

## Submission to Inquiry into management of the Murray Darling Basin – impact of mining coal seam gas

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I wish to comment on environmental and social impacts of coal seam gas exploration and mining applications in the Namoi Basin and the Liverpool Plains area of NSW, particularly in relation to the following aspects of the Inquiry: *The economic, social and environmental impacts of mining coal seam gas on:*

- the sustainability of water aquifers and future water licensing arrangements;
- the property rights and values of landholders;
- the sustainability of prime agricultural land and Australia's food task;

I write as a resident at the edge of the Murray Darling Basin. I grew up on a small mixed farm in the Riverina district, learnt to swim in the Murrumbidgee River while at Hay War Memorial High School, and graduated with an Honours degree in Science from Sydney University. Environmental matters and conservation have been major concerns all my life, pursued as a Life Member of the National Parks Association of NSW, as a member of Birds Australia and of the Regent Honeyeater Recovery Team and as a participant in many other environmental networks.

This background informs my deep concerns about the Murray Darling Basin, the past over-allocation of water and the absolute necessity to reduce this to sustainable levels as suggested by the MDB Authority. This concern is now compounded by the recently proposed rapid expansion of the Coal Seam Gas industry in NSW, starting with the huge Eastern Star Gas project proposing to go to full production in the Pilliga forests near Narrabri NSW.

I believe that coal seam gas extraction represents a serious threat of irreversible damage to the Murray-Darling Basin, and I call on the Committee to recommend that coal seam gas extraction should be prohibited on prime farmland, bushland and anywhere associated with important aquifers, that coal seam gas extraction should be banned in the Murray-Darling Basin, and that landholders should have the right to veto coal seam gas extraction or exploration on their land.

The Pilliga is the largest temperate woodland left in eastern Australia, and one of the Murray-Darling Basin's most important natural assets. It is 'a million wild acres', some 500,000 hectares in size, and it has recognised national and international conservation significance. It is a significant recharge area on the edge of the Murray Darling Basin.

Little is known about the location and connectivity of the aquifer components underlying the Pilliga forest areas. The Namoi Water Study for the Liverpool Plains area is not looking at the Pilliga area, despite its being traversed by the Namoi River and tributaries. Perforating it with hundreds of coal seam gas extraction boreholes without comprehensive detailed hydrological and geomorphological studies into the underlying aquifer systems poses an absolutely unacceptable risk to the Great Artesian Basin and the whole Murray-Darling Basin in NSW.

The huge scale of the coal seam gas (CSG) industry proposed across NSW and Queensland means that the cumulative impacts on rural landscapes, water resources, communities and the environment will be severe. Damage to the environment, biodiversity and productivity of the land is likely to be irreversible, contrary to claims by the CSG industry.

In the Namoi Catchment in NSW, the coal seam gas industry is poised to impact not only on the best farmland but also the best high conservation value bushland, and it looks set to simultaneously degrade both our productive base and our ecological base.

Commonwealth and NSW legislation governing assessment and approval processes demonstrably lacks capacity to consider fully and appropriately these huge developments in a relatively new industry, which is proceeding on old exploration licenses issued decades ago without any effective environmental assessment or regulation, and with little monitoring of compliance.

Examination and analysis of current coal seam gas exploration and pilot production installations in the Pilliga Forest, part of the Murray-Darling Basin, has identified the following serious matters which threaten the Basin:

- Saline water spillage from pilot wells leading to tree deaths, salt scalds and contaminated soils.
- Overflow of drill ponds leading to contamination of creeks.
- Potential de-watering and cross-contamination of aquifers, including the Great Artesian Basin.
- Discharge of treated water changing the ecology of local creek systems and reducing water quality.
- Use of large volumes of water for drilling and fracking, competing for scarce surface and underground water resources.
- Construction of major toxic water storage impoundments with associated environmental impacts from leaching or overflow in extreme rainfall
- Toxic water storages left open to wildlife, leading to animal deaths.
- Clearing and fragmentation of high conservation value vegetation, leading to a degraded series of forest remnants which have lost integrity.
- Destruction of large areas of habitat for threatened species, leading to threat of further decline and extinction.
- Dramatically increased fire risk in very fire-prone vegetation already subject to ignition from lightning strikes in severe storms.
- Threats to important groundwater dependent ecosystems and wetlands
- Pipelines degrading important agricultural lands and risking high conservation value areas such as Travelling Stock Routes, which provide connectivity that is vital to allowing flora and fauna to adapt to accelerating climate change and loss of habitat.

If allowed to continue, the coal seam gas industry will:

- Transform rural landscapes into industrial zones
- Forever change the socio-economic profile of communities, with a fly-in/fly-out workforce that does not participate in the community.
- Undermine regional communities who depend on cohesion and resilience and the water resources of the Murray Darling Basin.
- Represent a serious threat to water resources, including the Great Artesian Basin
- Result in farmers losing control of their land and agricultural production
- Provide property rights to miners rather than the custodians of the land
- Undermine the rights and interests of Traditional Owners
- Represent a health risk due to methane leakage and aquifer contamination.

**I call on the Senate Rural Affairs and Transport References Committee to recommend:**

1. that coal seam gas extraction should be prohibited on prime farmland, bushland and anywhere associated with important aquifers,
2. that coal seam gas extraction should be banned in the Murray-Darling Basin as an unacceptable threat to its food production capacity.
3. that landholders should have the right to veto coal seam gas extraction or exploration on their land.