

PRESENTATION TO THE SCIENTIFIC INQUIRY INTO HYDRAULIC FRACTURING OF UNCONVENTIONAL RESERVOIRS IN THE NORTHERN TERRITORY

Good afternoon. My name is Jo Vandermark, and I wish to make a presentation to this Inquiry as a private individual, Darwin resident and voter. I am not a representative of any organisation or group. Since coming north I have worked in 29 communities in the Kimberley and Northern Territory. I wish to honour not only the Larrakia but all Aboriginal people across the Territory and trust this Inquiry will listen to their voice and respect their views.

I attended Dr Hawke's Darwin hearings where I was encouraged by the highly articulate and logical questions and comments of the participants, most of whom were not in favour of 'fracking' the Territory.

I was alarmed when I learnt that the process of mining unconventional gas had been recommended ***subject to the creation of a robust regulatory regime***

Consequently I would first like to address what seems to me to be the critical issue of **REGULATION AND COMPLIANCE**

A regulation is only as good as its enforcement. Without enforcement regulations are worthless.

Over and over again Dr Hawke's Executive Summary emphasises the crucial importance of regulation. Examples are:

New Zealand: *Dr Wright concluded that fracking can be managed effectively **provided that operational practices are implemented and enforced through regulation.***

The UK Report: *"The health safety and environmental risks associated with hydraulic fracturing as a means to extract shale gas can be managed in the UK **as long as operational best practices are implemented and enforced through regulation.**"*

The Australian Council of Learned Academies (Peer Reviewed)

*Nonetheless it is important that the shale gas industry takes full account of possible adverse impacts on the landscape, soils, flora and fauna, ground water and surface water, the atmosphere and on human health in order to address people's concerns. **This will require improved baseline studies** against which to measure future change and to compare natural change and change resulting from industry activities...nonetheless there will be some cumulative regional, ecological and hydrological impacts, including fragmentation of habitats and overall landscape function. These will need to **be carefully assessed and managed using best practice.**"*

On Chemical and Water Management

*"Contamination of aquifers and surface water can result from chemical spillage ...These are unlikely to occur if **best practice** is followed, but **regulations need to be in place and enforced, to help to ensure this.**"*

In relation to monitoring and regulation, the Report concludes:

*“Monitoring of shale gas production and impacts is likely to be undertaken by petroleum companies as part of their normal operations, but in order to win community confidence, truly independent monitoring will need to be undertaken by government or other agencies and/or credible research bodies... **This will require a robust regulatory regime**, which will build on existing regulations and which will also fully take account of the need for sensible and multiple land use, based around well-resourced regional planning and cumulative risk assessment.”*

Accordingly Dr Hawke’s Recommendations state:

Recommendation

This Inquiry’s major recommendation, consistent with other Australian and International reviews, is that the environmental risks associated with hydraulic fracturing can be managed effectively **subject to the creation of a robust regulatory regime.**

Recommendation

The Inquiry recommends that a Cabinet Sub-Committee be formed, chaired by the Deputy Chief Minister and comprising the Ministers whose portfolios cover Lands, Planning and the Environment; Land Resource Management; Mines and Energy; and Primary Industry and Fisheries to oversee the work required for the NT **to set the standard for a best practice regulatory regime.**

WHY THEN AM I CONCERNED?

My concern is whether Northern Territory Governments have the capacity, the will, and the financial resources to implement best practice and enforce regulation.

HOW CAN I JUDGE THIS?

It seems to me that I have only past and current Government practice as a basis to answer this question, so may I quote three examples?

- 1. Rapid Creek Markets.** This is an example of failure to enforce even a simple regulation. The regulations demand that stall holders must display prices on their produce (just as supermarkets are required to do). I have notified enforcement authorities several times of the absence of prices on many stalls but nothing has changed. As of yesterday, upwards of fifty per cent of produce was unmarked. **The failure to enforce such a simple and easily monitored regulation does not inspire confidence.**

2. **Crocodile Trophy Hunting Proposed Regulation.** In this case the proposed legislation is ludicrously detailed, laying out the position of the crocodile (distance from the water, angle, the particular area of the body which can be targeted etc. etc.) **Why I quote this is that to me it suggests ‘stringent regulations’ which do not have the slightest chance of being enforced, but instead serve the purpose of trying to make trophy hunting more acceptable to the opponents, that is to disarm opposition.** In actual fact Kakadu NP does not even have the resources to deal with the current illegal shooting of crocodiles. Could the stringent regulations recommended in Dr Hawke’s report be included to similarly ameliorate opposition?

3. **Macarthur River Mine.** This is by far the most important and relevant example of the complete and utter failure to enforce regulations, to the extent that the mine is now labelled as an unmitigated disaster! As an opponent of the diversion of the river, I am well acquainted with the promises of stringent environmental regulations and claims of best practice. What a travesty!

Reactive iron sulphide rock on the mines waste dump has been burning for three years. Glencore, the operator of McArthur River Mine, grossly underestimated the amount of potentially acid forming material, claiming in its 2011 Environmental Impact Statement that the proportion was 12% of waste rock, when it was later found to be 88%.

Health authorities have told residents not to eat more than two small portions of fish per week, but it was not until eighteen months after detection that local residents were informed of this pollution. Invertebrates and cattle have registered unacceptable levels of lead.

Most disturbing of all, Glencore has admitted that the mine will have to be monitored for several hundred years! In addition Glencore has rejected putting the waste back into the pit as too expensive, instead intending to leave hundreds of millions of tonnes of reactive waste above ground, despite warnings of dire future consequences for the community and the environment. Extraordinarily the Government has kept the amount of Glencore’s environmental bond secret from the electorate!

In the light of such continuing failure, how can any Territorian maintain trust in the Government’s competence, will or capacity to monitor and enforce the ‘robust regulation’ of fracking which is the condition of Dr Hawke’s approval and recommendation for fracking to proceed. Regulation without independent monitoring and strict compliance supervision is worthless!

And this is in the context of Australia’s estimated 70,000 abandoned mines leaking toxins into the environment. (*The mining industry prefers the term ‘legacy mines’*). Wouldn’t it be a good idea to fix up these mining disasters before embarking on another round of destruction?

NATIONAL FACTORS But it is not solely the NT’s failure to enforce regulation that erodes public trust. National factors also bear responsibility

1. **POLITICAL DONATIONS** The banning of political donations to parties and governments would enable decisions to be made on their merits, rather than be purchased by multi-nationals, corporations or individuals, is an urgently needed reform. The mining industry's campaign against the mining tax, and its success in unseating the leader of the National Party in WA because he advocated for a small additional tax on mining operations to support the regions are recent examples of the blatant purchasing of government decisions.

2. **A NATIONAL COMMISSION AGAINST CORRUPTION** would assist this undue influence on government decision-making.

3. **THE DEVALUING OF SCIENCE** The politicization of science manifested in the emasculation of formerly eminent scientific organisations like the CSIRO, the Great Barrier Reef Authority and the Climate Council, the removal of experienced senior scientists, and the muffling of scientific evidence-based advice in favour of politically acceptable opinions must be reversed if public confidence is to be regained. Decisions need to be made on scientific evidence, not on the political power of sectional interests and well-financed lobby groups. The recent elevation of fund raising applied science to the neglect of basic research also requires urgent reversal as it too undermines the collection and independence of essential baseline data.

The most blatant recent example of political decision-making subverting science must be the NSW Governments unexplained reduction of over twenty compliance officers to four individuals charged with the implementation of the Murray Darling Plan. How can we trust governments to enforce regulation!

4. **THE TRIPLE BOTTOM LINE** A good start to government decision-making would be the restoration of the concept of the triple bottom line in government accounting, whereby environmental and social costs are given equal weighting with purely economic gains so often short lived.

ECONOMIC ARGUMENTS - JOBS, JOBS, JOBS The developing of fracking across the Territory is frequently promoted as a source of employment. Unfortunately this claim is based more on wishful thinking rather than reality.

The reality is that gas projects are capital intensive, not labour intensive.

Once the construction stage is complete, many fewer jobs are available, and in the future that number will be further reduced as mining becomes robotic. A perfect example of this is the proposed Adani coal mine. While the PM and Treasurer are quoting 10 or 12,000 jobs, upped by Senator Canavan to 14,000 jobs, under oath in India Mr Adani stated that there would be 'up to 1,200 jobs in the construction stage, following which the mine would be 95% robotic'.

ABS statistics estimate that in the NT oil and gas companies employ 1,023 people, whereas arts and recreation services employ twice this number, namely 2,243 at the last

census. Mining is not a huge employer even now, and the inevitable rapid progress to robotic control undermines the employment argument even further. The speed and impact of robotics on the mining industry appears to be ignored in government predictions/dreams of future employment prospects.

DISPLACEMENT OF JOBS

Not only are inflated employment predictions a feature of mining industries, but the consequent displacement of jobs and industries is seldom calculated. There appears to be no monitoring of the potential loss of agriculture, fishing and tourism, or the limitations unconventional gas mining will place on the new industries of the twenty-first century like renewable energy innovations and the potential of the exciting development of biomimicry.

As for individual employment, the coal seam gas industry was sometimes found to reduce employment, as in CSIRO's study of Queensland's unconventional gas expansion finding that for every 10 additional people employed in coal seam gas, 18 agricultural jobs were lost. Professional service jobs increased, but there were no additional retail or manufacturing jobs. These figures indicate that simplistic employment predictions should be subjected to more thorough analysis than currently practised.

OTHER ECONOMIC ARGUMENTS

Reports from the independent Australia Institute question much of the economic conventional wisdom e.g. claims like the recent pronouncements of the Federal Treasurer that the lifting of the moratorium will solve the NT's economic problems, a claim that ignores the fact that total mining and gas royalties contribute just 3% of NT government revenue.

To return for a moment to the McArthur River Mine, no royalties were paid to the government in 2015. Recently Chevron has been revealed as paying no tax in Australia. It is just too easy for multinational companies to arrange their accounts to the benefit of the parent company and the commensurate disadvantage of the host country. Hence the Queensland Government's disappointment at receiving less than 10% of the anticipated income from gas mining.

The Institute claims that the development of unconventional gas in the NT will only confound Australia's problems of household and industrial steeply rising prices, and declining tax revenues and shareholder value through the further flooding of the market. NT gas extraction is likely to be very high cost, and global markets look set for a period of abundant supply. Also to be taken into economic account are the investment costs to governments of required infrastructure provision. Detailed authoritative economic studies will be provided to the Inquiry by the Australia Institute.

ENVIRONMENTAL IMPACTS

Of particular concern to me are the environmental impacts of fracking the Territory. I am a representative of Australians who have migrated to the north for environmental reasons, to have access to areas where it is still possible to witness natural processes, vegetation and wildlife relatively undisturbed. With an unregulated world population explosion, could there be any more valuable resource to the future of Territorians?

At a time when biodiversity is in rapid decline in the Northern Territory, to what extent will this loss of natural capital be exacerbated by the introduction of this water hungry industry? Australia is the most arid inhabited continent in the world, but water depletion is not the only threat. Pollution of rivers and streams, even of the aquifers would have catastrophic consequences to all forms of our unique wildlife and distinctive vegetation.

Where are the baseline studies essential for measuring the impact of fracking on our natural inheritance? Money for basic research on wildlife has been so scant in recent years that every 'Bush Blitz' discovers scores of new species! Even common species have been only superficially studied. Loss of biodiversity is escalating right across the Territory. We simply do not yet have the essential species information to enable accurate monitoring of the impact of unconventional gas extraction. Much more time and increased resources are required for this essential baseline data.

WHY THE RUSH?

I have not even touched on many of the other fracking concerns, but from even this cursory examination it is clear that the current knowledge of the consequences of such an irreversible modification and dramatic disruption to the Territory environment requires a vastly extended time for analysis.

THE PRECAUTIONARY PRINCIPLE

If ever there was a case for adhering to this principle, surely this is one such occasion! Intergenerational equity demands no less.

QUESTIONS FROM THE PANEL

The most difficult question raised by the panel is what I think could be done to address the objections to fracking raised in my presentation.

First may I observe that to every complex issue there is a simple solution – which is invariably wrong! Complex issues require multi-pronged solutions. Having said that, the first issue to be addressed has to be the timeline.

THE TIMELINE FOR DECISION-MAKING MUST BE DRAMATICALLY EXTENDED to allow much more detailed collection and assessment of data. This is in no way a reflection on the competence of the panel, but an indictment of the paucity and lack of thoroughness of the evidence required to adequately assess this proposal.

REFORM OF POLITICAL DONATIONS is essential to replace the current system of the purchase of government decisions with impartial evidence based criteria, assisted by the establishment of a national and NT ICAC. It seems to me that this is essential to restore public faith in the democratic system.

STRENGTHENED LEGISLATION defining not only regulation requirements but also mandatory effective compliance mechanisms with adequate financial resourcing.

THE REINSTATEMENT OF SCIENCE is an absolute prerequisite for the future prosperity of our country in general, as well as the provision of the reliable, independent evidence as the basis for the fracking decision.

TRIPLE BOTTOM LINE ACCOUNTING must be reinstated so that environmental and social impacts are weighted equally with economic implications, in this case the impact of fracking on the unique biodiversity of the Territory and the provision of unpolluted, adequate water supply

LONG TERM versus **SHORT TERM** - I'm not sure how we can extend this decision timeline in this age of social media, constant polling, and instant news cycles, but public education must be a part of the solution.

Jo Vandermark *31 July 2017*

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A Personal Addendum

*I would like to pay tribute to **KATE BOYD**, who registered me to give this presentation that she originally intended to be a joint presentation. The presentation represents our collaborative position. Kate was hoping to be present but collapsed the night before. I would like to thank the panel for advancing the time of my presentation. It meant I could join the family and close friends before Kate's life support was removed later in the afternoon. Thank you.*