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Thank-you for the opportunity to submit to the Scientific Inquiry into Hydraulic Fracturing in the northern Territory. This is a significant undertaking across a enormous swath of Australia's land, and concerns me greatly.

I appreciate the enormous undertaking before you and note at the community session I attended in Darwin, and watching individual submissions online, the considerate and respectful manner in which you all regarded the participants.

As modern societies we are heavily dependent of fossil fuel industries, and there is much positive to be said for the economic and modern lifestyles based on this. However, we are increasingly being confronted with the smallness of the planet in coping with absorbing the negative effects of these modern societies based on fossil fuels. Extractive industries have a long legacy of environmental damage (much of which is non-mitigatable, or willfully just not 'mitigated' or restored), social disruption, human health impacts (Whitter et al., 2008), and accumulations of local activities to global impacts, such as climate change

It is my understanding that you will be receiving a range of submissions that are of great concern to me including: the broad scale lack of mapping of ground water tables and waterways, which is of paramount importance in the context of rain and weather cycles across the nT; the highly problematic nature of current regulatory environment assessments process; the impacts of other critical industries notably tourism and agriculture; the further disenfranchisement of Aboriginal peoples from their lands- I would argue that we are again treating the country as *terra nullis*; and critically, the contribution this will make to climate change and emissions targets – we at a crucial juncture the survivability of our planet is up to us, right now. As there are others more well versed in this evidence than I, below I will briefly present on some of the social science aspects that concern me.

As a background, I was born in Darwin in the 1970's and have lived outside the territory and Australia for just over a handful of years in several different countries. I have always been immensely proud of my top end heritage, of the unique landscapes, history and cultures, and it is an important part of my Australian identity. I make two notes here, I am a single Mum embarking on a HDR with CDU, whilst also working and having considerable other commitments. I haven't been able to do the larger submission that I originally envisioned, it is very stressful that the onus is on the communities to fight and have to prove that we don't want our amazing state turned into an industrial wasteland as has happened elsewhere. (Also please note my 'n' key isn't working properly.)

In attempting to gather evidence for this submission, I was struck by the extent of social science research gaps, notably of psychological, sociological and critical social work investigation, into shale gas fracking impacts. Preliminary research suggests that there is a broad range of social issues attendant with the industry, and that ‘fracking is fast becoming a civil and political rights issue’ (Short & Szolucha, 2017 p2). Public and community perceptions of fracking has received some interest, however, the value of these is variable for our purposes in assessing the validity and application of broad scale fracking in the nT.

7.6 Social Impacts

Morrone et al (2015), examined perception of fracking in the context of social cohesion and sense of community, and explored characteristics that might influence community function. They draw from literature that states that psychological sense of community, perceptions of belonging, and social cohesion, relational ties between community members where shared values are a critical component, are important markers of the social health of a community. The findings provide preliminary evidence that unconventional natural gas extraction may be fracturing more than just shale; it may also be fracturing communities. Fracking may exacerbate pre-existing tension in a community based on length of residence, sense of community, or perceptions of shared values. Morrone et al (2015) identified that a sense of community and social cohesion are sources of pride, as well as pride in where they live. The history and narrative of the nT is arguably a significant source of pride and identity for many residents, particularly those who have lived here for a long time. Furthermore, that resource exploitation hurts the community, notably the boom and bust cycle of a lot of industries..

Short and Szolucha’s (2017) research on social impacts of the fracking planning and exploration processes in Lancashire UK concluded that for the communities involved a form of ‘collective trauma’ was experienced. As with the territory populations, these communities became well versed with the literature of the negative impacts including truck traffic, industrialisation, water pollution, air quality, noise, and seismicity. Arguably, the nT experiences further exacerbating factors including extreme weather patterns, unmapped ecological environments, interactions with other key industries, the rights of small communities in remote areas not being acknowledged, to name but a few. Furthermore, this research highlights that peoples perceptions of risk is further intensified by implicit powerlessness in the processes, lack of trust in the economic benefits and being treated as ‘collateral damage’.

The role of place and psychosocial stress in understanding the potential health impacts of fracking was explored by Sangaramoorthy et al (2015) in Doddridge County, West Virginia, USA. They found participants reported deep distress over the transformation of the physical and natural environment. Along with

other studies of impacted communities in the Marcellus Shale region, it is suggested that ‘participants’ lived experiences of fracking contribute to a heightened sense of fragmented individual and collective identities and increasing loss of control over lives and personal property’ (p34). Also, that there is increasing mistrust and community stress resulting from perceived or actual, lack of governmental regulation and enforcement associated with fracking.

References

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