Tuesday 26th July 2011

Inquiry: The management of the Murray-Darling Basin.

I am writing to you to express my concern regarding current Coal Seam Gas (CSG) mining legislation, regulations and practices that could potentially threaten the sustainable future of the Murray-Darling Basin in terms of:

Water

It is a well known fact that Australia is the driest inhabited continent on earth and that water is our most valuable resource. To highlight this point, the Australian Government National Water Commission states, "groundwater systems make up the vast majority of the water systems currently identified by jurisdictions as overallocated, overused, or both."[1] In addition:

> "The Australian Water Resources 2005 baseline study identified aquifers throughout the country where water entitlements and/or use exceeded sustainable yield or recharge. The study reported on groundwater stocks for its 51 selected catchments. It was estimated that in 2004-05 there was approximately 49,200 GL of groundwater recharge nationally. This was 17% of total runoff and recharge. However, of the nation's total water use, groundwater extractions comprised over 30% in 2004-05."[2]

Add to this the Council of Australian Governments (COAG) development of the National Climate Change Adaption Framework in 2006 in response to global warming which states:

> "Climate change presents significant additional challenges for managers of water resources in Australia. In a changing climate, droughts are expected to become more severe in the south and east of Australia. The potential for replenishment of groundwater is expected to continue to decline and water quality is also likely to be affected. Rainfall is likely to be concentrated more in extreme rainfall events affecting water availability (both surface and groundwater), water quality, the balance between environmental and consumptive demand and allocation, as well as the design and safety of dams. Improved knowledge is needed to assist water managers to understand the wide range of impacts climate change will have on surface and groundwater resources and the demand for water. Adaptation to changed water availability could require the sourcing of additional water supply and retrofitting water infrastructure, with the associated costs. It could also mean new ways of managing water."[3]

When reading The National Water Initiative (NWI) signed by COAG in 2004 – 2006 which is meant to be Australia's 'enduring blueprint for water reform' and look at our present day situation with regards to further disruption and depletion as well as the introduction of contamination of existing aquifers due to coal seam gas mining operations and practices, there are important issues that need addressing. In particular, the use of hydraulic fracturing (otherwise known as fracking/fraccing). The 'potential' risk associated with coal seam gas

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[1] http://www.nwc.gov.au/www/html/174-reform-progress.asp?intSiteID=1
[2] Ibid.
[3] http://www.coag.gov.au/coag_meeting_outcomes/2007-04-13/docs/national_climate_change_adaption_framework.pdf

mining practices including fracking/fraccing is actually 'real' and happening right now. Not only has Cougar Energy just been ordered to shut down its trial UCG plant near Kingaroy (July 2011) for contaminating groundwater supplies with cancer-causing chemicals including benzene, one only needs to refer to media reports including 'Undermined' by 60 minutes, 'The Gas Rush' by Four Corners and coverage by the 7pm Project. On an international level 'Gasland' has exposed the environmental devastation associated with coal seam gas mining practices in the USA (different gas: shale vs coal seam, yet 'fracking/fraccing' is the same method employed for extraction) as well as France, the United Kingdom and South Africa now officially banning hydraulic fracturing from coal seam gas mining practices. In fact, the Queensland Government Department of Infrastructure and Planning recognises the implications associated with coal seam gas mining practices by stating "it is possible that CSG water extraction may reduce groundwater levels within important aquifer systems surrounding to the coal seam beds, including aquifers within the Great Artesian Basin. It is uncertain how long this effect would exist."[4] Furthermore, Apex Energy admits groundwater impacts associated with coal seam gas mining practices to include "the impact on surrounding aquifers".[5]

Corporations are obliged by international law to commit to upholding human rights standards including the right to water which is linked "to a range of civil rights".[6] Hence, I am also concerned by the fact that the coal seam gas mining industry is mostly unregulated, with failed and inadequate risk assessments. Suggestive terms 'may', 'could', 'seem', 'potentially', etc., used by government officials and coal seam gas mining corporations are simply inadequate in terms of transparency and due diligence. To date, not one coal seam gas mining corporation is able to guarantee 100% that coal gas seam mining practices including fracking/fraccing do not and will not disrupt, deplete and contaminate underground and for that matter, aboveground water supplies.

Agriculture/Food Production

I am also concerned about the CSG industry in terms of putting the approximate 4% of Australia's most prestigious agricultural/cropping land at risk. Soil and air quality and inevitable disruption, depletion and contamination to underground and aboveground water supplies are just some of the issues that threaten the long term security of this country's food task.

Environment

The impacts associated with coal seam gas mining practices and infrastructure need to be examined and closely scrutinised, especially in the context of the following information:

- ✓ Australia has the highest number of threatened amphibians and reptiles in the IUCN's Red List of Threatened Species, the world's most authoritative status list of threatened plants and animals
- ✓ Australia has the second highest annual ranking of global threatened animal species, according to the World Conservation Union's (IUCN) Red List

[4] http://www.dip.qld.gov.au/resources/factsheet/lng/csg-aquifer-impacts.pdf
[5] http://www.apexenergy.com.au/csg/
[6] http://www.un.org/News/Press/docs/2010/ga10967.doc.htm

- ✓ 12,259 species are now threatened with extinction across the world, including 1,324 Australian species

- ✓ A large number of animal species are moving into the threatened category for the first time, primarily as a result of landclearing, the impact of weeds and pests and the loss of wetland habitat

- ✓ 1557 plants, animals and ecological communities - are now listed as threatened under Australia's Environment Protection and Biodiversity Conservation Act 1999. 115 plants and animals are already extinct

- ✓ Australia (1324) is second only to the United States (1911) for the total number of animals listed under all categories

- ✓ Australia is also ranked second in threatened categories only (critical, endangered and vulnerable)

- ✓ Australia has the highest number of threatened reptiles (38) and amphibians (35) of any country, according to the 2003 Red List

- ✓ Australia has 74 threatened fish species and is ranked third after Mexico (106) and China (91)

- ✓ More than 20 per cent of all of Australia's mammals are now threatened with extinction, according to WWF-Australia. Now the Redlist ranks the country as 6th highest for the number of threatened mammals

- ✓ Landclearing and its consequences, such as salinisation of rivers and landscapes, are the foremost threat to the majority of species on this list. For many species, the additional impact of climate change is now providing the final straw

- ✓ The impact is on the entire landscape. The fact that a large number of plants are now reaching threatened status means that animals relying on these for food and shelter are also directly affected

- ✓ According to the Federal Government's Terrestrial Biodiversity Audit, released in April 2003, one third of the world's extinct mammals were Australian.[7]

I do hope you will consider this information and I thank you for allowing me to put forward this submission.

Yours sincerely,

Susan Gourley

[7] http://www.wwf.org.au/news/n48/