



SUMMARY OF DISCUSSIONS AT COMMUNITY FORUMS AND THE FINAL LIST OF ISSUES

3.1 Community forums

3.2 Key issues raised

3.3 Final list of issues

Chapter 3 Summary of discussions at community forums and the final list of issues

3.1 Community forums

The Issues Paper identified the issues that the Panel considered to be the main risks, or issues, arising from the development of an onshore unconventional shale gas industry in the Northern Territory. The Panel sought feedback from Territorians about those issues, and about any other concerns the community had about the hydraulic fracturing of onshore shale gas reservoirs, at a series of community information engagement sessions (community forums) (for a description of the community forum process see Chapter 2).

3.2 Key issues raised

Most of the issues listed in the Issues Paper were raised by the public during the course of the community forums. Some issues were, however, identified as key concerns by those present. These are summarised below in the order of their importance to the community.

3.2.1 Water

The primary and most consistently raised issue across all community forums was the potential impact of any onshore unconventional shale gas industry on water resources (surface water and groundwater) in the Northern Territory, both in respect of human use (including for cultural purposes) and dependent ecosystems:

- it was repeatedly stressed that much of the Northern Territory relies on groundwater for its water supplies, including for 'domestic' and commercial use. Therefore, any adverse impact on potable water was universally seen as unacceptable;
- potential causes of water contamination were constantly raised. These included aquifer contamination due to well failure caused by pipe or cement corrosion or seismic activity, spillage of hydraulic fracturing fluid, spillage of wastewater, and wastewater storage ponds overflowing given the extreme rainfall events common in the Northern Territory;
- the significant amount of water required for hydraulic fracturing and where this water would be sourced from was repeatedly mentioned. In this context, it was routinely suggested that water usage should be monitored and that a water licensing regime should be implemented to ensure adequate water quantity and quality for multiple uses;
- many participants considered that there was insufficient baseline data to properly assess the long-term impacts on water of horizontal drilling and hydraulic fracturing for onshore shale gas; and
- the importance of water with respect to a range of traditional cultural practices among Aboriginal communities was emphasised.

3.2.2 Regulatory reform

The adequacy of the regulatory framework governing any onshore unconventional shale gas industry in the Northern Territory was another key concern for participants at the community forums. The complaints consisted of:

- an absence of faith in the current Territory regulatory framework to adequately, or in some instances, at all, protect the environment from the risks inherent in any onshore unconventional shale gas industry;
- distrust in the Government to make decisions in the best interests of the community;
- a perception that the Government and the petroleum industry were too closely aligned and that the petroleum industry had the ability to distort executive decision-making;
- a demand for higher penalties for environmental damage, for the public reporting of incidents, for the imposition of adequate rehabilitation bonds, for the independent baseline testing of water and air quality, and for any onshore unconventional shale gas development to be subject to the *Water Act 1992* (NT) (**Water Act**); and

- a need for laws to be enforced by a well resourced regulator that is wholly independent from the Government and the petroleum industry. Suggestions for resourcing the regulator included a levy on the gas industry. Ongoing legacy mine issues were frequently cited as an example of the inadequacy of the regulator to prevent, penalise, or remediate environmental damage caused by the petroleum activity.

3.2.3 Land

The concerns expressed during the community forums in relation to land were:

- a loss of habitat for wildlife - there was substantial community concern that the vegetation clearing required for shale gas development would have a significant impact on biodiversity. A related and frequently expressed concern was the very limited knowledge of the Northern Territory's biodiversity assets, particularly for invertebrates;
- the spread of weeds and feral and exotic pests - weeds and feral and exotic pests can have significant impacts on both the conservation and production values of landscapes, and there was concern from multiple sectors that shale gas development would lead to the spread of weeds and feral and exotic pests, including into areas where they were currently not present;
- the contamination of land - the deleterious impact of land contamination on ecosystems and livestock due to spillages was often raised;
- the impediment of stock movement caused by a network of roads, pipelines, fences and well pads; and
- a loss of landscape amenity values - there was a widespread and deeply-held concern within Northern Territory communities that shale gas development would lead to the industrialisation of what are currently iconic outback landscapes. The concern was not just about amenity values for residents, but also about the impact on the Northern Territory tourism industry due to the loss of an outback wilderness experience, a primary visitor drawcard.

3.2.4 Air

The contribution of any onshore unconventional shale gas industry to climate change was a major issue for a significant number of participants. It was noted that shale gas is a fossil fuel and that its extraction, production and use, cause greenhouse gas emissions (carbon dioxide and methane) that contribute towards climate change.

The list of community concerns based on comments raised during the community forums is as follows:

- in respect of methane emissions, that:
 - Australia has limited or no measurements of methane levels at gas production sites; and
 - the Australian Government estimates for methane emissions are much lower than those reported in the literature;
- in respect of greenhouse gas emissions and downstream use, that:
 - there is an absence of baseline data and that the ongoing monitoring of greenhouse gas emissions is difficult;
 - life cycle greenhouse gas emissions for both upstream and downstream stages must be evaluated; and
 - at elevated methane emissions, life cycle greenhouse gas emissions for gas can be similar to greenhouse gas emissions for coal;

- in respect of emission monitoring, that:
 - there is a need for baseline measurements;
 - there is a need for independent monitoring of emissions; and
 - there are good examples of greenhouse gas regulations that should be examined;
- in respect of global climate change, that:
 - it is necessary to consider Australian greenhouse gas emissions; and
 - it is necessary to consider implications of these greenhouse gas emissions for additional gas production and use.

Finally, whether shale gas was a 'cleaner' source of energy was questioned. Numerous participants stated that the Northern Territory should be focussing on developing renewable energy resources and not extracting additional fossil fuels.



Katherine community forum, March 2017.

3.2.5 Aboriginal people and their culture

The potential impact of any onshore unconventional shale gas development on Aboriginal people and their culture was raised by traditional owners, members of Aboriginal communities, and by many non-Aboriginal people. Most were worried that any development would irreversibly disturb and damage country for future generations:

- there was a significant amount of concern about the detrimental effect that any onshore shale gas industry would have on songlines, sacred sites, and cultural landscapes. The Panel heard that the process of horizontal drilling was particularly troubling because sacred sites extend beneath the surface of the earth and the process of horizontal drilling in multiple directions underneath a sacred site could irrevocably damage that site. As one participant said, *"we need to protect the roots of the totem also"*;
- there was a widespread view among Aboriginal and non-Aboriginal people that most petroleum industries did not make a genuine effort to engage appropriately with, or to properly inform, traditional Aboriginal owners of the actual impact of that activity prior to seeking consent for the activity; and
- there was concern that traditional land use by Aboriginal people (camping, hunting, fishing and the collection of bush tucker) would be restricted.

3.2.6 Social impacts

The most frequently raised potential adverse social impacts that an onshore shale gas industry might have on local communities were that:

- a rapid increase in population associated with the development of any industry could lead to increased pressure on health services, schools, infrastructure and accommodation;
- the development of the industry could result in conflict within the community between those who were in favour of the industry and those who were opposed to it, and moreover, between those who stood to gain from the industry and those who would miss out;
- an influx of fly-in, fly-out (**FIFO**) workers could have a negative effect on the social fabric of the community, especially in circumstances where FIFO workers were employed in preference to locals; and
- a 'cash splash' could result in increased alcohol and drug abuse, and therefore, increased crime.

3.2.7 Public health

The eight key issues raised in community forums relating to public health impacts associated with unconventional gas extraction can be summarised as:

- the contamination of water used for domestic consumption and stock watering by chemicals used in hydraulic fracturing fluids, or in 'flowback' and 'produced water' (see Chapter 5) that is recovered from wells after hydraulic fracturing has occurred and during the extraction phase of the gas deposits;
- the release of fugitive emissions, including volatile organic compounds and airborne dusts from onshore shale gas extraction activities, that could have an impact on respiratory and related health effects;
- the air contamination caused by dust generated by increased land clearing, earthworks, and traffic, particularly if that dust has been contaminated by chemical spillage or wastewater;
- the potential additional impacts on climate change resulting from fugitive methane emissions and from the more generalised use of shale gas as a source of energy generation and other industrial activities;
- an increased risk of spills of chemicals along transport routes as a result of the greatly increased number of transport movements;
- an increased risk of road trauma associated with the construction of wellheads, the transport of chemicals and other materials to well sites, and the construction activities associated with pipeline development;
- the impacts on mental health and wellbeing associated with changes in the social structure of communities, including the stress relating to a 'boom and bust' economic climate and the transient nature of workforce development (that is, FIFO work practices); and
- the impacts on mental health and wellbeing caused by the industrialisation of the landscape that would diminish the amenity of the land.

3.2.8 Land access

Access to land for the purposes of exploration and extraction of shale gas was a significant issue, particularly for Aboriginal people and pastoralists. The concerns raised included that:

- pastoral lessees and Native Title holders did not have a right to refuse access to their property for petroleum activities, which was a matter of considerable anxiety;
- while it was noted that traditional Aboriginal owners of land subject to the *Aboriginal Land Rights (Northern Territory) Act 1976* (Cth) (**Land Rights Act**) have the ability to refuse access to their land at the exploration stage, there was no cognate right of veto at the production stage;
- there was a power imbalance between traditional Aboriginal owners and landholders, on the one hand, and the petroleum industry, on the other, particularly when it came to negotiating land access arrangements; and
- there should be restrictions on access to areas of particular environmental, cultural, or agricultural significance ('no go zones').

3.2.9 Economic impacts

The principal matters that were discussed during the community forums concerning the economic impacts of any onshore shale gas development were that:

- there was a significant amount of scepticism expressed about the true value of any economic benefit created by the development, especially in terms of employment, public revenue generation, and royalties;
- there was a strong belief that those who bore the risks of the development would not receive the benefits. In this regard, many members of the public expressed a desire for a 'Royalties for Regions' scheme and/or the implementation a Territory gas reservation policy;
- many participants considered that investing in onshore unconventional shale gas, rather than in renewable energy, would result in an opportunity cost to the community and to the Government, and that the Government should not be "*investing in a declining industry*";
- the petroleum industry might have an adverse impact on other industries such as tourism, pastoralism, horticulture, and agriculture, especially on the clean and green image of the Northern Territory;
- the rehabilitation and remediation costs of any air, land and water pollution and degradation would fall on the public, particularly if the relevant gas operator had gone into liquidation; and
- the public did not believe that the development of any onshore shale gas industry in the Northern Territory would alleviate the purported 'gas crisis' facing some parts of Australia. It was considered that Australia presently had sufficient gas reserves, but that these had been improperly managed.

3.3 Final list of issues

As a result of the feedback received during the community consultation process, the list of issues contained in the Issues Paper was revised to take into account the additional risks raised by the public but not included in that document. The final list of issues can be found at Appendix 2.