

GYMPIE WATER, AIR & SOIL PROTECTION GROUP

SUBMISSION TO SENATE INQUIRY ON THE IMPACTS OF COAL SEAM GAS (CSG) MINING ON THE MANAGEMENT OF THE MURRAY-DARLING BASIN

**To: The Committee Secretary
Senate Standing Committees on Rural Affairs and Transport
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Introduction

The Gympie W.A.S.P. Group is a non-political community-based group concerned about the protection of Australian water, air and soil from the adverse and unsustainable impacts of the mining and gas industries.

Gympie W.A.S.P. Group sprang into action when the Gympie Regional Council proposed in its “Economic Development Strategy: Vision and Implementation Plan” for Gympie to take advantage of the opportunities of coal seam gas in the Surat Basin, considering the rapid expansion of the gas industry in Queensland as a major local economic opportunity. (Details of this Plan can be read at <http://www.gympie.qld.gov.au/loadframe.asp?PageID=18&ID=824&Nav=1>).

Given that there is an approved gas pipeline extending from Gatton to Gympie, and the Gympie Regional Council plans to extend the reticulation of natural gas in the community (see the Gympie Region Community Plan, <http://www.gympie.qld.gov.au/loadframe.asp?PageID=18&ID=824&Nav=1>) our group set out to research the impacts of coal seam gas so we could understand and inform the community of the impacts of CSG mining on valuable water, prime agricultural land, and clean air. Members of our group have visited the gas-fields at Tara to witness the social and environmental impacts of the gas industry on the human communities there. Other members of our group have moved to the Gympie area to escape the impacts of CSG mining on their food-producing farm near Dalby.

This submission will outline our concerns about the social and environmental impacts of coal seam gas mining on:

- the sustainability of water aquifers and river catchments
- the sustainability of prime agricultural land for growing food
- the property rights and values of landholders
- the health impacts on human communities

The sustainability of water aquifers and river catchments

The Murray-Darling river system has suffered massive damage, described in Water Engineer Steve Posselt's book, [Cry Me A River](#) (Ebono Institute, 2009). The Murray-Darling basin needs significant, ongoing large-scale restoration, not further damage caused by the burgeoning gas industry. Although much of the catchment is in Queensland, and therefore at the mercy of the management of the Queensland state government, it is a vital concern for the rest of Australia. There is a current and recent proposal by the Queensland government to release water "produced" by coal seam gas mining directly into waterways. The Queensland state Department of Environment and Resource Management has released a consultation draft of a CSG Recycled Water Management Plan:

http://www.derm.qld.gov.au/environmental_management/coal-seam-gas/pdf/csg-recycled-wmp.pdf

The Mayor of Chinchilla has already welcomed the plan to release treated, recycled water into the Chinchilla Weir, which supplies the Chinchilla community as well as directly affects the Murray-Darling basin through the Condamine River. Such a plan cannot guarantee water health and safety or ensure the environmental protection of such a significant river system as the Murray-Darling basin.

On the Western Downs of Queensland, where CSG mining is expanding at an alarming rate, the impacts to underground aquifers have not been properly assessed. Farmers in the area have reported that bores have been affected, with significantly reduced levels of water available since CSG mining. These reports were broadcast on the Four Corners program in February this year:

<http://www.abc.net.au/4corners/content/2011/s3141787.htm>

Members of our group have met landholders and farmers in the Western Downs who have reported their dams turning black after CSG drilling a few hundred metres from their properties. Other residents in the area report that local contractors are being hired to empty water from toxic settling ponds into nearby waterways. This has been occurring without proper monitoring and before regulations or approvals are in place.

We were alarmed at the establishment of the 'Clean Water Alliance' (CWA) at the Brisbane CSG convention on May 30 this year, when several multi-national gas companies set aside commercial rivalry to unite and establish a "clean water" reputation. CWA representative David Stevens has made the following public claim: "Given how widespread our industry is going to be, with tens of thousands of gas wells reaching deep into the Artesian Basin, we can see that in the future there are vast profits to be made by selling clean water. People can't live without gas nor can they live without water and the Clean Water Alliance will be there when crystal clear water is needed and can't just be pumped from the ground like in the past." The CWA promised to support local communities by selling delivered water in quantities ranging from personal (600ml) through to bulk (50,000 + litres) at "reasonable" prices. (Source: Central Queensland News, 20 June 2011, <http://www.cqnews.com.au/story/2011/06/20/gas-giants-unite-for-clean-water/>). This is completely unethical, both environmentally and socially, for gas mining companies to profit from destroying valuable clean water from aquifers and then selling farmers treated 'produced' water from the extraction of CSG.

The chemicals used in hydraulic fracturing, or "fracking", have not been properly assessed, and these chemicals can poison valuable water for human communities and ecosystems (Report by the National Toxics Network, April 2011, <http://ntn.org.au/wp-content/uploads/2011/04/NTN-Fracking-Briefing-Paper-April-2011.pdf>). The Queensland government is downplaying reports of carcinogenic "B-TEX" chemicals found in bores near Dalby (<http://www.abc.net.au/news/2011-08-28/carginogens-found-in-coal-seam-gas-project/2858960>). Several other reports of these chemicals have been found in areas close to CSG mining operations. There needs to be a moratorium on the use of all "fracking" chemicals until there is a proper study undertaken of the risks to aquifers, river catchment environments, and human health. In both Queensland and New South Wales, CSG mining is currently exempt from State

Water Acts. The CSG industry is self-regulated, and the Queensland government relies on information supplied by the industry itself. This style of environmental regulation is ineffective and completely inadequate to enforce environmental responsibility for the protection of aquifers and river catchments.

The sustainability of prime agricultural land for food production

Farmers from our group and around this country know that their most important asset is their soil, closely followed by water. CSG mining puts both of these valuable assets at risk of permanent damage from saline water and toxic chemicals released from the coal seam. Soil becomes useless for agriculture when contacted by saline water. Large parts of farming properties will be put out of production by CSG infrastructure by the rapidly expanding gas mining industry.

Farm water is at risk of contamination from toxic chemicals, regardless of whether or not there is a gas well on the property. This may be from the chemicals used in hydraulic fracturing, from the chemicals naturally present in coal seams, or even the gas itself. Some of these substances accumulate in the food chain. Whether farmers produce grain or livestock, the quality of their food product is put at risk. Groundwater supplies may be diminished by CSG mining. Aquifers adjacent to coal seams, and shallower, alluvial groundwater connected to coal seams may be drawn down as the coal seam is depressurized to allow the gas to flow. Reports by farmers of groundwater supplies diminishing have been broadcast on the Four Corners program earlier this year (<http://www.abc.net.au/4corners/content/2011/s3141787.htm>).

The day-to-day property management of farms has been heavily impacted by CSG mining. Some of the land is taken out of production, as each gas well requires a 1 hectare pad plus an all weather access road and pipes. Gas mining on farm property may also include a compressor, a saline water storage or toxic evaporation pond and other infrastructure with farmers often having little or no say on where these are placed. Precision cropping and controlled traffic farming systems cannot co-exist with CSG mining developments.

The property rights and values of landholders

Unfortunately, the CSG industry is expanding rapidly across New South Wales and Queensland into areas of farmland and human communities before their impact has been properly realised. The impacts of CSG will be felt in both fertile farming areas and non fertile areas (eg. grazing land).

Because the industry is not adequately regulated or its impacts assessed and monitored, landholders are often unaware of the impacts to their properties before it's too late. Landholders are not informed of the plans for future expansion by the gas mining companies. Instead, property owners are issued with a letter informing them that the gas company will come within 2 weeks to drill a test bore, how the mining company owns the rights to any materials below the soil, and that the landholder can seek legal advice if they wish.

If the landholder cannot afford an independent lawyer, the owner is offered advice from a lawyer who is working for the gas company. This legal advice is not independent, and does not inform the property owner of expansion plans or protect the landholder's interests. Even if there are no plans for mining expansion in the area at the time, company plans can change. Initial compensation agreements may seem fair and reasonable but may be changed without the landholder's knowledge or consent and with no discussion about increased payments.

Any agreement signed could also bind all future owners of the property. The above use of stand-over methods and the lack of transparency in the industry is alarming, and should not be allowed to continue.

Clearly, the CSG industry is expanding without ethical or adequate protection of landholders' property rights.

As a result of CSG drilling and expansion, property values are impacted significantly. There are very few buyers interested in purchasing property in, or close to a gas field. CSG drilling rigs operate around the clock. Scores of heavy trucks come and go each day carrying equipment and supplies and carting away toxic "flow back" water. Large cement pads are laid and a security fence installed at each well-head. Pumps and lights can operate continuously. Pipelines are laid connecting each well-head to a main gas pipeline which flows to large and noisy compressor stations. Unwanted hydrocarbons are separated from the gas and then vented into the atmosphere. Many hydrocarbons are known carcinogens. Human health and safety hazards are combined with stress to both stock and their owners from these impacts.

Banks are already refusing business loans to owners of properties near gas fields because of falling farm values. This can directly impact landholders who are also business owners, and can make their business unviable or cause them to lose control of their business. Often landholders are forced to sell their property against their wishes due to their business failing from the impacts of coal seam gas. Contracts of sale to the mining company have "silence" clauses to prevent the seller informing other landholders in the community of the impacts of CSG on their business or property. Landholders who have been forced to sell by the impacts of CSG mining cannot speak about the impacts to their property without breaching the conditions of sale contracts, therefore we are unable to supply personal details for the purposes of this submission.

The health impacts on human communities

The CSG industry is actively encouraged by governments with inadequate regard for community welfare or the health of the environment. CSG mining is expanding into areas which are dangerously close to human communities when the health impacts on human communities have not been properly studied or regulated.

The chemicals used in "fracking" for CSG extraction are not safe in water supplies, air or soil:

http://www.appea.com.au/images/stories/mb_files/APPEA_fracking_chemicals.pdf

Many "fracking" chemicals and compounds released by CSG mining can affect human health when they are consumed from contaminated water or inhaled. Many of these chemicals are known to be carcinogens, and others are toxic to the human nervous system, immune system, endocrine system, and respiratory system (Report by the National Toxics Network, April 2011, <http://ntn.org.au/wp-content/uploads/2011/04/NTN-Fracking-Briefing-Paper-April-2011.pdf>). Hydrocarbons from the gas are vented into the atmosphere, and many of these are known carcinogens.

Members of the Gympie W.A.S.P. Group have travelled to Tara to witness firsthand the impacts of CSG mining on residential communities. We met people whose dams have turned black since CSG mining has expanded in the area only a few hundred meters from homes and farms. The dams were used to water stock and orchards. We also met people who have been sick after "produced water" from gas mining was used to spray dirt roads in the area. Children who biked to schools on these roads experienced illness including unexplained nosebleeds, vomiting and rashes afterwards.

Gas fields present significant fire and explosion hazards. More than 50% of wells tested in Queensland leak methane. Many landholders have reported instances of methane in their stock watering bores and even household taps. In a country which is already affected by bushfire hazards, CSG mining increases

the risk of bushfires raging out of control, threatening human communities. Bores which have been depleted from CSG extraction cannot be used for fighting fires. The CSG industry must not be allowed to continue affecting underground aquifers for this reason also.

Summary and Conclusion

Clearly, the social and environmental impacts of coal seam gas mining are not sustainable for water aquifers, river catchments, prime food-producing land, landholders' property rights and values, and the health of human communities. The CSG industry cannot be allowed to expand close to human communities, protected environments, or fertile food-producing land without devastating impacts to these valuable areas. Careful and detailed research is needed urgently, to assess the impacts of CSG mining to some of Australia's most valuable and vulnerable assets.

In conclusion, we ask for a moratorium on all further CSG mining operations in Australia until all the impacts are properly assessed and adequately regulated and monitored.