catchments, which in turn can lead to algal blooms. Algal blooms then require additional and sometimes costly treatment by water authorities.

Perhaps the most serious event of this type occurred in August-September 2007 when a 58 km algal bloom spread over Sydney's Warragamba Dam making a large percentage of the water undrinkable. Toxic Mycrocystins were detected and water had to be treated with powder activated carbon.

Low flows in natural waterways can also be a source of algal blooms. For several months in 2010 water authorities along the Murray River had to contend with extensive blooms of blue green algae. Powder activated carbon dosing was also required to deal with the bloom. Cyanotoxins (blue green algae) can be lethal if ingested.

South East Queensland Water had to pay additional millions of dollars to deal with sediment washed into Wivenhoe Dam by the 2011 January floods. Additional amounts of aluminium based flocculants were required to deal with the very fine sediment particles that had entered the dam.

High levels of aluminium have been linked to Alzheimer's disease. Some of the highest amounts of aluminium recorded in Australia were at Hamilton in western Victoria in July 2008, due to water treatment facilities unable to handle poor quality source water due to drought. Additional water treatment chemicals required to deal with the consequences of climate change could therefore increase health risks, particularly in many vulnerable smaller communities.

Bushfires

Bushfires also threaten water supplies by causing ash, muddy water, heavy metals, phosphorus and fire fighting chemicals to enter reservoirs. Severe fires can burn riparian zones and leave no protection for soils. If heavy rainfall occurs after bushfires, serious erosion and sedimentation problems can eventuate, once again placing pressure on water treatment plants.

Following the 2003 North East Victorian bushfires, a staggering turbidity level of 123,000 *Nephelometric Turbidity Units*, 24,600 times above the Australian Drinking Water Guideline, was recorded at Buckland after flash flooding. The Buckland River flows into the Ovens River, which provides drinking water to the town of Wangaratta.

Fish kills were widespread and a turbidity level 7000 times higher than the Australian Drinking Water Guideline was recorded at Myrtleford, 25 km downstream of Buckland. The poor water quality led to water restrictions, where water had to be trucked in to dilute water extracted from the Ovens River. Ongoing rainfall meant more sediment entered Ovens River well after the bushfire had occurred.

Disinfection by-products

With treatment plants having to cope with a range of potentially dangerous substances such as viruses, pathogens and bacteria, the pressure to disinfect water by increasing chlorine can also cause potential problems. As water becomes more salty and water levels in reservoirs drop, chlorine used as a disinfectant can react with these organic molecules to create disinfection by-products (DBPs). Some DBPs have been linked to bladder cancer. Higher water temperatures can also cause disinfection by-product problems, including water supplied via pipelines. In October 2012 Friends of the Earth revealed that many thousands of people in South Australia, including suburbs of Adelaide, had been exposed to drinking water with high levels of the Trihalomethane, Bromodichloromethane, in some areas for over a decade.

Many small communities in Victoria's Wimmera region, who source their drinking water from the Grampians, suffered high levels of chlorine DBPs during the millennium drought of the 2000s. A

FoE International Report: An Energy Revolution Is Possible

severe water shortage was experienced across the region, with the capacity of some of the regions headwork reservoirs falling as low as 2.5%. The prolonged drought meant that communities who were reliant on water being channelled to their communities from the headwork reservoirs found that this could not occur, and were left with older water which had been retained in their town storages. This water became more saline and the salinity directly impacted on the concentration of DBPs produced.

Following the DBP problem, in January 2011, heavy rain caused 200 landslips in the Grampians including many in the Lake Bellfield catchment, the major water supply catchment in the region. The catchment had also been severely burnt by bushfires in 2006. Severe sedimentation problems eventuated. Ten thousand people in 19 communities were impacted as their communities did not have water treatment plants to treat the sediment. Water supplies to many of the regions towns were undrinkable between 2011-12. A new range of DBPs was also formed as a result of the erosion problems.

As a way to reduce DBPs, water authorities sometimes add ammonia to chlorine as a means of extending the lifetime of the disinfectant. This treatment is known as chloramination. Chloraminated water can cause some health problems and aggravate others such as skin, digestive and respiratory ailments. Residents from the Victorian town of Maryborough have recently been in contact with Friends of the Earth regarding the poor quality of their recently chloraminated drinking water supply. The region recorded high levels of the DBP trihalomethanes (most notably Bromoform) between January 2007 and January 2009. Source water from nearby Tullaroop Reservoir had fallen dramatically. Since chloramination, the DBPs have significantly decreased, but now the community faces chloramination concerns. This scenario will also play out across many regional centres across Australia in the following decades as they make the switch to chloramination.

A report by Friends of the Earth International (FoEI), launched a week before the UN climate summit in Paris, estimates that it would take US\$5,148 billion of extra investment to generate half the world's electricity with 100% renewables by 2030. No small amount, but to put it in perspective, FoEI points out that this is an investment equal to the wealth currently held by 0.00001% of the global population, or 782 people.

This means that the personal fortunes of the 782 wealthiest people on the planet - many of them CEOs of major corporations - could power Africa, Latin America and most of Asia with 100% renewable energy by 2030. The wealth of the richest 53 people globally could power the whole of Africa with 100% renewable energy by 2030, and the wealth of the richest 32 people could power most of Latin America with 100% renewable energy by 2030.

The comparisons with individual wealth are used as a stark reminder that the finances needed to halt dangerous climate change is certainly available. The report does not suggest that the wealth of these individuals can or should be directly used to drive the needed energy transformation.

The report details the mix of renewable energy sources most appropriate for each region and discusses relevant technical issues regarding capacity factors, storage technologies and so on. But just as importantly, it argues that the energy revolution is necessarily a social revolution as well.

"Business as usual is no longer an option. Carbon emissions continue to rise. We need an energy revolution," said Dipti Bhatnagar, FoEI Climate Justice and Energy coordinator. "The energy transformation involves not just switching from fossil fuels to renewable energy, but also a deeper transformation including democratic ownership of renewable energy resources," she said.

Friends of the Earth International, November 2015, 'An Energy Revolution Is Possible'

Summary:

www.foei.org/wp-content/uploads/2015/11/foe-energy-revolution-reportSUMMARY-web.pdf

Full report:

www.foei.org/wp-content/uploads/2015/11/foe-energy-revolution-full-report-web.pdf

A prescription for a healthier planet

Dr Tatiana Hitchen

Healthcare workers vicariously experience many facets of human life, with social, economic and cultural factors influencing the health or ill-health of patients. The environment, too, influences and interacts with our bodies and well-being. There are the positives of outdoor activity for exercise, vitamin D, and the feeling of biophilia (that affinity we feel for nature). There are also numerous negatives, as practices that damage the environment also adversely affect our health – think of coal mining and the occupational lung disease pneumoconiosis, the profound air pollution affecting many large cities and driving respiratory illnesses, the way climate change is altering ecosystems and fostering the spread of disease, or the numerous hospitalisations that come with ‘extreme heat’ days.

There are many within the health care profession who lament the effects of climate change and fossil fuel use, and want to engage in meaningful action to hasten a transition to a low, if not zero, carbon world.

Healthy Futures is a network of health professionals, students, and supporters who have thought about the practicalities and want to aid a rational progression to sustainability. Coal mining, coal-powered energy, unconventional gas – these industries rely on investment and financial support. For instance, anyone can voice their dissent by switching their banking to an institution which does not invest in fossil fuels.

Our money, our health

Health care workers also have another divestment target – they are invariably signed up to one of two major superannuation funds, HESTA and First State Super, and it is these funds that Healthy Futures is focusing on.

The rationale is this: superannuation funds operate to invest members’ dollars to generate financial gains over time. Health care workers

may not feel comfortable that their retirement money is supporting the very industries that undermine their day-to-day work: a parallel would be investing in tobacco (which both HESTA and First State Super *have* divested from). Ergo, members and supporters of Healthy Futures are campaigning for super funds to divest from fossil fuels not only for the sake of the planet, but also to better reflect their members’ commitment to combating disease and promoting health.

Health professionals also have direct financial interests in their super funds divesting from fossil fuels. The profitability of fossil fuel companies is falling sharply as the world transitions to cleaner forms of energy. A recent report by Market Forces, “BURNED”, estimates that HESTA and First State Super lost \$485 and \$685 million respectively on their holdings in fossil fuel companies in the last financial year – amounting to a loss of \$735 for every HESTA member and \$1,174 for every First State Super member.

Funds might not be aware that their members strongly support divestment. To that end, in August 2015, Healthy Futures began its first major campaign, directed at HESTA, the largest super fund for the health and community services industry. Following a significant education and awareness programme at Western Health, Melbourne, over 500 people have signed an online petition for HESTA to divest from fossil fuel investments. Crucially, more than 160 of those are HESTA members. Employees at other healthcare organisations are also expected to join Western Health as the campaign programme expands. Healthy Futures sees great potential for HESTA to expand its socially conscious position – demonstrated by its divestment from tobacco and from immigration detention centre management company Transfield (now known as Broadspectrum) – to concern for the environment, and to demonstrate this through definitive action.

Healthy Futures is keen to provide people in the healthcare sector with ways to encourage and support the political parties to proffer more ambitious policies on climate change.



Healthy Futures further proposes that HESTA disclose all of its investments which support fossil fuels. This would allow members to make informed choices about how their money is invested, as well as opening an avenue for discussion about specific alternatives. Healthy Futures recently requested this but HESTA refused to disclose its fossil fuel company holdings, citing “commercial confidentiality”.

Healthy Futures has also launched an online petition for First State Super to divest from fossil fuels, building on the interest expressed by First State Super members who signed the HESTA petition (56 so far). First State Super has a socially responsible investment option and has committed to screen out from this option companies that derive more than 20% of their revenue from the sale of coal, oil and natural gas. However, that leaves the majority of their members invested in harmful and financially precarious fossil fuel assets. Healthy Futures are therefore requesting that First State Super extend the negative fossil fuel screens that are intended for their socially responsible investment option to also apply to their default investment option.

Making votes meaningful

2016 will also be a busy year for Healthy Futures as the next federal election is due. Healthy Futures is keen to provide people in the healthcare sector with ways to encourage and support the political parties to proffer more ambitious policies on climate change. Many electorates are expected to be hotly contested, and climate change is sure to be on the agenda for a lot of voters, particularly post-Paris. We will work with other non-government organisations in assisting political parties to achieve better climate policies.

Concerted collaboration

We have a number of other ideas and plans for engagement, advocacy and education, but we can't do this alone. Healthy Futures is an inclusive, dynamic organisation. We are keen to form partnerships with other networks of health care professionals, be they nurses, midwives, allied health professionals, medical scientists, or any groups that are concerned about what climate change does to our health and how we might evolve to safer, greener practices.

If you work in health care or community services and support a low-carbon future for our health, we'd love to hear from you. And, particularly, if you are a member of HESTA or First State Super, please visit our website to sign our petitions and learn more about having a say in how your retirement investments are directed.

If you are a great social networker who can help us foster friendships and partnerships, Healthy Futures would be very keen for you to join our communications team. If you have any other skills to offer, or even just want to support us through joining as a member, there are multiple ways you can be involved.

In summary, please sign on to our divestment campaign, help take our message further by being part of our communications team, and let us know if you're interested in encouraging political parties to offer better policies on climate change. Find out more about who we are and what you can do at www.healthbyfutures.net.au

Healthy Futures members (Drs Lin Wang, Tatiana Hitchen, Harry Jennens and Kate Lardner) with the Australian Medical Students Association (AMSA) Code Green Project Team, Code Green Lancet Commission Launch, Royal Children's Hospital, Melbourne.

Hunt turns Red Gum Parks into firewood

Morgana Russell

Friends of the Earth's River Country Campaign was alarmed to discover that Greg Hunt, Australia's 'Minister for the Environment', had approved a controversial logging trial in a NSW Red Gum National Park and Ramsar-listed wetland.

In 2010, new Red Gum National Parks were declared and just six years later, Australia's Minister for the Environment wants to bring back logging machinery into a Park which is only just starting to recover from century-long logging practices.

The Barmah-Millewa forest is situated near Echuca, on both sides of the NSW/Victorian border and is the largest River Red Gum forest on earth. It is a unique wetland forest ecosystem that is home to many threatened and endangered species. It is also an irreplaceable cultural landscape for Yorta Yorta Traditional Owners. The forest is an internationally significant Ramsar-listed wetland.

Since European occupation, this forest has been fragmented and degraded. Logging and cattle grazing have destroyed the ecological balance of the forest, introduced weeds and damaged soils. Drought and over-allocation of water has irreparably changed the natural flooding regimes that nourished its plants and animals. Climate change has added further urgency to the problem.

These issues inspired community groups, environment groups and Traditional Owners to campaign for over 15 years for the protection of the forest. In 2010 the Barmah National Park was declared in Victoria to be joint-managed with Yorta Yorta people. The Murray Valley National Park was created in NSW to protect the Barmah-Millewa forest across the border.

In 2012, the Victorian and NSW governments conspired to bring back logging into the protected Parks through a joint 'ecological thinning' trial. In 2014 the Victorian government pulled out of the trial after Friends of the Earth and Yorta Yorta Traditional Owners campaigned against the proposal. However the NSW government has pushed ahead, and last week received Federal approval for logging trials inside the Murray Valley National Park.

Once again, we have to fight for the integrity of our National Parks and keep our government from letting loggers back in. The fact that a 'scientific' trial to log this unique, protected forest can pass the test of the Environmental Protection and Biodiversity Conservation Act goes to show how flawed and weak our national environmental protection laws really are.



These logging trials are a costly and risky experiment. There is no evidence that selective logging of Red Gum forests will improve ecological health. Even the NSW government's own Public Environmental Report states that the trial «currently has no proven environmental benefits» and that «while the trial may impact on the ecological character of a Ramsar wetland, it is not known whether this impact will, in the long-term, be a negative impact or a positive impact.» All the science tells us that adequate environmental flows, not logging, are the key to sustaining these iconic ecosystems.

The Public Environment Report that Greg Hunt approved uses examples of other Red Gum State Forests that are still being commercially logged as a justification for allowing loggers back into the Parks.

The trial would mean felling red gum trees with heavy logging machinery in around 400 hectares of the Park, building roads and using herbicide in this sensitive environment. This perverse 'scientific logging' trial could be used as a model to push for destructive intervention in other National Parks across Australia and the globe.

The proposal states: «Trees not marked for retention will be machine felled using commercial tree harvesting machinery typical of a forest harvesting operation. Following felling, each stump will be painted with glyphosate biactive within five minutes to restrict coppicing. The felling method will aim to minimise damage to retained trees.»

This 'scientific trial' is a totally unfounded, dangerous and destructive attempt to appease pro-logging lobby groups in the region, who want to access the Park once again. By allowing this proposal to go ahead, Minister Hunt has shown his true colors in disregarding the value of our National Reserve System.

Australians care about our National Parks. These iconic River Red Gum forests are part of our national heritage. They need proper protection, adequate environmental flows and Indigenous co-management to thrive into the future. Minister Hunt's approval is a step backwards.

Please take the time to join our online action calling on Minister Hunt and Premier Baird to reverse their decision to send loggers back into the Murray Valley National Park. Get involved here: www.melbourne.foe.org.au/hunt_approves_logging

FSANZ deregulates GMOs by stealth

Louise Sales

You'd be forgiven for missing it, but in a quiet announcement at the start of the year our food regulator Food Standards Australia New Zealand (FSANZ) watered down already weak safety assessment requirements for several new genetic modification (GM) techniques. Despite – or perhaps because of – the strong public opposition to GM crops, FSANZ made these changes without any public consultation.¹ It also appears that the agency has misled Parliament and the public on the issue, claiming that no decision regarding these new techniques has been made.

To make matters worse, FSANZ seems to have made the changes based solely on advice given by an 'expert panel' stacked with GM crop scientists with vested interests in the techniques.²

The techniques include cisgenesis, intragenesis and grafting onto GM rootstock. The expert panel FSANZ commissioned to look at these techniques was chaired by Professor Peter Langridge, who was then Director and CEO of the Australian Centre for Plant Functional Genomics which has numerous GM patents and financial relationships with GM crop companies.²

Documents obtained by Friends of the Earth under Freedom of Information laws also suggest that FSANZ does not consider foods produced using a number of other new GM techniques³ to be GM under the Food Standards Code.⁴

Austrian government agencies are among the few globally to consider the biosafety risks posed by these new GM techniques. Contrary to FSANZ's expert panel, they have argued that products derived from these techniques pose the same risks as those created using older GM techniques and should be regulated in the same way.⁵

Friends of the Earth is concerned that these products could make their way regulated and unlabeled into our food chain, posing unknown risks – and removing choice for farmers, food producers and consumers.

It's time FSANZ stopped letting industry write the rules and put public health before private profit.



Take action!

Please contact Fiona Nash and tell her you ask her to ensure that:

- These new GM techniques and the products derived from them are subject to a comprehensive case-by-case risk assessment, including full molecular characterisation and independent safety testing to minimise any potential risks to human health and the environment;
- All products derived from new GM techniques are labelled to protect choice for farmers, food producers and consumers;
- A moratorium on the commercialisation of these new GM techniques is introduced until our regulatory system for GMOs is adapted to deal with the potential risks posed by them.

Contact her at:

Freecall: 1300 734 681

Email: Minister.Nash@health.gov.au

Twitter: @SenatorNash

Facebook: www.facebook.com/pages/Fiona-Nash/86298154631

References:

1. FSANZ (2016) *Application Handbook*, 1 March 2016, www.foodstandards.gov.au/code/changes/Documents/Application%20Handbook%20as%20at%201%20March%202016.pdf
2. Friends of the Earth (2015) *GM 2.0: Australian Regulators Engineering the Truth*, pp. 9-10, <http://emergingtech.foe.org.au/wp-content/uploads/2015/12/FOE-GM2-Report-A4-interactive.pdf>
3. Oligi-directed mutagenesis (ODM), zinc-finger nuclease technology types 1 and 2 and seed production technology.
4. Final Minute to the Minister on the release of the Workshop reports, July 2013, available at: http://emergingtech.foe.org.au/wp-content/uploads/2016/02/Document-18-Min-Sub-N13000738-New-Plant-Breeding-Techniques-Workshop-Report-SIGNED_Redacted.pdf
5. Austrian Agency for Health and Food Safety (AGES) (2012) *Cisgenesis. A report on the practical consequences of the application of novel techniques in plant breeding*. Report for the Austrian Federal Ministry of Health; Austrian Agency for Health and Food Safety (AGES) (2013) *New plant breeding techniques. RNA-dependent methylation, Reverse breeding, Grafting*. Report for the Austrian Federal Ministry of Health; Eckerstorfer, M., Miklau, M. & Gaugitsch, H. (2014) *New plant breeding techniques: risks associated with their application*, Austrian Environment Agency, www.ekah.admin.ch/fileadmin/ekah-dateien/New_Plant_Breeding_Techniques_UBA_Vienna_2014_2.pdf

Community Organising in the Oil Conflict Zone:

Friends of the Earth Uganda 'Sustainability School' Advocacy Initiative

Peter Westoby and Kristen Lyons

Friends of the Earth (FoE) Uganda (also known as the National Alliance for Professional Environmentalists, NAPE Uganda, <http://nape.or.ug/>) launched its advocacy initiative 'Sustainability Schools' (SS) in 2010, acting as hubs for community organising and training. The SS model of advocacy seeks to support communities to become active participants in driving sustainable local level development.

Sustainability Schools have been established around issues including land use and food security, oil governance, forests and large plantations, large dams and energy, and climate change. Our collaborative work with FoE Uganda has emerged over many years, and is aimed at increasing understandings of the Sustainability Schools as an advocacy model, and their importance in the context of ensuring just and fair development.

We arrived in Uganda late November 2015 to undertake the work we report on here. After some discussions with key FoE Uganda staff - Frank Muramuzi and Allan Kalangi - we were on the road to Hoima District, where a large concentration of Sustainability Schools are located, given the acute issues raised by oil exploration in this area. Hoima is close to the Congo border; a rural town in the biodiverse hot spot of the Albertine Rift Valley, and also a key site in Uganda's expanding oil industry. We met the field staff, including field worker Vincent Nyegenga, and the Community Green Radio team including Precious Naturinda - an offshoot of the SS launched in 2014 to amplify the voices of those affected by the oil industry.

For the next nine days we visited several sustainability villages, including Community Green Radio listeners' clubs (established to enable local communities to provide direct input into the development of content for radio programming.), communities that wanted sustainability villages to start, 'camps' of displaced people who 'wish they'd had a sustainability village' to help avert their displacement, and an annual monitoring and evaluation workshop with many people involved, including a key funding partner, the Rosa Luxemburg Foundation.

During those two weeks we listened, questioned, took notes, were questioned ourselves, went on radio, laughed with many people and even cried occasionally. Here we offer our reflections on the Sustainability School.

Sustainability Schools are having real impacts on the ground

Since its inception in 2010, NAPE's Sustainability Schools have delivered tangible impacts at the local and regional level. Evidence of this includes the formation of at least 24 sustainability schools that have trained at least 70 activists as sustainability educators. In the Hoima district where we travelled, activities of educators have led to the establishment of a range of local level projects, including tree planting, nurseries and bee hives. While on the one hand, these are livelihood projects that are directly benefiting local communities, they are also an expression of a 'radical' politics of resistance, including reclaiming local resources and landscapes.

There is a strong focus on gender equity across these projects, with both women and men actively involved and benefiting from the outcomes of these initiatives. Importantly too, we saw evidence of growing community resilience; with some community educators we met describing capacity to continue once FoE departed from their communities. As further evidence of this capacity, we also met community educators who had started a new sustainability village, extending on the work of FoE.

There was also evidence of Sustainability Schools making a measurable impact at the regional level. For example, community educators described their contribution in achieving the introduction of district level land ordinances - a mechanism by which recognition of community land rights at the local level might be achieved. Meanwhile, the Butimba Sustainability Village has provided advice to the Jane Goodall Institute on locally sensitive forms of community engagement. Their input has influenced the Jane Goodall Institute approach, enabling them to, in the words of local community members, better match up with local needs.

From adult learning to popular education

In an early Sustainability School Bulletin, Prof. Ephraim Lemmy Nuwagaba explained the philosophy of the school, discussing adult learning, de-schooling society and radical education as per the tradition of thought of Ivan Illich. In our reflections as engaged scholars we observed this philosophy in action, but also saw that the SS is a school using *popular education* approaches, not just adult education. It takes place 'under the mango tree', as many people described to us, and has two crucial elements that locate it within the popular

Community members displaced by large scale development in the oil district of Uganda.



education tradition – *it's political in orientation* (challenging the way power is mobilised) and *it's collective* (not about individuals learning alone). People are learning together through deliberation, asking questions, and posing solutions. People are then *acting together* and *reflecting together* on those actions, creating a cycle of action-reflection, known as praxis.

Dialogue and tensions in advocacy approaches and theories of change

This form of popular education is always premised on *dialogue and critical questioning*. Demonstrating the significance of dialogic processes in shaping the Sustainability School advocacy approach, one FoE staffer explained: “For us the most important thing is that our work is community driven”.

Yet in taking this approach, we noticed that the dialogue in learning has to hold some tensions. For example, one tension was awareness that sometimes international and national framing of issues and advocacy approaches were not the same as local positions, including the articulation of both radical and reform theories of change. Most obvious here is the tension between FoE International’s “keep oil in the soil” campaign approach (a radical change agenda), and some local community members’, for whom there was acceptance of oil extraction (e.g. “oil can be a curse, but we want it to be a blessing”), as long as the benefits associated with the industry are distributed fairly, accountably and transparently (reform).

These two positions live in tension, and require an understanding of dialogue in learning, and compromise between the NGO world and CBOs. As part of effectively managing this tension, NAPE describes their role as facilitating horizontal learning – a process whereby local communities co-learn with other communities in Uganda (and elsewhere) affected by extractive industries. In adopting this approach, rather than ‘imposing’ a radical theory of change (‘keep oil in the soil’) on local communities, the Sustainability School model enables local communities to come to their own position, through an informed and detailed dialogic and embodied experience. In the main, it appears, the outcome of this is that local communities take a position that is commensurate with FoE’s radical agenda. In taking this approach, FoE is able to avoid being seen as taking a heavy handed approach in imposing a theory of change, but rather can be seen as facilitating local communities’ rich learning on the impacts of extractive industries,

and the diversity of approaches and theories of change, including the option of saying no to certain forms of development.

In taking this approach, community educators are also able to avoid forms of advocacy that might be seen by the state as ‘anti-development’, or as ‘economic sabotage’; something to which the recently re-elected President Museveni has been very outspoken in clamping down on.

Towards Fanonian practice

Another observation is that the work of the SS can be further understood through the writings of Franz Fanon, an important writer on post-colonial Africa. Some key ideas of his that resonated with what we saw include the need for social change to be informed by a combination of the poor and marginalised sitting *with* activists – and entering into deep deliberation about the causes of poverty-making. This deep deliberation can then inform community organising and organisation – the *organising* being about strategy and tactics for change; and the *organisation* as about forming sustainable structures. This combination of deep deliberation and community organising/organisation helps to avoid ‘spontaneous action’ – often non-strategic violence (which is easy for the state to then repress), and instead ensures people find ethical and effective strategies.

The gender agenda

One thing that struck us was the gender sensitivity of those involved in the SS program – at all levels, from national to district field staff, through to community educators and village members. People talked about gender sensitivity and ‘gender mainstreaming’ (meaning all should participate in community and social structures). Community educators talked of ‘wanting to hear the voices of women’ and others shared about projects benefiting women (energy-efficient stoves). Clearly the SS program is full of women leaders, educators and staff.

Finally – working with love

A final reflection, heard by both of us as we sat with a group of people from one of the villages: one of the community educators opened the meeting by saying, “Vincent loves this village”. This statement says so much about how solidarity is experienced, not as something FoE does ‘to people’, but as a practice ‘with people’, where people affected by resource issues feel loved. The SS program is an expression of love and solidarity, whilst creating platforms for amplifying people’s voices (through the radio), and enabling people to deliberate (under the mango tree) and organise (through their SV structures). People organised have power. People alone are bewildered.

Tasmanian bushfires a climate wake up call

Cam Walker

On January 13, lightning strikes ignited more than 100 spot fires across Tasmania. Many of these became established and were quickly out of control. By mid-February, around 100,000 hectares had been burnt. Overwhelmed by the scale of the fires, the Tasmanian Fire Service (TFS) initially concentrated on human assets like towns and infrastructure.

As TFS workers fought fires that threatened communities, a series of wildfires burnt huge areas in the north-west and on the central plateau. The arrival of milder weather and some rain, as well as additional fire-fighting crews from interstate in the second week, allowed the authorities to slow the fires in mountainous and forested regions.

Large areas of the World Heritage Area and other conservation reserves were burnt. The world famous Overland track was closed, and many tourism operators reported cancellations. The economic and ecological costs of the fires will be enormous.

There are several dimensions to this year's fire season which should worry environmentalists. Firstly, large areas of the World Heritage Area were burnt. Fire is a feature of some of these landscapes, and some are fire adapted, and they can be expected to recover well. But a second concern is the fact that much of the alpine and sub-alpine vegetation that has been burnt is highly sensitive to fire. Trees more than 1,500 years old, such as Pencil Pines, which are only found in Tasmania, have been destroyed, with recovery expected to take centuries, if it happens at all. Some experts say much of the burnt areas of alpine flora is unlikely to ever recover.

Some of the initial public debate suggested that bush fire is 'natural' in Australia and that these areas will recover. This is not true in the case of much of the vegetation in the mountains of Tasmania. The cool temperate rainforests and relic species in the mountains date back to the time when Australia was part of the super continent of Gondwana. They are often called the Antarctic flora, and includes the various native pines, the southern beech (*Nothofagus*) and the deciduous beech. Fossil evidence suggests that temperate rainforest was widespread in Australia, Antarctica, South America and New Zealand around 45 million years ago and as the climate warmed and became drier, these forests retreated back to small pockets, primarily in Tasmania and south eastern Australia. They have not evolved with fire, and are badly impacted when fires do occur.

The third aspect is the question of whether the summer of 2015/16 is a 'normal' fire season. Tasmania has been uncharacteristically warm and dry. This appears to be part of a longer drying trend. Climate scientist Prof Steffen says that extreme fire weather risk in Tasmania has increased over the last 30 years due to the influence of climate change.

As noted by fire ecologist David Bowman in *The Guardian*, the fires are "a sign of climate change. This is bigger than us. This is what climate change looks like, this is what scientists have been telling people, this is system collapse."

Michael Grose, a climate scientist with the Australian national science agency, says that while scientists haven't yet directly attributed this year to human-caused warming, this fire season is consistent with what we expect climate change to bring to the state: "Dry springs and summers, hotter temperatures and more fires would make it difficult for these ecosystems to continue as they are."

There is the very real risk that we are now witnessing the beginning of the end for these ancient remnants of vegetation. This requires a major re-think about how we manage the World Heritage Area in Tasmania. It seems that in fighting this season's fires, something has gone wrong. Under climate change modelling, it is anticipated that there will be an increase in dry lightning strikes, which can be expected to start fires in remote and mountainous regions. Fire seasons are expected to be longer and start earlier. Yet the Tasmanian government has been engaging in fire fighting with a 'business as usual' mind frame.

Tasmanian fire fighters were only able to undertake substantial action against the wild fires after they had become too large to contain. There are some serious questions about whether the TFS has sufficient resources to fight fires in wild areas. We need to make sure that the lessons of these fires are not lost. We need to be better prepared for the next catastrophic fires, with the ability to stop remote area fires before they become established.

Friends of the Earth launched a petition to the Premier of Tasmania, Will Hodgman, requesting an independent inquiry into the fire. Following a media outcry over the fires, the premier announced an inquiry, adding that it would also consider the possible implications of climate change in terms of future fire risk.

Additional information is online:
www.melbourne.foe.org.au/tassie_forest_fires_climate_wake_up_call

Trees more than 1,500 years old, such as Pencil Pines, which are only found in Tasmania, have been destroyed, with recovery expected to take centuries, if it happens at all.



Econobabble

Econobabble

Richard Denniss

February 2016

\$19.99

ISBN: 9781863958042

Black Inc. Redback Quarterly

176pp

www.blackincbooks.com/books/econobabble

We hear it every day, when public figures and commentators use incomprehensible economic jargon to dress up their self-interest as the national interest, to make the absurd seem inevitable or the inequitable seem fair. This book is designed to expose the stupid arguments, bizarre contradictions and complete lack of evidence upon which much 'common sense' about the economy rests in Australia. With acuity and precision, Richard Denniss from the Australia Institute demolishes the tired and misleading arguments of right-wing economic 'experts', empowering you to cut through the babble and reach the truth.

Readers interested in *Econobabble* might also be interested in Jason Sweig's book, *The Devil's Financial Dictionary*. Zweig skewers the plutocrats and bureaucrats who gave us exploding mortgages, freakish risks, and banks too big to fail. And he distils the complexities, absurdities, and pomposities of Wall Street into plain truths and aphorisms anyone can understand. The book is published by Public Affairs and was released last November.



Civil resistance in West Papua

Merdeka and the Morning Star: Civil Resistance in West Papua

Jason Macleod

\$39.95

December 2015

304 pages

ISBN: 978 0 7022 5376 8

www.uqp.uq.edu.au/

Review by James Whelan

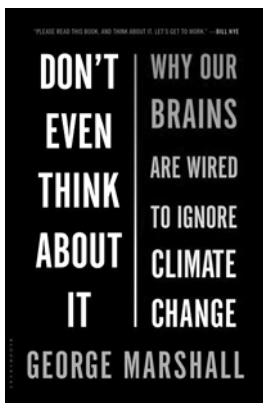
Jason Macleod is a member of the Change Agency team: a dedicated activist educator, mentor and strategist. Having dropped out of university in 1991, Jason hitched to northern Queensland then made his way to Papua New Guinea. Hiking and paddling the Sepik, he made his way into a remote part of West Papua where he contracted malaria. He collapsed into a coma and was cared for by local health workers.

Jason's initial experiences in West Papua led him to form an enduring commitment to justice for the West Papuan people: a 25-year commitment that has involved spending time with leaders of the self-determination movement each year, training hundreds of West Papuan activists and completing a PhD to deepen and articulate his emerging understandings.

Jason's analysis of the West Papuan struggle for self-determination is powerful and compelling. He draws on his 25 years of lived experience as an ally and his deep understanding of social movement theory.

Merdeka and the Morning Star speaks equally to academics and activists. Jason applies his deep understanding of theoretical frameworks and political history to analyse strategic options, looking at the West Papuan self-determination struggle in its historical and contemporary forms, and looking forward to its future success.

This is a precious example of activist research. Jason writes with the clarity that comes from decades of action and reflection and the commitment of a genuine ally.



Why our brains are wired to ignore climate change

Don't Even Think About It.

Why Our Brains Are Wired To Ignore Climate Change

George Marshall

2014

Bloomsbury, New York

ISBN13: 9781620401330

ISBN10: 1620401339

www.climateconviction.org

Review by Chrissy Sharp

Most people recognise that climate change is real, and yet do little to stop it. What is the psychological mechanism that allows us to know something is true but act as if it is not? George Marshall's book tackles the big question that confronts us in the environment movement. How is it that after decades of campaigning and advocacy, the issue of climate change still fails to receive the level of attention it deserves in global political discourse? Why are we failing to get our message across with the urgency it deserves?

Why will a newspaper devote a front-page headline to a drowned toddler or a grisly murder but demote an international conference, the outcome of which will affect the future lives of billions, to a few paragraphs in the back pages?

Martin suggests there are two impediments working against this issue. Our brain's wiring means that most information about climate change, which is technical and hypothetical in nature, gets processed in the rational frontal lobe, that part of our brain that excites us as much as the filling in of forms does.

Our reptilian brain, or the "emotional brain" as Marshall calls it, does not get activated by abstract hypotheses, and dry facts and figures about sea levels. Yet it is *this* part of the brain that motivates us to take urgent action to flee or fight or to love and hate, in other words to get emotionally involved.

His other explanation is even more challenging: in the environment movement we have claimed climate change as our biggest issue. Yet in using the narrative of environmentalism, we have sent a subliminal message to the average voter that this problem is not about something critical to them. Polar bears being trapped on shrinking ice are not one of their everyday challenges, so they can dismiss the problem.

There's the challenge: how do we personalise this issue? There is a need for a new inclusive communication strategy that connects to both left and right and to ordinary lives. At the last climate change rally I attended the main banner on centre stage read, "Zero Emissions Now". That was the message seen on the local TV coverage – an impossible goal that would clearly fail to invoke the shared conviction needed to evoke concern.

So there you have it: personalise the issues, recognise our own emissions, affirm wider values, close the partisan gap and drop the eco-speak. This book challenges our set ways. That is why it is worth reading.



How the food system drives climate change

The great climate robbery: how the food system drives climate change and what we can do about it

By the international NGO Grain.

December 2015

ISBN: 9781742199917

246 pages

Hard copy: A\$27.95,

eBook: A\$17.95

www.spinifexpress.com.au/Bookstore/book/id=284/

This anthology shows how food sovereignty is critical to any lasting and just solution to climate change. With governments, particularly those from the main polluting countries, abdicating their responsibility to deal with the problem, it has become ever more critical for people to take action into their own hands.

Changing the food system is perhaps the most important and effective place to start. *The great climate robbery* provides valuable information about how the industrial food system causes climate change, how food and agribusiness corporations are getting away with it, and what can be done to turn things around.

The chapters in this collection document the ill effects of this industrial food system such as the growing hunger, the destruction of rural peoples' livelihoods, the loss of biodiversity and cultures, the exploitation of labour and a range of health calamities.

Naomi Klein writes: "This book lifts up the voices of indigenous and peasant farmers around the world, comprehensively explaining why their fight to stop the industrial food juggernaut is the same as the fight for a habitable, just planet."

Vandana Shiva writes: "This book is a must read for movements addressing climate change as well as Seed and Food Sovereignty. It shows that industrial corporate agriculture is a major part of the climate crisis, and small scale ecological farming is a significant solution. It also alerts us to the false solutions being offered by those who created the problem."

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Other states – see Local Group contacts.

Affiliate members

ClimActs

(theatre troupe communicating the dangers of inaction on climate change)
<http://climacts.org.au>

CounterAct

CounterAct supports communities with training for effective, creative, civil disobedience, nonviolent action, capacity building and campaigning skills.
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[@market_forces](https://www.facebook.com/MarketForces), [facebook.com/MarketForces](https://www.facebook.com/MarketForces)

Mukwano Australia

Supporting health care in organic farming communities in Uganda.

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Reverse Garbage Queensland Co-op Ltd

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Ph 3891 9744, info@reversegarbageqld.com.au,
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Sustainable Energy Now (WA)

Perth. PO Box 341, West Perth WA 6872.
www.sen.asn.au, contact@sen.asn.au,
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Tulele Peisa (PNG) 'Sailing the waves on our own'

www.tulele-peisa.org

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National campaigns, projects and spokespeople

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LOCAL GROUPS

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facebook: [facebook.com/foe.adelaide](https://www.facebook.com/foe.adelaide),
[facebook.com/fairfoodadelaidesa](https://www.facebook.com/fairfoodadelaidesa),
[facebook.com/Clean-Futures-Collective](https://www.facebook.com/Clean-Futures-Collective),
[facebook.com/groups/MarchAgainstMonsantoAdelaide](https://www.facebook.com/groups/MarchAgainstMonsantoAdelaide)

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Six Degrees Coal and Climate Campaign

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FoE Melbourne

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website: www.melbourne.foe.org.au

Anti-nuclear & Clean Energy (ACE) Collective

email: ace@foe.org.au

Dirt Radio:

www.3cr.org.au/dirtradio Mondays
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Economic Justice Collective:

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The Strzelecki Koala needs your help

The Strzelecki Koalas are the original Victorian koala and they have much to contribute towards the future management of koalas in Victoria and elsewhere in south-eastern Australia. Because of this the Strzelecki Koalas arguably constitute Victoria's most important koala population but they need our help if they are going to survive into the future.

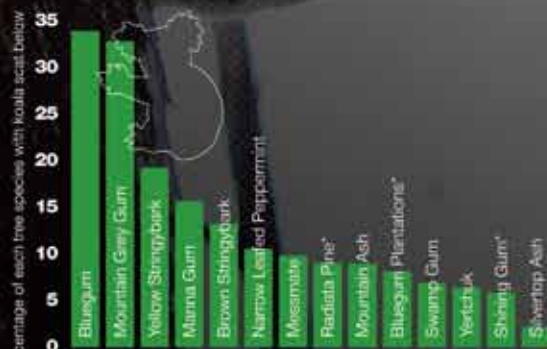
Between November 2013 and April 2014, a team from the NSW Office for Environment and Heritage surveyed 141 locations in the Strzelecki Ranges for koalas. Each site consisted of 30 trees. The koala survey was the first conducted in the Strzelecki Ranges using a scientifically sound methodology. The survey results revealed that the 3025ha of forest surveyed contained ~811 koalas.

Mountain Grey Gum and Southern Bluegum were the most preferred trees for koalas. Yellow Stringybark and Messmate were the next most preferred species based on statistically relevant samples.

Soil types also had a major bearing on koala numbers, with higher numbers on the better quality Strzelecki soils.

The initial surveys targeted the best remaining stands of native forest in the region. Since May 2014, FoE and FoGB have assessed an additional 52 sites or ~1050ha of fragmented forest which is more typical of the region. Lower numbers of koalas have been found in these surveys.

It is necessary to look further afield to better determine koala numbers of the region, including South Gippsland. Friends of the Earth and Friends of Gippsland Bush are now interested in surveying native forest on private land.



Koala scat strike rates from 193 sites (5790 trees) surveyed so far
*These are plantation species which koalas also utilize, particularly if the plantations are in close proximity to native forest



If you have native forest on your property and are interested in seeing if it can be surveyed for koalas please contact us by email at ajamis50@gmail.com



Tax deductible donations are also most appreciated.

