Reasons why gas mining in Victoria must be stopped

7 July 2015 - www.climatesafety.info/thesustainablehour80

'Audio submission'

This 'audio submission' has been sent on a CD to the Victorian State Government – along with an edited print of this webpage.

A radio podcast for politicians and decision makers in the Victorian state parliament about the prospects of turning farmland into industrial gasfields.

1.3 million hectares of land in Victoria is threatened by onshore gas mining. The 80th Sustainable Hour on 94.7 The Pulse contains an ‘audio submission’ produced for the Victorian Premier Andrew Daniels, Minister for Energy Lily D’Ambrosia, their colleagues and staff, where Victorian experts explain why it is unhealthy, economically unwise and ethically immoral to turn Victorian farmland into industrial gasfields.

Andrew Daniels, Lily D’Ambrosia, we invite you to listen.

» To open or download this programme in mp3-format, right-click here (Mac: CTRL + click)

Interviews and audio-quotes in the hour, in order of appearance:

» Kieran Kennedy, mayor of South Gippsland, Victoria
» Gavin Mudd, PhD researcher at Monash University
» Merryn Redenbach, paediatric doctor, Doctors for the Environment Australia
» Mark Oge, researcher and a public liaison officer to The Australia Institute.
» Cam Walker, campaigns co-ordinator at Friends of the Earth Melbourne
» Danielle Mulholland, mayor of Kyogle, New South Wales
» David Suzuki, scientist, and Naomi Klein, author

Music credit
A big thank you to Leo Sayer and The Aussies Against Fracking Allstars for their song 'No Fracking Way'. For more music information and links, see below.

Reasons why we don’t need to frack for gas

1) The local community bears the burden while the profits go elsewhere:
• Gas prices go up – the gas is exported
• Landscape mutilated by industrial gasfield zones. Tourism ruined. Real estate value drops
• Local pollution and noise 24/7. Risky gambling with drinking water and health

2) Fracking is intergenerational theft, short-sighted and morally wrong.
Here’s why:
• It is only profitable because costs of cleaning up and climate damage are not part of the equation
• Gas causes more climate damage than coal and oil when methane and fugitive emissions are accounted for
• Removes focus and economy from the transition to renewables and sustainable jobs
• Unnecessary detour. Fossil fuels are to be phased out
• So-called 'scientific' figures are taken out of thin air. Scientists' statements are for hire.

What drives the gas mining industry forward is a desire to make profits. Local communities in Queensland are seeing the devastating consequences of this industry: Only a few people benefit financially from it, and they are not held accountable by authorities to pay the bills for the damage they create in the ground as well as in the air.

Australia is being fracked not for the greater good but for irresponsible private profit. The Victorian government will have to make a permanent ban on fracking or lose all credibility in local communities all over the state.
Compare gas and renewables

Our political leaders need to make a comparison between gas and renewable energy sources – and then choose the right path. There are many reasons why the proposed gasfield madness in Victoria both socially, morally and environmentally is simply the wrong path to enter.

Wind turbines, especially when they are on land, are the cheapest energy source, according to a report from the Danish Energy Agency – a governmental body.

So why would anyone invest in an energy technology that pollutes drinking water, makes people sick, is noisy, destroys landscapes, emits methane and which – when taking fugitive emission into consideration – is no more “climate-friendly” than coal?

The answer to that is: they shouldn’t! But they do it anyway, because there is a little group of people who currently are able to earn some good money by doing it – and it’s not small sums of money we are talking about.

In the “fracking game” there are some winners and some losers. Once you realise this, then the only obvious question that follows is: Why should we – the residents of “fracking-zones” who stand to lose big on a number of frontiers in this game – just put up with that?

We don’t have to.

Our numbers are high – in most areas we represent the majority of voters in the Victorian communities – and as such, we have a basic democratic right to not only oppose and pause, but to stop this toxic and invasive industry, and to insist that our governments come to their senses and do what they should have started doing long time ago: begin investing full-hearted in the energy source which is cheapest and which benefits the general population as well as the environment.

Making the right choice

Let’s not just talk about ‘fracking’ and the problems with it. Fracking and renewables should always be mentioned in the same sentence. Because it is about making that choice.

The need to move to renewable energy sources for climate reasons is urgent, and so are the prospects of creating new, secure jobs, and the dynamic prospects of community engagement in the transformation process.

When comparing the two paths we can choose between – fracking and renewables – we must talk about the risks involved. ‘Risks’ is something else than ‘Facts’ or ‘Evidence’. The point being that while we don’t have all the scientific facts in yet about how dangerous and damaging fracking is, we can and must make our choices based on which risks we are prepared to take and for what reason.

I.e: Why should citizens of Victoria risk their water being polluted just so that a company can extract and sell some gas to Asia, which at the same time will create higher gas prices in Australia?

It makes no logical sense to take such a risk to other than that company which profits from it plus those who’ll be getting royalties or compensation payments.

---

Interviews

Information about the interviews in this ‘Audio Submission’

Gavin Mudd

Gavin Mudd is a PhD Researcher at Monash University and a ground water expert who has looked into the Sustainability of Mining in Australia.

www.eng.monash.edu.au
Gas Submission 922

Mark Ogge

Mark Ogge is a researcher and a public liaison officer to the Australia Institute. He talks about the physical impact on the landscape and the economic impacts, and about the fact that the gas is for export, and why this will make gas prices go up for us, the consumers. The gas price in Asia is about five times the gas price in Australia. So exporting it is going to triple or quadruple the gas prices here, he estimates.

Mark Ogge: “I think the unconventional gas issue is an enormous thing that people have to come to grips with because it’s going to have a huge impact on the area around Western Victoria and also Gippsland if these huge projects go ahead. It’s so important for a number of reasons – the first reason is that the infrastructure is huge.

If you look over at the US at what they actually look like, a commercially operating type gas or shale gas field has thousands of wells and they tend to be very closely placed – between 500-750 metres between wells – and all of those wells are connected by roads, pipeline and interspersed with water treatment plants, compression stations and all of those kinds of big, industrial infrastructure.

It has a really huge impact on the physical landscape. If you have an economy that’s largely based on tourism, amongst other things, and the landscape is transformed into an industrial landscape, then that’s going to have a big impact on tourism and industries like that, where people come to see the west coast of Victoria largely because it’s such a beautiful area. If it’s industrialised, it can have a very big effect.

Now, the gas industry – and sometimes the government – say that we need these industries because they provide jobs and economic benefits, and it is true that these industries do employ some people. But what we need to understand is that they are very small employers overall – the entire oil and gas industry in Australia employs around 0.2 percent of the workforce.

Because of the nature of gas fields, they don’t need very many people to run them, so they are very small employers and, in a local economy, the effect of a big gas project can actually have crowding-out impacts on other industries, so there are some real economic downsides.

Often the benefits the industry claims can be very exaggerated. One of the things you need to understand is that when companies try to get approval for their projects, they are essentially ‘towing up’ their projects – so they will try and talk up jobs claims and the economic benefits – and there’s a big tendency to exaggerate those and to use dubious jobs multipliers and things like that, and not talk about the downsides of the negative impacts that gas and big gas developments is having on the rest of the economy.”

“But we see examples, for instance in the United States, where the gas industry moves in on a farm, and this farmer becomes rich…”

“Yes, there are some people who will do well out of the gas boom; some farmers will be paid for gas wells – it won’t be a huge amount – but that is definitely a benefit to those farmers. Some people will be employed by the gas industry, and so there will be some winners, but what you need to remember is there’s going to be a lot of losers.

The first thing to remember is that, because the gas industry is a small employer in the first place, the jobs that it does provide – it actually employs quite a lot of people during the construction phase, which is one odd years – there is a sort of peak of construction over a couple of years, and after that there are very few operational jobs. And when you have a big construction workforce coming in within a couple of years, it’s quite disruptive to other industries.

Most of these workers will be pretty much entirely drive-in drive-out, or fly-in fly-out workers. They are generally not recruited from the local area. And when they are, the people who are construction workforce coming in within a couple of years, it’s quite disruptive to other industries.

Because of the nature of gas fields, they don’t need very many people to run them, so they are very small employers and, in a local economy, the effect of a big gas project can actually have crowding-out impacts on other industries, so there are some real economic downsides.

Often the benefits the industry claims can be very exaggerated. One of the things you need to understand is that when companies try to get approval for their projects, they are essentially ‘towing up’ their projects – so they will try and talk up jobs claims and the economic benefits – and there’s a big tendency to exaggerate those and to use dubious jobs multipliers and things like that, and not talk about the downsides of the negative impacts that gas and big gas developments is having on the rest of the economy.”

“But Mark, for instance here in Geelong, we have gas pipes everywhere. All the houses are using gas for cooking and warming their houses and so on, so there’s a lot of infrastructure there already for gas. So doesn’t it make sense to get some gas in there?”

“Well, in terms of whether we need the gas… At the moment the industry is trying to argue that if we don’t mine a whole lot more gas, then there’ll be a gas shortage and gas prices are going up. The first thing to understand is there is no gas shortage. On the east coast of Australia it’s all one big gas network, and for the amount of gas being extracted, it is a massive increase. It is historically an unprecedented increase in the amount of gas being extracted through unconventional gas.

Gas demand in Victoria and the rest of south eastern Australia is actually falling, but the reason there is such a huge drive for more gas is to export it through the export terminals up in Gladstone. So this expansion isn’t for domestic consumption. It is for export.

The gas industry argued that we need to extract more gas to keep gas prices down, but it’s a really disingenuous argument because the reason that gas price is going up is that gas companies are now able to sell their gas to Asian customers, and the gas price in Asia is about five times the gas price in Australia. So they were selling it for $4 a gigajoule, which is just a measure of the amount of gas, in Australia – but they can sell it for $16 a gigajoule in Asia. So that’s a huge incentive for them not to sell it to Australian customers, but to sell it to Asian customers.

And what it means is that Australian customers have to compete with those prices.

So, Australian customers who used to buy their gas for $4 will probably now have to pay about $11 or $12, because otherwise the big gas companies are just going to sell it to Asia. The fact that we are exporting the gas is probably going to triple or quadruple the gas prices for domestic customers. And it doesn’t matter how much more gas you drill for – you could cover all of Gippsland and all of western Victoria in gas wells – it won’t bring down the gas price at all, because the reason that gas prices are going up isn’t because of the lack of gas supply, it’s because we are part of a market that is now linked to Asia through export, and our gas prices are linked to the Asian gas market.”

The interview was transcribed by Elizabeth Hynes.

More information about Mark Ogge can be found on: www.hia.org.au
Merryn Redenbach

Merryn Redenbach is a paediatric doctor who works for Doctors for the Environment Australia. She is based in Melbourne. In the interview, Merryn Redenbach explains about the latest scientific evidence and studies of the negative health effects of fracking. She recommends to take a look at the home page of Concerned Health Professionals of New York on www.concernedhealthny.org.

Kieran Kennedy, Mayor

“Gippsland Is Precious” is a documentary about Coal Seam Gas mining which explores what is at stake for Victoria’s Gippsland region, and what communities and individuals are able to do in order to stop the invasive gas mining industry.

Danielle Mulholland

On 23 November 2013, the people of Kyogle in northern New South Wales, Australia, came together for a moving ceremony to declare their region gasfield-free. Speakers included local and federal politicians, community members, and health experts. In the documentary about the event, CSGFree NorthernRivers interviewed Mayor of Kyogle, Danielle Mulholland. Here is a transcript of what she said:

“We are seeing democracy in action. We are seeing people flocking to this event to say ‘We don’t want unconventional gas in our area’. That is essentially what it comes down to. And as representatives of the people, we should be enforcing that position. So that is why I am here today.”

“They are afraid for the children, their grandchildren’s futures. They are afraid for their health. Air. Farmland. Water. There are so many issues around Coal Seam Gas that are unresolved.”

“The chemicals in particular concern me – in terms of our groundwater. Because without water, we die. That is what it comes down to. Whether it be your cattle, whether it be your crops. Anything. We have talked today about the contamination of these things.”

“The state government has introduced a range of regulations which are the most stringent in Australia whilst at the same time we can acknowledge that governments of all persuasions have
Cam Walker

Cam Walker is an organiser and coordinator at Friends of the Earth Melbourne.

In this one minute excerpt from the interview with Cam Walker, he talks about the climate aspect of fracking: the fugitive emissions.

“State government and councils need to put good public money into renewables and into transition plans. We throw vast volumes of public money at the pipe dream of “clean coal”. We need to stop doing that. In the last state budget I think we put 100 million dollars into a project called “Gas for the regions” which is about the roll-out of natural gas. We should be putting that money into meaningful green manufacturing transition jobs in places like Geelong.”

Cam Walker, Friends of the Earth, in The Sustainable Hour in August 2014

“The economic impact of climate change is going to be incredible. What government that says the economy is its highest priority can continue for over 10 years to ignore climate? If they really care about the economy, they’ve got to focus on that. Because the economic implications of climate change are catastrophic.”

David Suzuki, Canadian scientist

March for Jobs, Justice and the Climate draws on allies for a clean-energy revolution

At the ‘March for Jobs, Justice, and the Climate’ on 5 July 2015, thousands marched through downtown Toronto representing diverse environmental, union, anti-poverty, health, faith and aboriginal causes, forming a powerful alliance with a single goal in mind: “a justice-based transition to a clean-energy economy in Canada.”

David Suzuki, Jane Fonda, and Naomi Klein marched along with the thousands of others. Listen to what they had to say in the video

POLICY

Glenn Lazarus “stands up for the future of this country”

Senator Glenn Lazarus – voted into Australia’s Senate on the Clive Palmer ticket in 2013, now an independent – has emerged as one of the most eloquent advocates of critical policies in the Senate. This is especially the case in the energy and climate change spheres.

Glenn Lazarus recently said: “The people of Australia want our country to move towards cleaner, greener energy. Everyone knows that dirty coal is bad. Everyone knows renewable energy is not only good for the planet but also good business sense – full stop.”

“I would also like to put on record that I am not party to the other dirty deal done between the Abbott government and the cross-bench which reduces support for the wind industry, puts in place additional layers of compliance and installs a national wind farm commissioner.”

“I make no apologies for being one of the few senators in this place to stand up for the future of this country. The rest of the world is moving towards renewable energy and so should we.”

> See article on www.reneweconomy.com.au

The ‘bridge-fuel’ nonsens

Gas causes more climate damage than coal and oil

Dr Robert Howarth: Replacing coal and oil with natural gas will not help fight global warming

“Both shale gas and conventional natural gas have a larger greenhouse gas footprint than do coal or oil, especially for the primary uses of residential and commercial heating.”
Dr Robert Howarth, a professor of ecology and environmental biology, came to this conclusion after assessing the best available data and analyzing greenhouse gas footprints for both methane (including shale gas and conventional gas) and carbon dioxide over a timescale of 20-years following emissions. The findings are published in Energy Science & Engineering.

“While emissions of carbon dioxide are less from natural gas than from coal and oil, methane emissions are far greater. Methane is such a potent greenhouse gas that these emissions make natural gas a dangerous fuel from the standpoint of global warming over the next several decades,” said Dr. Howarth.

“Society should wean ourselves from all fossil fuels and not rely on the myth that natural gas is an acceptable bridge fuel to a sustainable future.”

Open or download the 14-page report document: ESE_Methane.pdf

Wiley’s Global Research – 21 July 2014: Replacing Coal and Oil with Natural Gas Will Not Help Fight Global Warming

See also:
- National Geographic – 24 September 2014: Switch to Natural Gas Won’t Reduce Carbon Emissions Much, Study Finds
- AP / SF Gate – 10 October 2014: Satellite sees hot spot of methane in US South west
- ABC Radio National – 3 August 2014 at 8:00am: The price of gas
- The Guardian – 18 August 2014: UK energy dependence – five hidden costs expose truth about fracking

Click to share this photo on Facebook

The ethics – the moral aspects

Click to share this photo on Facebook

Uniting Church: “Get your town to vote to be CSG free”

If you would like to see some real leadership in a religious community, take a look at what they have produced in the Uniting Church. Here is an Australian church that not only takes a clear stand for everyone to see, but also invests special efforts into advising its members on how to respond to the invasive and toxic gas mining industry.

In this pamphlet, Uniting Church explains its stand on unconventional gas mining – also known as ‘fracking’ or ‘Coal Seam Gas’. The following is an excerpt of the pamphlet’s text:

“The Uniting Church has a longstanding commitment to the environment, both because social justice and environmental sustainability are linked and because the environment has intrinsic value.”
The church believes that God, as the Creator of the universe, calls humanity into a relationship of mutuality and interdependence with the creation. God’s will for the earth is renewal and reconciliation, not destruction by human beings.

The church is particularly concerned about human-induced climate change, regarding it as a serious threat to the future and integrity of life on earth. The church is especially worried about the impacts on vulnerable communities such as those in the Pacific. Over the last decade, the Assembly has responded to Pacific churches’ requests that churches throughout the world act in solidarity to reduce the causes of climate change.

In 2006, the church adopted the statement “For the Sake of the Planet and all its People”, which lays out the church’s position on climate change and fossil fuels: “The scientific evidence on global warming and its potentially disastrous impacts is now indisputable. Also beyond dispute is that the burning of fossil fuels and subsequent creation of greenhouse gas emissions... is seriously exacerbating the problems we face.” The Assembly therefore called upon church members to reduce their own greenhouse gas emissions and to advocate for government to implement policies to reduce Australia’s dependence on fossil fuels.

The 2009 statement “An Economy of Life” concerned inter-linked crises confronting human and ecological wellbeing. The statement named these crises (including climate change, militarism, the energy crisis, the food crisis, and the global financial crisis) as deeply rooted in our social, political, and economic systems. The Assembly called upon all parts of the church to participate in “a vision of flourishing, abundant life, of peace and reconciliation, justice and transformation, love and inclusion for all creation,” and upon governments to develop policies and structures that support human and ecological flourishing.

See these statements and others at: www.unitingjustice.org.au/environment

NSW/ACT Synod position
The Synod of NSW/ACT has also expressed its environmental concern over the decades. The Synod has adopted various resolutions, including several about renewable energy, energy efficiency, climate change and fossil fuels. In 2008, the Synod stated that “a commitment to ecological sustainability is an essential part of the church’s discipleship” and committed itself to “integrating ‘creation care’ into all aspects of its worship, witness and service.”

The Synod passed two important resolutions in 2013 in relation to the fossil fuel industry. The first was that the Synod “call on the NSW Government to amend the NSW Strategic Regional Land Use Plan so that it identifies and protects from coal mining and Coal Seam Gas exploration and mining:

(a) areas which should be kept strictly for sustainable agriculture and food production;
(b) irreplaceable water resources including underground aquifers; and
(c) high conservation value areas including forests and wilderness areas.”

The second resolution noted that:
• the vast majority of fossil fuels will need to remain untouched to avoid the worst excesses of climate change;
• Australian governments and the international community are not adequately addressing the threat of climate change; and
• the rapid expansion of fossil fuel mining in Australia “is directly threatening agricultural land, human health and biodiversity”.

The Synod therefore resolved to stop investing in fossil fuel corporations and move instead to investing in renewable energy stocks.

What can we do about it?
• Be fully informed about the church’s position, the effect of fossil fuel extraction on the environment, CSG processes and dangers, and the local issues in your area
• Inform your faith community, your town and the surrounding farming communities
• Make submissions to the government
• Write letters to politicians and newspapers
• Join or start a group such as “Lock the Gate”
• Attend public protests
• Get your town to vote to be “CSG free”

Visit www.unitingearthweb.org.au/csg for links to useful organisations for information and support (e.g. Lock the Gate, Our Land Our Water Our Future, ARRCC).”

Health concerns
British Medical Journal: adverse birth outcomes

“Public Health England’s draft report thoroughly assesses the peer reviewed scientific literature on the public health implications of extracting shale gas. Unfortunately, the conclusion that shale gas operations present a low risk to public health is not substantiated by the literature. The correct conclusion that Public Health England should have drawn is that the public health impacts remain undetermined and that more environmental and public health studies are needed.

Furthermore, the report incorrectly assumes that many of the reported problems experienced in the US are the result of a poor regulatory environment. This position ignores many of the inherent risks of the industry that no amount of regulation can sufficiently remedy, such as well casing cement failures and accidental spillage of waste water.

More attention should have been paid to drilling in areas that are densely populated. Recent evidence suggests a higher prevalence of some adverse birth outcomes for those living in closer proximity.”

These summary points are from a recent editorial in the British Medical Journal in response to Public Health England’s draft report regarding the safety of unconventional gas mining: "Mistaking best practices for actual practices"

American compendium of scientific and medical findings

An American summary of some of the emerging health concerns is the ‘Compendium Of Scientific, Medical, And Media Findings Demonstrating Risks And Harms Of Fracking (Unconventional Gas And Oil Extraction) 10 July 2014 – by ‘Concerned Health Professionals of New York’ where the State Assembly recently passed a three-year moratorium on fracking.

One of the studies referenced in the compendium (and which was also quoted in the BMJ editorial above) monitored a cohort of 124,842 births between 1996 and 2009 in rural Colorado, reporting an association between density and proximity of natural gas wells within a 10-mile radius of maternal residence and found that Neural Tube Defects e.g. Spina Bifida (NTD) prevalence was associated with the highest exposure (OR = 2.0, 95% Confidence Interval: 1.0 to 3.9, based on 59 cases), compared to no gas wells within a 10-mile radius. Also the prevalence of babies born with Congenital Heart Defects (CHD) increased the closer the pregnant mother lived to natural gas wells within a 10 mile radius, with the closest exposure group being 1.3 times more likely to have a heart defect (95% Confidence Interval: 1.2 to 1.5).

This is one of many concerning associations in the emerging scientific data, and while it is statistically significant, it does not yet demonstrate causation. It does however warrant further scientific enquiry, and caution by decision makers in potential onshore gas mining regions such as ours.

Doctors for the Environment Australia’s concerns

The potential human health impacts has been explored in the submission to the Australian Chief Scientist by the Doctors for the Environment Australia group: Review of CSG in NSW – Chief Scientist Submission (PDF)

The Lancet Commission’s concerns

Most recently, the second Lancet Commission on Health and Climate Change has been released. This report argues that tackling climate change could be the greatest global health opportunity of the 21st century, an opportunity that now requires political will to realise.
The following excellent 3 minute video summary of the current health risks of ongoing fossil fuel based energy consumption at current or increasing levels is sobering. It highlights the health co-benefits of policy directed at shifting to renewable energy development:

Specifically regarding further gas infrastructure investment, the Commission reports “The time when fuel switching could decarbonise the global economy sufficiently quickly to avoid dangerous climate change has almost certainly passed. It is increasingly difficult to justify large-scale investment in unabated gas-fired infrastructure.”

**HEALTH**

Major report on health and climate change

Another big international moment happened last week: the release of a major report on health and climate change in the globally renowned medical journal the Lancet. This is a bit like the UN panel of climate scientists for the health world, and it is big global news. It speaks in a strong language, calling climate change a ‘health emergency’.

The ‘2015 Lancet Commission on Health and Climate Change: Policy Responses to Protect Public Health’ is an update to the landmark 2009 Lancet Commission report. This new report argues that tackling climate change could be the greatest global health opportunity of the 21st century, an opportunity that now requires political will to realise.

**The Lancet report: ban fracking**

The report recommends to stop fracking for gas: “The time when fuel switching could decarbonise the global economy sufficiently quickly to avoid dangerous climate change has almost certainly passed. It is increasingly difficult to justify large-scale investment in unabated gas-fired infrastructure,” it states.

» Read more: [www.thelancet.com/commissions/climate-change](http://www.thelancet.com/commissions/climate-change)

» [The Lancet report](http://www.thelancet.com/commissions/climate-change) (PDF, 60 pages)
Overview of health effects – a framework and summary

“The health consequences of unconventional gas extraction might be framed in a classical medical primary, secondary and tertiary effects manner. Primary are the direct, secondary the indirect, systemic effects and tertiary the flow on effects.

- Primary / direct effect on air quality | Cause: Methane, volatile hydrocarbons
- Primary / direct effect on water quality | Cause: Drilling and fracking chemicals. volatile hydrocarbons and methane from coal. Salts. Heavy / radioactive metals from coal and rock
- Primary / direct effect on water availability | Cause: Use of water in production. inadvertent linkage of aquifers and water loss
- Primary / direct effect on soil quality | Cause: Chemical leakage / spillage from production or waste water
- Primary / direct effect on seismic activity | Cause: From fracking and pressure changes below ground
- Primary / direct effect on erosion | Cause: Increased travel over roads and country
- Primary / direct effect on spread of weeds | Cause: From increased vehicle access

Secondary / follow on effects (Note: these effects arise from several primary effects synergistically)
- Compromise of agricultural land
- Adverse effects on livestock
- Adverse effects on ecosystems and the biosphere
- No reduction in GHG emissions and continued global warming

Tertiary / Flow-on effects on well-being and health
- Conflict in mining affected communities
- Loss of control over access to property
- Reduced water availability
- Fears of loss of land, livelihood and community
- Actual loss of agricultural productivity impacting food security for Australia
- Loss of wellbeing due to concerns about health
- Psychological effects from several of the above sources

Examples of such effects in Australia include:
- Benzene, xylene and toluene were found in monitoring water bores. Connectivity and cross contamination of the Springbrook aquifer by the Walloons coal measure was demonstrated post fracking at Myrtle 3.
- There was widespread habitat destruction after a spill in the Pilliga forest.
- There are flammable water bores at Kogan and gas fuelled bush fires at Dalby.
- The Condamine River is bubbling methane along several kilometres of its length.
- There is a cluster of ill health amongst people living in the gas fields near Tara and Kogan. Their symptoms are similar to what have been reported in gas fields in the US. These include daily headaches, epistaxis, rashes after bathing, nausea, eye irritation, metallic taste and respiratory problems.”

Read more about health concerns on [www.frackfreegeelong.org/health](http://www.frackfreegeelong.org/health)
much about fracking’s impact on human health or the environment. Study after study has highlighted the lack of toxicity information available on fracking fluid—the mix of chemicals, water and sand injected deep into the ground to fracture oil- and gas-trapping rock.

Now a new study, presented at the national meeting of the American Chemical Society, says that out of 190 commonly used compounds, hardly any toxicity information is available for a whopping one-third of them. In addition, another eight fracking fluid compounds, the researchers found, are proved to be toxic to mammals.”

» Continue reading Newsweek article

» The study: www.eurekalert.org

» More about studies: www.news.wisc.edu

www.huffingtonpost.com

Common Dreams – 10 September 2014:
Research Shows Frightening Correlation Between Fracking and Rates of Illness
Respiratory and skin issues likely caused by air or groundwater contamination as a result of natural gas drilling, says new study
By Lauren McCauley

» Medical Journal of Australia – March 2014:
Harms unknown: health uncertainties cast doubt on the role of unconventional gas in Australia's energy future
By Alicia Coram, Jeremy Moss and Grant Blechal

» Business Insider – 3 March 2014:
Australian Doctors Have Raised A Health Red Flag Over Coal Seam Gas Developments
Uncertainties about the health implications of unconventional gas production should be a factor in putting the brakes on the industry in Australia, say researchers in the Medical Journal of Australia.

USA: Letters from over 1,000 doctors

On 20 February 2014, Environment America Research & Policy Center and its state affiliates delivered letters from more than 1,000 doctors, nurses and other health professionals to President Obama and state decision-makers asserting that fracking should be stopped, given the overwhelming threats to public health.

The letters come as public awareness of the health and environmental impacts of fracking is on the rise. For example, in a peer-reviewed study published last month, researchers found an increased rate of birth defects in babies born to mothers in Colorado who lived in close proximity to multiple oil and gas wells.

“Fracking is making people sick—period. Families from Pennsylvania to Colorado to North Dakota are already suffering from dangerous air pollution and water contamination caused by dirty drilling,” said Courtney Abrams, clean water program director for Environment America. “The time for action is now. And more than 1,000 doctors, nurses, and health professionals nationwide agree. This should serve as a wake up call for our decision-makers.”

» See article on: www.ecowatch.com

» Concerned Health Professionals of New York: www.concernedhealthny.org

Water safety

USA: Thousands of cases of water contamination

In August 2014, Pennsylvania for the first time made public 243 cases of contamination of private drinking wells from oil and gas drilling operations.

In 2013, the American chemical engineer Robert Jackson from Duke University reported that his researchers had found methane in 115 of 141 shallow, residential drinking water wells. The methane concentration in homes less than one mile from a fracking well was six times higher than the concentration in homes farther away. And here is an ever-growing list of the over 6,000 individuals and families that have been harmed by fracked gas and oil production in the United States.

» Pennsylvania Department of Environmental Protection: Regional Determination Letters (PDF)

» The Wall Street Journal – 28 August 2014: Online list IDs water wells harmed by drilling

» ClimateProgress – 29 August 2014: Pennsylvania Finally Reveals Fracking Has Contaminated Drinking Water Hundreds Of Times

Published on youtube.com on 21 February 2013

The Project’s Charlie Pickering produced this 7-minute video report about unconventional gas mining in Australia in 2013. Still worth watching. The video clip contains, among others, an interview with Dr Mariann Lloyd-Smith.
Protestors at City of Greater Geelong Council meeting in July 2014

Growing resistance

In Victoria, the movement against fracking started in Gippsland in 2011, when a lot of drilling licenses were given out in Western Victoria for the exploration of unconventional gas: coal seam gas, tight and shale gas.

Frack Free Geelong is a newly formed community group which is concerned about the risk that gas mining will have on Geelong and the Surf Coast. Similar groups have formed in the Grovedale, Bellarine Peninsula, Surf Coast, Colac, and Moriac & Deans March.

Also, citizens in the area around Warrnambool and Apollo Bay have formed groups.

In 2014, an Otways Basin Alliance of the various groups in the region was established, named ‘Protect the West’.
NSW: Corowa places a moratorium

Corowa Shire has reinforced its position on coal seam gas mining by placing a moratorium on exploration and seismic testing on all land under its care and control.

Corowa’s mayor Fred Longmire echoed concerns raised by the Corowa community regarding the impact of exploration activities on the shire’s valuable groundwater supply and the sustainability of key industries:

“The potential of groundwater and land contamination during the mining process is of major concern to the council and community members. We cannot afford to take any risks with this,” he said.

Corowa council is calling for a full assessment from the NSW government to determine the impact coal seam gas mining will have on the agriculture production and aquifers in the area.

“This is a big issue for us,” Cr Longmire said. “We need to ensure people have all the facts they require to make an informed decision.”

» Article by David Johnston in The Bordermail on 26 July 2014: Corowa coal seam gas mining on hold

Anti-fracking resolution from the municipality peak body in Victoria

What this resolution basically says is that the State Council of Munical Association of Victoria – the legislated peak body for Victoria’s 79 councils – opposes any exploration for and extraction of fracking and gas mining within the state.

Coal Seam Gas
Resolution: The State Council of MAV to oppose any exploration for and extraction of Coal Seam Gas within the State.

» www.mav.asn.au

A second opinion – from United Kingdom scientists

This is what Carbon Brief – a climate science and energy policy newsprovider written by scientists and researchers – has to say about fracking. They try to summarise the key questions about shale gas’ impacts and, where possible, draw some conclusions in this way:

• If shale gas replaces coal – and methane leaks are minimised – it could be used as a bridging fuel while decarbonisation happens. But there is limited room for continued use of fossil fuels without CCS if we are to stay within UK carbon budgets.
• Some fears about water pollution are overblown. Surface spills or leaky wells could contaminate water. A lack of water could constrain the industry, and dealing with wastewater will be a challenge.
• Fracking is unlikely to cause earthquakes.
• Shale gas is unlikely to bring down household energy bills.
• Fracking isn’t that noisy, but could cause some local disruption.
• Any health risks are low if fracking is done responsibly.
• Fracking’s impact on wildlife is unclear.”

Carbon Brief sees gas as a ‘bridging fuel’ even though at the same time they admit that the question whether unconventional gas is more or less polluting (and therefore climate-damaging) than coal and oil remains unresolved. Some say it is, others say it is not. Carbon Brief writes:
“According to the Committee on Climate Change (CCC) shale gas is better than coal as long as the methane leakage rate is below 11 per cent. Others put the threshold at 3.2 per cent. But again, lack of data is a challenge – leakage rate estimates currently range between 0.6 and nine per cent.”

» Continue reading on www.carbonbrief.org

Germany: 600 page report about fracking risks

In Germany, the Federal Environment Agency released a 600+ page report giving a detailed outline of the many risks involved in fracking. This research led its president Maria Krautzberger to this conclusion (translated from German):

“Fracking is and remains a risky technology and therefore requires considerable limits to protect the environment and health. As long as the significant risks involved in this technology cannot yet be predicted with certainty and controlled, there should be no fracking in Germany to extract shale gas and coalbed methane.”

» Download the report from: www.umweltbundesamt.de (PDF)

» Food & Water Watch Europe – 6 August 2014: Germany’s Environment Agency Calls for an End to Fracking

“In Australia, fugitive emissions from coal mining, oil and gas production account for about 8 per cent of Australia’s greenhouse gas emissions…”

Damian Barrett and Stuart Day in The Conversation

“One of the most common questions Australians ask about coal seam gas is whether the gas wells leak – and if so, how much? In the first Australian study of its kind, new CSIRO research now gives an indication of how much these “fugitive emissions” might be, and how we can start to reduce them.

» The Standard – 8 July 2014: Local communities express their opposition to fracking in south-west

More than 1100 people across western Victoria turned out for state government-held community consultation on fracking, with an overwhelming majority opposed to the industry. An approximate breakdown of public sentiment was 75 per cent opposed, 20 per cent undecided and 5 per cent not opposed, according to one of the independent facilitators, Mick Maguire. Nine communities have declared themselves coal and gasfield free, with another 20 communities in the process of making the same declaration. Article by Brittany Stewart

» Sydney Morning Herald – 9 October 2013: Industry’s coal seam gas campaign is a con

The gas industry is working a scam on the people of NSW, in collusion with other business lobby groups and federal and state politicians. It’s trying to frighten us into agreeing to remove restrictions on the exploitation of coal seam gas deposits. Failing that, the various parties want to be able to lay the blame for an inevitable jump in the price of natural gas on the greens and farmers. 3-minute video and article by Ross Gittins, the Sydney Morning Herald’s Economics Editor

» The Spectator – 25 July 2014: Energy giants’ donations boost Coalition and Labor

Australia’s major political parties have accepted almost $2.7 million in donations from companies associated with fracking and unconventional gas between 2010 and 2013. Article by Spectator’s Rex Martinich

The National Party Victoria accepted a $3,000 donation from Santos in 2010, while the Liberal Party Victoria Division accepted more than $98,600 from unconventional gas companies and their investors between July 2010 and June 2013.

In Victoria, the Australian Labor Party state branch topped the charts by accepting almost $112,000 during the same time frame from donors associated with unconventional gas.

How does Australia compare…

» See more at: http://climatesafety.info/thesustainablehour80

How does Australia compare…

EUROPE

» See more at: http://climatesafety.info/thesustainablehour80

Europe
European report: ‘Fracking should be temporarily banned’

Fracking poses “significant” risk to humans and should be temporarily banned across EU, says new report

A major new scientific study has concluded that the controversial gas extraction technique known as fracking poses a “significant” risk to human health and British wildlife, and that an EU-wide moratorium should be implemented until widespread regulatory reform is undertaken.

The damning report by the CHEM Trust, the British charity that investigates the harm chemicals cause humans and wildlife, highlights serious shortcomings in the UK’s regulatory regime, which the report says will only get worse as the Government makes further budget cuts.

It also warns of severe risks to human health if the new Conservative government tries to fast-track fracking of shale gas across the UK. The “scale of commercial fracking” unleashed by the Government’s eagerness to exploit the technique “should not be underestimated”, it cautions.

> Read more on www.independent.co.uk

UNITED KINGDOM

Government report: Fracking impact on water quality

Fracking operations to extract shale gas in Britain could cause nearby house prices to fall by up to 7% and create a risk of environmental damage, according to a government report that has been published in full for the first time.

Entitled ‘Shale Gas Rural Economy Impacts’, the Department for Environment, Food & Rural Affairs (Defra) document was released on 1 July 2015 after a freedom of information battle.

An official assessment of the impact of fracking, it warned that leakage of waste fluids could affect human health through polluted water or the consumption of contaminated agricultural products.

> The Guardian – 2 July 2015: Fracking could hurt house prices, health and environment, official report says

JUSTICE

Pending civil case against Australian government

Environmentalists in Australia are preparing to launch legal action against the government’s inaction on climate change. This comes after a landmark ruling in a Dutch court, which ordered the country’s government to slash greenhouse gas emission at a faster rate.

SBS News’ Abby Dinham spoke to lawyer for Environmental Justice Australia, Ariane Wilkinson

Environmental Justice Australia have several clients who are very concerned that the current policies are failing us and are concerned about the harms to Australians from government inaction on climate change. “The duty of care aspect is a legal hurdle which will have to be established,” Ariane Wilkinson explains in the interview.

> SBS – 1 July 2015: Environmentalists consider legal challenge to climate ‘inaction’

Could it happen in Australia?

> Sign up here with Environmental Justice Australia if you are interested in finding out more about any climate legal action in Australia and/or attending an online briefing about the Dutch case: www.envirojustice.org.au

“Investing one cent more in oil, coal and gas is investing in the death of society, and the in the death of our children.”

“We have not inherited the Earth from our fathers and are hence entitled to use it according to our wishes. We have rather borrowed it from our children and have to maintain it properly until they can take over.”

Australian Minister of the Environment, speaking at OECD Ministerial Conference on the Environment in November 1974

### POLICY

**Putting a fee on pollution**

The Australian Greens MP Adam Bandt spoke at the event ‘Intelligence Squared: A Tax Won’t Fix Climate Change’

The one-and-a-half hour [YouTube video](http://www.youtube.com/watch?v=) was published in January 2015. The event was held on the eve of the vote on carbon tax legislation in the Australian parliament. Politicians, scientists, academics and stakeholders make their case and plead their cause: Can a tax fix climate change? If not, what will?

Adam Bandt maintains that “direct action” and a price on carbon should not be seen as mutually exclusive measures. He demonstrates his point with the example of federal anti-smoking campaigns, and emphasises precautionary principles, comparing the tax to an insurance policy for our continued survival.

### USA

**Senator Sheldon Whitehouse’s 104th speech**

In this week’s ‘Time to Wake Up’ speech, Senator Sheldon Whitehouse discusses the recently released Papal encyclical on the environment:

‘Time to Wake Up’ speech no. 104 on 24 June 2015

Every week Senator Sheldon Whitehouse gives a ‘Time to Wake Up’ speech in the American Senate where he reminds the senators that climate change is real, and that the numerous climate skeptics in the Senate are wrong.

“We are sleepwalking our way to a climate catastrophe. The data match, and show decades of increase in global temperature. The ocean is warming, sea levels is rising. More acidic. Those are the facts.”

Senator Sheldon Whitehouse

What the scientists are telling us about sea level rise is scary stuff. Much uncertainty still surrounds the pace of future sea level rises, with estimates for a five-metre rise ranging from a couple of centuries – possibly even less – to a couple of millennia. But there is hardly any doubt that this rise is inevitable. Five metres.

### POLICY | USA

**Australian business roundtable requests climate action**

Unprecedented alliance of peak bodies pressures PM over climate change

A new “wellfare lobby group” which includes two of the nation’s most recognised and powerful employer organisations, the Australian Industry Group and the Business Council of Australia, wants to set the path for policies that encourage investment in low and zero-carbon technologies.

“This is real leadership that bridges previously untouchable divides, and which attacks Abbott Government solidarity on climate change where it hurts – and at just the right time too.”

Alan Barlee

» The Guardian – 29 June 2015:

[Australian climate policy quangos has to end, business roundtable says](http://www.abc.net.au)

“Business and industry alliance sets out climate ‘principles’, including that climate policy should be ‘capable of achieving deep reductions’ in emissions”

“Some of the nation’s peak business and lobby organisations are calling on the Abbott government to dramatically ramp up Australia’s emissions reduction commitments from 2020 onwards, warning against “piecemeal” policies and arguing that avoiding dangerous warming and reconfiguring the economy requires tougher and more urgent action than politicians have allowed.”

*Sydney Morning Herald*

### POLICY

**Farmer group urges Liberals to take action on climate**

In an open letter to the Liberal Party ahead of this weekend’s national conference, a group of farmers say climate change is real and happening on their farms. They urge the Liberal Party to take strong action on climate change

» Read more on [www.abc.net.au](http://www.abc.net.au)
100% renewable electricity for South Australia

There is an energy revolution underway, and our state faces some big choices. We are leading the world in renewable energy and have a real chance to get to 100% renewables in 15 years.

This paper summarises its key findings in a recent study by Dr Mark Diesendorf, Deputy Director of the Institute of Environmental Studies at the University of NSW. He examined scenarios where the future electricity mix of South Australia (SA) could be predominantly or entirely based on renewable energy by 2030.

» Read more on www.abc.net.au

Renewables 2015 Global Status Report


Get the figures right and put the relative importance of wind energy into perspective, as compared to solar, when we talk renewable energy choices:

Globally, solar PV capacity has grown 48-fold over the last decade. From 3.7 GW in 2004 to 177 GW in 2014.

Wind power capacity went up nearly 8-fold over the same period. From 48 GW in 2004 to 370 GW in 2014.

» Read the report ‘Renewables 2015 Global Status Report’

Bloomberg predictions for wind industry

In 2026, wind turbines will become the cheapest form of power generation in the world, Bloomberg predicts

The road to remaking the world’s power generation will have two major milestones. The first comes in 2026. That’s the year when Bloomberg analysts project wind will become the cheapest form of power generation in the world. Of course the world will actually be catching up to Brazil, the European Union and Australia, all places where wind is already the cheapest form of new power generation.

» Read more on www.scientificamerican.com
Beyond Zero Emissions flyer about why we don’t need gas. Recommended reading.

- Gas rush – information page
  Gas fact sheets from independent Australian organisations

- Why you should be concerned about ‘fracking’
  Gathering of articles, links and videos

- The Sustainable Hour on 16 April 2014:
  Impacts of unconventional gas extraction
  Podcast about the seminar 'Unconventional gas extraction and the social, economic and environmental impacts' which took place in Melbourne on 26 March 2014. It was transmitted via video conference to 13 different locations in Victoria – one of them at Deakin in Geelong.

More about onshore gas mining

- On [www.frackfreegeelong.org](http://www.frackfreegeelong.org)
- On [this website](http://www.frackfreegeelong.org)