

**Submission
No 907**

INQUIRY INTO COAL SEAM GAS

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NSW Parliamentary Committee investigation - impacts of Coal Seam Gas

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As residents within the Manning Valley (mid north coast of NSW) we are very concerned with local exploration for CSG and from a wider perspective we are alarmed at the rapid spread of this industry across Australia despite significant and largely unquantified risk to the environment and health of Australian citizens.

We are particularly concerned by the lack of a sound strategy or policy for the industry that is effectively guided by principles of ecologically sustainable development, the lack of community and local government consultation that has occurred, the lack of appropriate and transparent environmental assessment and poor regulation. One of us (Teresa James) has worked in the environmental field as a botanist and ecologist for many years and I recognise the disparity between assessment processes and regulation in CSG and other industries.

We acknowledge the recent decision by the NSW Government in extending the moratorium on issuing new exploration licences until December 2011 but this is of insufficient duration to adequately address the range of issues and problems that are now widely acknowledged. We strongly recommend that the moratorium is extended and the scope increased to include all new projects (exploration, production and extensions of existing projects) until the full range of impacts are known and best practice guidelines and planning are in place.

1. Environmental and health impacts of CSG activities

The Manning Valley and mid-north coast generally is rich in natural resources including significant areas of biodiversity and productive agricultural land. The natural assets of the region are identified in the Draft Mid North Coast Conservation Plan (DMNCCP) prepared by the Department of Environment, Climate Change and Water (2010). There are many conservation reserves, extensive water catchment areas, rivers and creeks, and flora and fauna corridors that contribute significantly to biodiversity conservation, essential ecosystem services and tourism. Despite these significant values, however, exploration licence (PEL 476) extends from Gloucester across to the coast (covering 139 land holdings) with active surveillance and selection of exploration sites underway. Many other areas also subject to exploration licences or drilling e.g. north coast of NSW and south of Sydney (water catchment area) similarly contain sensitive natural ecosystems.

Environmental impacts of particular concern include direct, indirect and cumulative effects on biodiversity and groundwater. These two natural assets are interrelated with many vegetation communities dependant on the groundwater including wetlands, riparian land and some forms of rainforest.

Environmental Assessment

The current level of environmental assessment required within the industry is highly deficient. With such an explosion in the industry, a high risk of significant impact and the number of contamination incidents that have been reported (e.g. in Queensland, the Hunter Valley and overseas) a full independent inquiry is warranted to establish and assess the short-term and longer-term physical, social, environmental and

economic impacts of CSG. There should be legislative changes to remove the adverse impacts and unacceptable risks with a move to transparency and best practice. Comprehensive base-line data and monitoring of impacts is required for adaptive management to be an effective mechanism.

Individual proposals should be subject to a comprehensive assessment and approval process under Part 4 of the EP & A Act and the Threatened Species Conservation Act (1995) and not the tokenistic assessment currently undertaken under Part 5 of the EP & A Act. The construction of exploration wells and access roads requires the clearing of vegetation and impacts adjoining areas through edge effects, and if extraction should proceed then these impacts are clearly increased. There is also a risk of soil contamination from chemicals and increased salinity levels which is already an issue on highly cleared landscapes. Most importantly indirect impacts through the alteration and contamination of groundwater have not been adequately assessed and are poorly known due to lack of research.

The assessment of these impacts (Review of Environmental Factors REF) is undertaken by the CSG companies and reviewed by the NSW Department of Primary Industries under Part 5 of the EPA Act. Such assessment is typically less comprehensive than under Parts 3 and 4 with development considered to be small-scale, generally comprising essential infrastructure works such as roads and water supply structures and most importantly the nature of impacts are well known with low risks. The CSG drill sites in contrast are often not small-scale (hundreds of wells are proposed in some regions), do not comprise essential infrastructure, impacts are poorly known or understood and there are significant risks. Assessment of impacts of CSG on biodiversity clearly requires a more thorough and accountable process. A REF prepared by Lucas Energy in 2008 for drilling under exploration licence PEL 285 (Gloucester region) exemplifies the poor level of assessment that is common within the industry. There was very limited documentation and assessment of impacts on biodiversity despite three of the wells (Craven 4 & 5 & Waukivory 2) being located on or in the vicinity of watercourses and native vegetation. Based on aerial photographs and a brief site visit the report states that the sites are located on cleared land and pasture and consequently there will be no impacts on biodiversity. No specific flora and fauna survey was undertaken despite the creek-lines and remnant vegetation yet it was claimed that no threatened flora and fauna were present. How would they know? No documentation of the vegetation was provided at all. This level of assessment would not be tolerated for any other development, particularly one of this significance.

We support initiatives to assess impacts on biodiversity, agricultural land, aquifers and hydrology generally (including groundwater). There should be an independent consent authority. There is nothing more divisive and inflammatory than a government department that is self-regulatory, fails to follow best practice consultation and assessment process. Monitoring with fines for environmental damage must be significantly increased and enforcement of consent conditions sufficiently rigorous to provide a strong deterrent to poor practices.

Improved Information Base and Guidelines

The compilation of existing information (global), identification of information gaps, new research, monitoring of existing sites and adaptive management are all urgently required. The identification and provision of information on all toxic chemicals used in CSG processes must be made available and reviewed independently prior to their use. Health risks from toxic chemicals and heavy metals in the soil, groundwater and creeks/ivers are poorly known and unacceptable.

The Manning Valley contains important water catchment areas and contains a large number of endangered ecological communities including rainforest, over-cleared vegetation types and threatened species including several that are known to be dependent on existing hydrological regimes. These assets and “sensitive” areas are protected under various legislation, catchment management plans etc. but CSG has the potential to significantly impact on them. There is currently inadequate assessment of biodiversity and hydrological issues, and our knowledge of threatened biota and the location of aquifers within the Manning Valley are poor and incomplete.

Where insufficient knowledge exists the precautionary principle should be adopted. We must learn from mistakes made elsewhere and be honest about the nature of the industry and impacts. The misleading advertising on television of recent weeks presenting CSG as a clean and environmentally friendly industry should be removed.

Bushfire risk

There is clearly a fire hazard from CSG wells and potential leaks along pipelines. Much of the east coast and ranges are well vegetated with extensive areas of reserves and state forests. The Manning catchment on the mid north coast is a good example. These areas are rated as having a high bushfire risk. Our property, for example, is contiguous with extensive NPWS reserves including Dingo Creek National Park and various state forests. My partner is a member of the local rural fire service. The combined risk from CSG and climate change comprises an unacceptable threat to the community and environment. The potential risks associated with major events such as earthquakes, although rare, do occur and should be also be considered.

Sustainable regions

The Manning catchment is an example of an area that has considerable potential to develop as a sustainable region. There are many conservation reserves, extensive water catchment areas, rivers and creek systems, flora and fauna corridors and good agricultural land that contribute significantly to biodiversity conservation, carbon capture, essential ecosystem services, agriculture and tourism. The future of Taree as a regional centre depends on the protection and enhancement of these natural assets. The Draft Mid North Coast Conservation Plan (DMNCCP) prepared by the Department of Environment, Climate Change and Water (2010) provides a framework for sustainable development within the region and identifies areas to be protected and those suitable for urban and industrial development. Areas to be protected include conservation reserves, endangered ecological communities, over-cleared vegetation types, threatened species, Koala habitat and riparian habitat and corridors. A similar framework is also provided in the Hunter-Central Rivers Catchment Action Plan (2007) that includes specific guidelines for mining and extractive industries within the catchment. The potential for CGS development within the region should be assessed within the context of these plans and be consistent with their principles and guidelines.

Greater certainty is required over future land uses within all regions. I support the development of strategic regional land-use plans but this process will take several years and in the meantime significant degradation may occur. Any exploration or extraction should be suspended until such time these plans become available.

2. Economic and social implications of CSG activities

Legal rights of property owners

We strongly believe that CSG (and other mining industries) should not have the right to enter and mine privately owned properties without the owner's permission. Many people, like us, have invested considerable time and money (including government grants) in improving the land and setting up sustainable practices both at home and in the broader community. To have this taken away or degraded in any way does not reflect an equitable society. The fragmentation of areas through piecemeal development (where some individuals sell out to the miners) is also a problem for those remaining (and the environment) and can cause great division within the community and poor health. The only solution to this is strategic planning where areas are identified through a sound process and bought up specifically by the industry. Individuals should not be expected to co-exist with CSG or any other intrusive industry or development.

Food security and agricultural activity; regional development

Food security will increasingly become a key issue in future years and part of the solution lies in the development of regional areas where food is grown, processed and sold locally. The loss or degradation of agricultural land, water supplies and biodiversity (in good condition) through inappropriate extraction of CSG (or other mining) will impact on the ability of regions to do this. The short-term gain from extractive industries cannot be allowed at the cost of a region's sustainability. The conversion of regional towns to mining towns is occurring widely in the Hunter Valley and on the Liverpool Plains. They become dependent on the mining industry and when the mines close they become ghost towns. Sustainability is a key word in current legislation, policies etc. but it needs to happen at a grass root level to provide long-term security for our people and the environment.

There is frequent reference to CSG avoiding "prime" agricultural land but in reality there is very limited areas identified as such although many areas e.g. Manning Valley are highly productive. We recommend that this definition is re-evaluated in the context of productivity values, water availability, carbon storage and future food security.

3. Role of CSG in meeting the future energy needs of NSW

Australia has an abundance of solar, wind, wave and other clean renewable energy sources -these words front the federal government clean energy future web-page. CSG is not a clean, renewable energy source and it is our belief that future investment in this industry should be limited. The current importance and focus on the industry, as reflected in its rapid spread and limited regulation, is not justified. The degradation of our environment and communities to merely provide export dollars is unacceptable. The potential for a sustainable future cannot be eroded for short-term gain.

4. Summary

The future role and development of the CSG industry requires objective assessment. It is not a clean and renewable energy source. It has the potential to erode long-term sustainability of our regions for short-term gain.

Any future for the industry must be based on sound strategy or policy that is effectively guided by principles of ecologically sustainable development. There should be legislative changes to remove the adverse impacts and unacceptable risks with a move to transparency and best practice.

Exploration licences should be restricted to where there is reasonable certainty of gas resources, impacts will be minimal and if consistent with relevant regional and catchment plans. We strongly recommend that the current moratorium is extended until these conditions are satisfied including the development of regional land-use plans.

Teresa James and Bryan Barber