Public Health Association
AUSTRALIA

Public Health Association of Australia submission on hydraulic fracturing in the Northern Territory

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Introduction

The Public Health Association of Australia

The Public Health Association of Australia (PHAA) is recognised as the principal non-government organisation for public health in Australia working to promote the health and well-being of all Australians. It is the pre-eminent voice for the public's health in Australia. The PHAA works to ensure that the public's health is improved through sustained and determined efforts of the Board, the National Office, the State and Territory Branches, the Special Interest Groups and members.

The efforts of the PHAA are enhanced by our vision for a healthy Australia and by engaging with like-minded stakeholders in order to build coalitions of interest that influence public opinion, the media, political parties and governments.

Health is a human right, a vital resource for everyday life, and key factor in sustainability. Health equity and inequity do not exist in isolation from the conditions that underpin people's health. The health status of all people is impacted by the social, cultural, political, environmental and economic determinants of health. Specific focus on these determinants is necessary to reduce the unfair and unjust effects of conditions of living that cause poor health and disease. These determinants underpin the strategic direction of the Association.

All members of the Association are committed to better health outcomes based on these principles.

Vision for a healthy population

A healthy region, a healthy nation, healthy people: living in an equitable society underpinned by a well-functioning ecosystem and a healthy environment, improving and promoting health for all.

Mission for the Public Health Association of Australia

As the leading national peak body for public health representation and advocacy, to drive better health outcomes through increased knowledge, better access and equity, evidence informed policy and effective population-based practice in public health.

Preamble

PHAA welcomes the opportunity to provide input to the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory. Community consultation through the Inquiry process can contribute to the reduction of social and health inequalities, which PHAA believes should be an over-arching goal of policy and a key measure of our progress as a society.

PHAA Response to the hydraulic fracturing Inquiry Terms of Reference

1. Assess the scientific evidence to determine the nature and extent of the environmental impacts and risks, including the cumulative impacts and risks, associated with hydraulic fracturing of unconventional reservoirs and the associated activities in the Northern Territory.

This Inquiry highlights the importance of the precautionary principle in decisions affecting health and the environment. Precaution is a core principle in environmental health, with four components, all relevant in considering fracking [(1)]:

1. When there is any uncertainty about an environmental health issue, precaution is needed to ensure that health and the environment are protected, erring on the side of excess precaution rather than unnecessary risk.

2. Those who would like to undertake a potentially damaging project, such as fracking, must demonstrate the lack of risk of harm, rather than those who would face the risk of the damage being required to demonstrate the possibility of harm.

3. Alternatives to possibly harmful activities such as fracking should be actively considered and explored. One of the strengths of the precautionary principle is the innovation that results from taking precaution and seeking out safer alternatives with less health and environmental risk.

4. When risks and benefits from an activity such as fracking are distributed unequally, and where communities bear the burden of risk and may pay the price, while benefits may be more widely distributed, justice demands communities should be engaged in decision making about potentially damaging projects that could affect them.

All environmental decisions should invoke the precautionary principle, and this is particularly so with decisions involving technologies that are relatively new. Impacts in the lifetimes of future generations may be quite unexpected. The history of lead is telling, since humans used lead for over 2000 years before its toxicity was understood [(2)]. Its use continues, and its toxicity continues to affect children today for economic, political and historic reasons despite modern understanding and alternatives [(3)]. Likewise asbestos continues to kill Australians: we have the highest incidence of asbestos related disease in the world [(4)].

In making this submission we acknowledge the Northern Territory Government for its prioritisation of implementing a moratorium on fracking so soon after the NT Election in August 2016, and the establishment of this scientific and public consultation. We believe that the people of NT deserve this opportunity to speak directly to decision-makers, and to contribute to this critical part of NT's economic and energy development.

Water

The PHAA supports the inclusion of the values of water mentioned in the Background and Issues paper: quality, quantity (supply and distribution), aquatic ecosystems and biodiversity, amenity values, public health, Aboriginal people and their culture, economic, and cumulative risks are all important as water is the basis for life and material prosperity.

In addition at another level, water holds spiritual value. Water represents the life force; in both Aboriginal and non-Aboriginal communities and may be considered 'alive' as it is essential for life on earth [(5)]. Spiritual values transcend amenity and aesthetic values for both Aboriginal and non-Aboriginal Australians [(6)].

The spiritual values of water are important in both desert environments through scarcity and vitality, and also in tropical environments where water is embedded in day to day livelihoods. This may explain the fear of water contamination experienced with the prospect of fracking. Assurances of safety ring hollow in the face of spiritual concerns. Spiritual concerns may contribute to divisiveness and conflicts within communities where fracking is proposed [(7)]. While the material values and risks described in the Background and Issues paper are important, without considering this spiritual dimension, the panel risks underestimating community concern.

Land

Values of land, like values of water, include public health although this is not explicit in the Background and Issues Paper. Overlapping values reflect the inherent interconnection of health with the other values of land that are mentioned: terrestrial ecosystems and biodiversity, soil health, Aboriginal people and their culture, economic, amenity values and cumulative risks. Again there are three dimensions to this. Firstly is the necessity of healthy land for environmental values such as ecosystem processes and biodiversity, and economic value for agriculture and habitation.

Secondly, exposure to nature is increasingly recognized as an important health determinant [(8)]. Lack of exposure to nature has been termed "Nature Deficit Disorder". There is evidence that this may contribute to a number of increasingly common social and medical problems including depression, obesity and asthma [(9)].

Finally, as with water, land has important spiritual values, whose fragility is increasing with climate change [(10)]. Fracking therefore poses a risk to spiritual health through its impact on the land.

Public Health

A recent summary of health risks of unconventional gas development, which requires hydraulic fracturing, has been published in Environmental Science and Technology [(7)]. This is a very rapidly evolving area and a recent publication identified 685 papers published between 2009 and 2015, in peer-reviewed scientific journals that are relevant to assessing the impacts of hydraulic fracturing. Of the papers identified, 84% contain findings that indicate public health hazards, elevated risks, or adverse health outcomes [(11)].

It is not clear why health and safety risks to workers are outside the scope of the Inquiry. In the setting of small communities, workers are the community and the public. Thus this exclusion of work safety from the terms of reference does not present the reality for people in small communities [(12)].

Exposures from the workplace are readily transmitted to household contacts. This includes both material exposures such as toxins and particles, and workplace stress. In rural areas both employment and its benefits are unstable, exacerbating workplace stress [(13)]. Transferring benefits or risks from the community to a fly-in-fly-out workforce does not reduce exposure. Ironically the small number of workers required for contemporary extractive operations may be a benefit when considering the potential risks of extractive industry workplaces, since less people are exposed [(14)].

Additional public health risks associated with a fly-in-fly-out workforce include increases in crime, substance abuse, and sexually transmitted infections [7]. Looking beyond individual health to the health and wellbeing of communities highlights the divisiveness and conflict that can arise when fracking is proposed [7]. Such conflict is already evident in NT during the course of this Inquiry [15].

The Public Health Association of Australia is also concerned with road safety, noting that NT has the highest road toll in Australia, at least four times over the national target rate of 5.6 per 100 000 per year [16]. Heavy vehicles are around six times more likely to be involved in fatal and serious injuries in Australia [17]. Overall, this data presents serious concern for introducing further industry such as hydraulic fracturing, into remote regions of NT.

Aboriginal people and their culture

PHAA supports the inclusion of culture, values and traditions as values for Aboriginal people and their culture which may be affected by fracking or related processes. These are material impacts on Aboriginal culture.

Non-material impacts of fracking including spiritual impacts are also important. However, the framing of Aboriginal culture and knowledge in a way that can be known and described reflects a non-Indigenous way of describing culture and knowledge. This may not reflect Aboriginal ways of knowing, in which culture is embedded in the land [18]. The "Scientific" framework of this study represents a view of the world from a non-Indigenous perspective, privileging non-Indigenous knowledge.

For historical and political reasons, legislation has been ineffective in protecting Aboriginal heritage, leading to the suggestion that greater Aboriginal sovereignty is needed [19]. Such an argument, in the context of discussions about resource development, points to the high degree of inequity between Aboriginal and non-Indigenous Australians, and likelihood of increasing inequity through fracking. Thus it is near inevitable that Aboriginal people and their culture will experience unanticipated and negative impacts of fracking irrespective of regulations.

Strong reliance on bush food as a source of nutrition and cultural strength may put Aboriginal people at much higher risk of toxicity than other communities [20]. Significantly higher rates of stillbirth (2.17 times increased risk) and cancer (1.48 times increased risk) among Aboriginal people who live in the vicinity of the Ranger uranium mine remain unexplained over a decade after they were first reported [21, 22].

Further, extractive industries near to where Aboriginal people live risk exacerbating health and socio-economic inequity. Despite rhetoric about jobs and economic opportunity (which are important for health), there is evidence that Aboriginal people's wellbeing does not improve when there is mining or other industrial activity near their communities; in many cases wellbeing deteriorates [23].

Social impacts

Community cohesion is described in the Background and Issues Paper in relation to fly-in-fly-out workers. However, as mentioned under Public Health, community cohesion can be affected in many ways, before, during and after fracking operations. Different value systems among community members, who have no say in the distribution of costs and benefits among current and future community members, loss of value of tourism and other industries that may be affected by fracking, changes in land values, perception of lack of transparency and misinformation and other sources of stress can all contribute to loss of community cohesion [7].

Economic impacts

The value "Energy Security" as described in the Background and Issues Paper assumes that NT energy security will be promoted by fracking, and there is a risk of jeopardizing energy security if gas resources remain undeveloped.

However, this is not the experience elsewhere in Australia, where development of the gas industry has not ensured energy security. Market forces in the energy market and large scale export of gas have meant that despite significant gas extraction energy supply is less secure in South Australia and Queensland. With the likelihood that a gas pipe will be constructed in NT, fracking and large scale gas development will reduce energy security in NT through diverting investment, training and other resources from solar to fracking [(24)].

Conclusion

The Background and Issues Paper demonstrates considerable detail and insight into the terms of reference, and we acknowledge the panel for this.

The Public Health Association of Australia sees no possibility of safe fracking in NT, and we therefore argue strongly against any such development. However, as a fall-back, should unconventional gas extraction go ahead, we would point to a number of mine-related ventures which have provided useful outcomes for affected Aboriginal people. Should fracking go ahead in NT, then using strategies from these will minimise negative impacts on the Aboriginal people affected. Common features are long-term commitment over and beyond demonstrating corporate social responsibility, prioritisation of Aboriginal people's connection to their ancestral lands and desire for meaningful employment on those lands, attention to local factors particularly culture and language, and integration of education and employment services [(25)] .

The Public Health Association of Australia believes that inquiring into fracking as an issue in isolation will not provide an appropriate framework for energy development in the NT or Australia. The question to be asked is not whether or not NT should extend the moratorium on fracking, or whether it might be possible to regulate and monitor this industry. The question is how NT, and Australia as a whole, can best ensure that energy and other resources are secure and affordable into the future. Our energy supply must be maintained while we fulfil our obligations under the Paris Climate Convention to mitigate climate change by urgently reducing fossil fuel use. This must be done while we adapt to accelerating climate change including extreme weather events requiring high levels of energy use, and short and long term disasters such as floods, cyclones and droughts. Beyond Zero Emissions has provided an engineering framework for a carbon neutral energy system for Australia. This demonstrates how we can achieve an affordable and secure energy supply through renewable energy sources [(26)].

Through a rational approach to energy development, NT can design an appropriate and sustainable economic development framework to meet our needs as we enter an increasingly insecure energy and environmental future. The PHAA appreciates the opportunity to make this submission and the opportunity to contribute to the inquiry into fracking in the NT. Please do not hesitate to contact me should you require additional information or have any queries in relation to this submission.

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