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The Executive Officer,  
Economic Development & Infrastructure Committee,  
Parliament House,  
Spring Street,  
East Melbourne Vic 3002.

*correspondence #*  
*R57-12*



Dear Sir, **Greenfields Mineral Project Development in Victoria**

When considering cost and benefits of Greenfields Mineral Project Development in Victoria highest priority must be given to the impact mining, quarrying or coal seam gas extraction will have on Victoria's limited water resources. It is essential also that there is an enforceable regulatory authority and legislation in place to deal with inevitable breaches that occur with many mining projects resulting in damage to the environment and well-being of local communities.

#### **Climate change**

Increased temperatures due to climate change will lead to higher evaporation rates and will reduce water supply for agriculture and biodiversity thus demand for water will increase with warmer temperatures. The CSIRO believes surface water could decline by 35% to 50% in Victorian regions in the driest years. Variable climate, low rainfall and increasing population will present challenges for natural resource managers who will need also to consider the impact of coal-seam gas mining on groundwater. **1**

#### **Groundwater**

Groundwater accounts for approximately 10% of Victoria's total water use with discharges to surface water sustaining many aquatic systems during summer months. Groundwater is used in irrigation of crops, pastures and for stock and domestic purposes including human consumption especially important in Western Victoria where there is a lack of surface water.

Although groundwater use in the Central Highlands is relatively low it has great economic and environmental significance in the mineral springs complex in Daylesford and the Wandin, Kinglake and Flowerdale areas. Highland aquifers provide base flows to many Victorian streams particularly around highland fringes. Sale of groundwater generates millions of dollars in revenue per year. The replacement cost of groundwater will be immeasurable should the bores and aquifers become polluted. **2**

#### **Mining**

Farmers in Queensland are currently experiencing problems with coal seam gas mining on their property. CSG mining involves fracking, a controversial process in which fluid containing carcinogenic chemicals are pumped into a coal seam to crack the rocks and improve the flow of gas. In Queensland the presence of cancer causing chemicals known as BTEX (benzene, toluene, ethylbenzene and xylene) have been recorded in underground coal gasification and coal seam gas wells. **3**

Concern expressed to the Murray-darling Committee about the environmental impact on groundwater through CSG mining exploration and mining in New South Wales and Queensland. included:-

- contamination of aquifers through leaching wastewater
- changes in aquifer pressure and other damage or destruction of aquifers
- reduction of surface flows into interconnected systems
- intensive use of Great Artesian Basin water by CSG operations
- contamination of land **4**

### **Mining (continued)**

It was put to the Murray Darling Basin committee that the science and evidence around the impact of coal seam gas mining is not yet well known enough to gauge the long term effect on aquifers. The issue with coal seam gas is that it cannot be guaranteed that mining is not going to effect the interconnectivity between aquifers . For example when 350,000 megalitres of water is taken out of an aquifer in the Great Artesian Basin, there will be changes to water pressure. Santos has admitted in their Environment Investigation Submission (EIS) that they would de-pressurise one of the aquifers and it would take more than 150 years before it recovers. The Committee noted that Section 255A of the Act requires an independent scientific study to be undertaken on the impact of any new mining licences on flood plains that have underlying groundwater systems.

**“ The potential impact of CSG on both extraction volumes and health of groundwater systems is concerning. The mining industry must be placed with the same obligations as other water users in terms of sustainable extractions and care of the environment.”<sup>5</sup>**

### **Agriculture**

The total value of all primary production across the Mallee, Loddon, Goulburn and Ovens is in the vicinity of \$3.5 billion. <sup>6</sup>

In weighing up the costs and benefits of greenfield mineral exploration consideration of the impact on forests and agriculture, if mining is approved as a result of this inquiry, is essential. Countries around the world recognize that natural assets such as water security and food producing land will be the most valuable assets in coming decades. In this country arable land amounts to only 6% along the east coast of Australia , mainly the states of Queensland, New South Wales and Victoria, therefore it is imperative that what little arable land remains in Victoria is retained in Australian hands and is safeguarded for food and water security otherwise, as climate scientists predict , it will no longer be possible to grow sufficient food to meet the demands of the populace.

### **Forests**

Native forests have a substantial role in reducing greenhouse effect through sequestration of carbon from the atmosphere.thus mitigating the effects of climate change.

Magnificent River Red Gums growing in the Benwell, Guttrum and Gunbower State Forests in the Mid-Murray are used for nesting by significant fauna and must be retained..<sup>7</sup> Barmah, Koondrook- Pericoota and Benwell-Guttrum State Forests as well as native forests in East Gippsland, the Strezleckie Ranges and Central Highlands water catchment such as the Toollangi Mountain Ash forests must all be excluded from open cut mining, quarrying or coal seam gas mining.

Obtaining general community consent and ensuring that any development is in accordance with principles of sustainability is essential as the community increasingly expects better environmental management and safety and continues to push for greater environmental protection of priceless assets .

## Conclusion

The MDBA Committee recommends that the Commonwealth Government ensure that the mining industry is placed under the same obligations as other water users in the Murray Darling Basin by ensuring

- no mining activities are approved that impact on Basin water resources until such time that the impact of such activities is fully understood and able to be mitigated.
- relevant legislation/regulations are applied with specific focus on mining activities in the Basin as a matter of urgency to ensure that the long term health and productivity is protected. 8

**Recommendation 6** is thoroughly endorsed . We believe that no open cut mining, quarrying or coal seam gas mining is begun in Victoria before relevant regulation/legislation is applied to safeguard groundwater resources, farmland and the environment.

Mary Rimington  
Secretary  
MBCL

*M. Rimington* ..... 22-7-2011

## REFERENCES

1. Victorian Environment Assessment Council. River Red Gum Forests Investigation. Discussion Paper. October 2006.
2. Environment Protection Authority Policy Assessment; Protecting Groundwater in Victoria. State Environment Protection Policy (Groundwaters of Victoria.)
3. Murphy, Mathew. "Stepping on the gas in Qld" in the Age March 8 2011
4. Of Drought and Flooding Rain. Inquiry into the impact of the Guide to Murray-Darling Basin Plan. House of Representative Standing Committee on Rational Australia. 2011
5. MDBA Plan *ibid* p.95
6. VEAC *op.cit.* p.194
7. VEAC *ibid* p. 219
8. MDBA Recommendation 6. p.96.