

## **Submission To The Committee**

### **The Senate Inquiry into the Environmental Protection Biodiversity Conservation Amendment Bill 2012[Provisions]**

Dear Sirs/ Mesdames

My points are as follows:

#### **Without water there is no life!**

To sustain our lives we all require *potable water* for drinking, and for the watering of animals and a lower quality [though not polluted] for gardens and crops. If this seems as if I am stating the obvious – it has been abundantly clear to me that politicians and the Coal Seam Gas [CSG] industry appear to have lost sight of this crucial point.

For the CSG industry spokespersons, the politicians and the various government departmental staff to treat us, Australian residents, as if we are: a) imbeciles and b) expendable - is absolutely heinous and tantamount to genocide!

This country has had enough problems over its history with severe and on-going droughts. The Murray-Darling River system is already very fragile, and has been the subject of much debate as to how best to manage it. *Who, in their right minds would want to jeopardise this vulnerable natural resource?*

I wonder - who could have failed to be deeply moved by the interview, on Four Corners on ABC on Monday 1<sup>st</sup> April 2013, of the South Queensland farmer, George Bender and his wife, whose farming property adjoins the once renowned Condamine River?

Five generations of his family have farmed there. He said the QCG drew down thousands of litres of water daily ["as much as they want" according to Brian Monk, another local resident] yet the Bender family will lose their own bore water within 3 years! Where's the so-called 'Aussie spirit of fairness' in that, may I ask?

On the ABC programme, the now *very murky-looking* Condamine River was busily bubbling away with methane gas – which George said that QCG told him was "natural". George said, "They should've told us the truth in the first place!" Pam, his wife said, "What's going to left? They've taken everything!"

**I have attached below an article that I found during my research a couple of weeks ago. It was written by Dr Philip Pells, a Civil Engineer who has spent four decades in geotechnical and groundwater engineering.**

CSG extraction is a relatively new industry and a form of mining that covers very large areas very quickly. It has the potential to adversely affect groundwater systems over large parts of this state.

In order to extract coal seam gas, one first has to depressurise the groundwater in the coal seams and move it to the surface.

So the coal seams are, in effect, groundwater voids – the same as coalmines. But we are no longer talking about relatively localised effects. We are talking huge areas.

The enormous expansion of CSG mining has occurred in a poorly controlled manner over a very short period.

Large areas of our state will be affected by a relatively new industry where the science behind these impacts and the key hydro-geological parameters are poorly understood.

We have very little empirical information about long-term impacts from CSG operations because the industry is so young.

What we do know is that the impacts will develop over many years – and that, if the impacts are substantial, they will be almost impossible to reverse.

The current NSW government listing of exploration licences for CSG totals 189,567 square kilometres, almost 19million hectares.

To this we must add 24,000 hectares in production leases for CSG and all the coalmining areas.

Together this comprises much of our populated area, our forested wilderness, our wetlands and rivers, and our productive agricultural land.

What we do with our water matters.

Rainfall is our primary water source and is subject to huge swings.

In times of plenty, our rivers flow, our dams fill, but most importantly our groundwater systems replenish.

Huge quantities seep into the Great Artesian Basin from the recharge zone along the east coast, into the porous and fractured rocks in the Sydney-Gunnedah geological basin that extends from Sutton Forest to Narrabri, and also into the older rocks west of the divide.

Apart from feeding bores, groundwater sustains the baseflows of our creeks and rivers, and our wetland systems.

Diminish those groundwater systems and you create a tendrill effect of damage that extends from an individual vegetable farmer at Picton to a complete river system in the Yarramalong Valley, or at Gloucester.

### **CSG mining puts our groundwater under enormous pressure.**

It is simply a matter of physics, not of opinion, that this depressurisation from CSG mining will adversely affect the whole groundwater system, because like the apple that fell on Isaac Newton's head, groundwater is controlled by gravity and flows from zones of high elevation to zones of lower potential energy.

How long will it take for the changes to our groundwater to be substantial?

We don't know.

How extensive will they be?

We don't know.

One thing we do know, is encapsulated by Dr Richard Evans, Principal Hydrogeologist of Sinclair Knight Merz,

"There is no free lunch here – every litre of water you pump out of the ground reduces river flow by the same amount."

I don't believe as a society we should just let this process run helter skelter – a process whose consequences on our environment are not yet fully understood by scientists and engineers.

And we cannot rely on what is called "adaptive management", because if monitoring of CSG does show significant impacts on water systems, there is very little that can be done to reverse the process once the damage is done.

Wisdom demands that the whole process of CSG extraction in this state be urgently wound back.

That may allow the science to catch up with the present rapacious desire to exploit a resource.

To allow CSG mining to proceed before more is done to understand its impact is a reckless gamble with our future.

Perhaps we can learn from past lessons involving asbestos, tobacco, thalidomide and Agent Orange.

Damage may be done that cannot be repaired.

**I would have liked to attach to my submission a copy of the article below, however there is no option for this, and I was unable to copy and paste it my own document. May I respectfully suggest that the committee members obtain a copy and read it?**

**'The Australian Gas fields; the personal insights into the health impacts and limitations of regulation' - by Dr Geralyn McCarron MB BS FACGP, a GP, who works in Queensland.**

Yours faithfully

A Registered Nurse and a qualified Occupational Health Nurse for over 25 years.

4th April 2013

