

## Response to Draft Final Report of the Scientific Inquiry on Hydraulic Fracturing NT

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We would like to acknowledge the Arrente people of Mparntwe by recognising that we are on land that was stolen from them, and that the impacts of colonization continue to negatively affect indigenous people's health and wellbeing. The Fracking Industry is yet another looming burden of colonization.

We are shocked and disappointed at the content on the Draft Final Report of the Scientific Inquiry into Hydraulic Fracturing in the NT. 6 months ago we presented to you a submission prompted by our ethical and professional responsibility to protect the health and wellbeing of our patients, wider community and environment. Our submission, based on peer reviewed scientific evidence, outlined why lifting the moratorium on fracking would put the human, animal and environmental health of the Northern Territory at unacceptable risk. We acknowledge the work that the Panel has done in the last year, and had hoped that this would be translated into a cohesive, balanced, Report that realistically reflects the impact that fracking will have on the NT. But instead, the Panel has chosen to omit the pertinent opinions of public health experts. Experts like Prof Melissa Haswell who is acknowledged in the first page of "Public Health" and then her recommendations for protecting the health and wellbeing of Northern Territorians is summarily ignored, in lieu of other, less authoritative sources.

We strongly dispute the Panel's assertion that hydraulic fracturing has a 'low' likelihood of risking public health. We also strongly criticize the practice of using industry-commissioned HHRAs (human health risk assessments) to support the Panel's risk assessment.

It is self-evident that HHRAs designed by industry will have a vested interest in minimizing the potential adverse effects of that industry. We understand that the Panel's scope was to examine all available evidence regarding health risks of fracking, and for that reason acknowledgement of the information put forward in the HHRAs was appropriate. These may have been the only HHRAs relating to fracking that were available to the Panel. What we find unacceptable is that the Panel acknowledges the "significant limitations" of the HHRAs and then employs these reports as a source of information. In other words, the Panel explicitly questions the validity of the HHRAs measured health outcomes and then utilizes the reports to provide quotes and figures to support the Panel's

own assessment.

The Panel states, and I quote: “The two critical elements of an HHRA that must be present in order to aggregate and characterise the risks are, first, identification of, and knowledge about the chemicals of concern, and second, identification of the potential exposure pathways”.

All of the HRAs considered by the Panel fail to address either one, or both of these “critical elements” needed to characterize risk. This renders them inappropriate as key resources influencing decision-making. The HRA by Origin on its exploratory activities at the Amungee well in the Beetaloo Sub-basin failed to fulfil either of the 2 essential criteria. The Santos HRA on its developments in the Surat and Bowen basins in south-west Queensland failed to assess critical exposure pathways leading to contamination of groundwater and surface water. So did Santos’ health and chemical risks assessment of its CSG development in Narrabri, NSW. The WA HRA utilised by the Panel was the subject of an extensive and detailed critique from Public Health advocate Professor Melissa Haswell. Professor Haswell found that the report did not fully and accurately assess the potential risks and benefits of the industry to the health and wellbeing of the population (1). Finally, the AGI Upstream Investment HRA assessing health risks associated with bTeX in flowback water in the Gloucester basin of the Waukivory CSG project in NSW only covered airborne transfer from the holding tank, and not leaks or spills to surface or groundwater, due to being an “incomplete pathway”. To repeat, all 5 HRAs utilized by the Panel in their consideration of risk failed to fulfil either one or both critical criteria required to characterize risk. I quote: “All 5 reports provide useful information supporting the risk assessments undertaken by the Panel in this Report, and they are consistent with the Panel’s consequence and risk assessment of ‘low’”. How is this conclusion reached when the reports fail to fulfil the criteria of HRA?

Why are they being used as sources to support the Panel’s assessment? If the pathways are incomplete and omitted from the assessments, how and why has the Panel drawn conclusions from incomplete evidence?

We acknowledge Recommendation 10.1 within which the Panel calls for HRA reports to include risk estimates assessments of exposure pathways that are deemed to be incomplete. This is an admission that inclusion of all exposure pathways is imperative to HRAs. So, the question must be asked, why are these evidently weak sources, which form an essential component of the Public Health Chapter, being used by the Panel to justify the assessment of health risks as low? We want our opposition to the use of these sources to stand on the public record. Furthermore, it can be

seen in the Public Health Risk Matrix that the Panel's recommends "gas companies to prepare site specific HHRAs". It is completely unacceptable to expect industry to self-regulate their own practice.

We also want on public record our opposition to the stipulation in recommendation 10.1 that, quote formal site specific HHRAs need to be prepared and approved prior to the grant of any production licence for the purpose of any shale gas development. We urge the Panel to amend this Recommendation to require site specific HHRAs be approved prior to the granting of any exploration licenses. Allowing industry exploration rights before fully assessing the impacts these activities may have on a community is unethical and unjustifiable.

It is unacceptable that the Chapter on Public Health includes only one small paragraph on the enormous subject of social cohesiveness, mental health and wellbeing. Worse still, this paragraph states "the Panel is unable to find any cogent evidence that supports an evaluation of the magnitude of this risk to public health". This inability or refusal to acknowledge the evidence is the result of the Panel's favouring of a foreign study (McMullin et al.) that is not peer reviewed. The McMullin et al. study has such a narrow categorical framework that it reviews a measly 12 US studies, out of the hundreds of studies available. The Report tables this literature review on an entire page in the Public Health Chapter. This is misleading to the general public trying to make sense of this Report because the majority of the categories state the evidence is "insufficient" or "failing to show an association". Furthermore, it is insulting to the enormous amount of work and references Australian Health Professionals and Public Health experts have provided to the Panel. If health academics in this country used evidence as flimsy as McMullin et al. to support their arguments this would be highly frowned upon in the health domain.

If the Panel had wanted to assess the impacts of the fracking industry on the mental health and wellbeing of the community affected, they would have incorporated a validated assessment tool into their community consultation process. An effective and efficient process could have included appropriate questions to investigate people's concerns and stressors. This would have provided valuable locally relevant information at the source, providing the evidence required to demonstrate the effect that impending fracking has had on communities at risk from the industry. Basically, all the Inquiry had to do was listen, and accurately document it.

But as has been proven by secretly taped footage of the community "consultation" that occurred in Marlinga, the Inquiry consultants did not listen. Instead, they went to remote communities and encouraged indigenous residents to capitalise on an industry that they said is inevitable. In a process

of “consultation” the consultant in Marlinga spoke for 36 minutes and listened to the community for a total of 8 minutes! This is why the Panel does not have any evidence regarding the impact of fracking on mental health, wellbeing and social cohesion. Because the “voice” they gave to remote communities was merely lip service, and the gravity of community stress has been in effect omitted from their Report.

Health Professionals Against Fracking NT were lucky enough to be asked to do a presentation at the Aboriginal Fracking Forum recently on the impacts of fracking on health. The audience was a room packed with powerful Indigenous spokespeople from 13 different communities across the Territory who had gathered to discuss their concerns about fracking and make a collective statement which they presented to Parliament. For hours we listened to the wide range of concerns people in remote communities have about the looming fracking industry. This is primary source information. In the Final List of Issues in Appendix 2, the Panel states ‘there may be a risk that the physical and mental health of Aboriginal persons and communities, as a group that is especially vulnerable and disadvantaged, is particularly affected.’ As Health Professionals we acknowledge that the increased stress, anxiety and looming loss of cultural sustenance has a profound negative impact on the mental health of the communities at risk of industrial destruction. This is a form of sickness that it is affecting people already, long before fracking has even arrived.

We would like to remind the Panel and observers that a categorical assessment of 685 peer viewed literature published in 2016, found 84% of the public health studies indicate risks to public health, 69% of water studies show actual or potential water contamination, and 87% of air quality studies indicate elevated air pollution (2). The evidence is strong enough for fracking to have already been banned in 12 countries around the world. In Australia, we commend The Victorian Government in leading the way by passing legislation to ban any unconventional gas drilling in the state because of the unknown and unquantifiable risks to the safety and security of public health, water and agriculture industries. We implore the Panel to recommend that the NT Government does the same.

In the Final List of Issues in Appendix 2, compliance and enforcement is mentioned in the following statement: “There may be a risk of inadequate monitoring or enforcement of compliance with the regulatory framework as a result of inadequate resourcing of the regulatory agency, inadequate expertise or training”. The Panel quotes the UK Task Force on Shale Gas acknowledgement that there has been understandable concerns and fear in communities affected by the Fracking Industry

due to lax operation standards which have led to negative health outcomes. This Task Force assure us, however, that in the last few years, standards have improved dramatically and that we should simply trust the industry will follow best-practice to ensure the safety and wellbeing of ourselves and the environment.

The distrust that industry and government will safely regulate themselves has grown from years of dealing with the impacts of mining. Some would argue, for many indigenous people, this distrust is deepened by the lived experience of colonisation, forcible removal from homelands and land exploitation for resource extraction. History is the best predictor of the future.

I would like to demonstrate how, in the NT, industry continues to fall well short of the tight regulations in place.

1. Most recent and relevant in terms of threats to our water supply is the PFAS incident in Katherine. PFAS were in the foam used at RAAF bases - including at Tindal near Katherine – and have seeped into the town's bores and infiltrated its drinking supply. A Four Corners investigation revealed the Defence Department were told the chemicals must not enter the environment as far back as 1987, however, throughout this time chemicals were leaching into the groundwater and residents were not told their bores were contaminated until 2016 (3).
2. Ranger, Australia's largest Uranium mine that operates within the World Heritage listed Kakadu National Park is one of the most heavily regulated and monitored mines in the world. Despite this, the Federal Government's leading research body found cancer rates almost double in indigenous populations living close to that mine. This study found no monitoring had been done in the last 20 years on the mines impact on local indigenous health despite over 200 known incidents, spillages or leaks of contaminated water into the local environment. (4) These spills included a large acid leach tank completely collapsing releasing a million litres of acid radioactive ore slurry into the surrounding area (5).
3. In 2017 the McArther River Mine near Borroloola 63 truckloads, or 14,000 tonnes of toxic matter were dumped erroneously at a site that was not designed to store the acid-forming material. This matter then combusted, as it is known to do on contact with oxygen, releasing sulphur dioxide into the air. (6)

Many people have engaged with this Inquiry's process in good faith, at every available opportunity and put in countless hours of unpaid time and energy in the hope that our opposition to fracking would be heard. We were suspicious when the expert number massagers Ansil Alen were chosen to do the independent economic impact assessment. We were outraged when the Inquiry gave Alice Springs, a town of 30000 people, a mere 3 days notice for a community consultation. But when the community consultation sham was exposed on the ABC, we realized where this Inquiry was heading. And this is reflected in the Final Draft Report, where the concerns of Indigenous and non-Indigenous Territorians are not reflected. We have continually told you we are calling for a permanent Ban on Fracking. Where is that documented in the Report? Nowhere. Community opposition is misrepresented as community concerns. Hundreds of people turned up to participate in the community consultation process. Often there was unanimous opposition to fracking, as was witnessed in Alice Springs where hundreds of people spontaneously stood with hands raised high in favour of a total ban on fracking. Where is this reflected in the Report? We refer to Jan 26 Edition of the Rural News where a double page spread on the Draft Final Report stated it has "Gone against everything the people called for" and "buries opposition in the report while offering a blueprint for the gas industry to forge ahead". We do not have an exhaustive list of concerns that can be compartmentalised and individually addressed by recommendations which may or may not in reality stop a risk from occurring. An overwhelming percentage of the population here are ethically, politically and environmentally opposed to the fracking industry and said they want a Total and Permanent Ban on Fracking. This needs to be documented.

As Health Professionals Against Fracking NT we maintain our concern that lifting the moratorium on fracking in the NT poses unacceptable risks to human and environmental health.