

## Basin Sustainability Alliance

### Submission to the Senate Standing Committee on Rural Affairs and Transport Inquiry

#### Management of the Murray Darling Basin – impacts of coal seam gas

June 2011

The rapid escalation of the coal seam gas (CSG) industry is having a massive impact on regional Queensland. The Basin Sustainability Alliance was formed in early 2010 as a result of the increasing community concerns about the rapid expansion of the coal seam gas industry. Community felt the impacts on their businesses, the ground water systems and the surface environment were being ignored or very poorly managed by government and the CSG companies.

Our membership and our committee is an overarching group that links to a number of local farming and agribusiness enterprises and interest groups. BSA is committed to ensuring the sustainability of water resources, agricultural land and regional communities for future generations.

BSA has activity lobbied Government and CSG companies in order to make them aware of the issues that need addressing and has been prepared to work cooperatively to find a solution.

BSA has addressed numerous committees and public meeting in an attempt educate people about the possible impacts of CSG extraction and what needs to be done by government and the CSG industry to avoid long term environmental damage.

We have developed a blueprint entitled “Not at any Cost” to help communicate to industry and government our position on sustainable CSG operations. The blueprint (which is available at [www.notatanycost.com.au](http://www.notatanycost.com.au)) was developed because there was a need for BSA to clearly identify the key issues that need addressing. A copy of the blue print was personally given to the four major CSG companies operating in the Surat basin, APPEA and QRC. An offer was made for them to respond to the document which they all said they would do. Arrow has responded already and their response is on the BSA website. The blueprint forms the basis of our submission to this inquiry.

The developing CSG industry is going to be the biggest energy industry development to ever take place in Australia it could nearly double water extraction from the GAB, bury more kilometres of pipelines, introduce millions of tonnes of salt to the surface environment and build more new roads than any industry before and impact on more farming communities and agricultural land than has ever happened before.

With such a massive environmental and social foot print why aren't governments managing the industry under the precautionary principle? Following is our submission for your consideration.

Ian Hayllor, Chairman

Basin Sustainability Alliance

or visit [www.basinsustainabilityalliance.org](http://www.basinsustainabilityalliance.org) or [www.notatanycost.com.au](http://www.notatanycost.com.au)

## BASIN SUSTAINABILITY ALLIANCE SUBMISSION

### BSA's main concerns are as follows:

- Over exploitation of water in the Great Artesian Basin (GAB) and impacts on the sub artesian aquifers – water depletion and contamination.
- Land impacts – contamination, loss of productivity, loss of amenity and reduction in land value.
- Land access and compensation – unfair rights of entry and compensation, inadequate make good arrangements for groundwater impacts and uncertainty about the extent of future CSG developments.
- Social impacts – uncertainty, increased costs of living to sections of the community and increased demand on community resources such as roads and health services.

### The Principles behind our submission:

- Environmental sustainability of water and land resources is to be of the highest priority. Scientific studies must precede any development.
- More certainty and transparency is required (by all parties).
- Fair compensation must be offered to any and all affected landholders. CSG companies must be able to pay full compensation and have the capacity to fund make-good arrangements.
- Make-good arrangements must be enforceable, provide for future generations and for all affected parties. They must be transparent and fair for the benefit of the wider community as well as current individual landholders.
- A substantial bond (or some other form of environmental insurance) must be held by Government to ensure the capacity to pay for serious environmental impacts that may occur at any time and for as long as the impacts may endure.
- Landholders also want protection against unforeseen on-farm impacts. CSG Companies must carry insurance or have some other surety to be able to meet any such contingencies in future. We also demand public disclosure of bonds and insurance policies.
- Recognition of and a commitment by CSG companies to respect the landholder's tenure rights associated with the land. Whilst petroleum and gas tenures in Queensland give CSG companies the right to extract CSG, current landholders enjoy the right to utilise the surface resources of their land. CSG companies must avoid unreasonably interfering with a landholder carrying out their lawful business.

## Economic, social & environmental impacts of mining coal seam gas

### Water

Landholders and the many communities that rely on groundwater must not have their access to water compromised.

Cumulative impacts on groundwater aquifers must be understood on a local, regional and catchment basis to minimise the risk of over-exploitation of current water reserves. This must apply to both GAB and Sub-artesian aquifers. Farmers and communities are already facing severe cutbacks in water allocations because of previous Government reluctance to manage water resources sustainably. Current groundwater utilisation has exceeded recharge and as a result has been unsustainable. All groundwater systems are in deficit and therefore all CSG water extraction must be regulated and accounted for in the same way as it is for existing users.

Baseline monitoring of water quality and quantity is an absolute priority and must be implemented by the State Government immediately. Monitoring should be carried out by an independent accredited body and detailed reports provided to individual landholders. The development of groundwater models by the Queensland Water Commission is essential. Landholders must be regularly informed of the results of this modelling.

By understanding the water balance we expect to understand all water inputs, outputs and movements and long-term impacts of any change. This is so that future water security can be achieved. Our current understanding is that many of the aquifers are inter-connected as are the surface water resources. Further research must quantify transmissivity between aquifers and between aquifers and surface water. Individual aquifer assessments and modelling should be a pre-requisite to any activity which might adversely impact on the aquifer and where risks are apparent they should be assessed and appropriately addressed before activity commences.

'Make good' provisions must include making good any adverse impacts on water quantity and water quality whether the "trigger thresholds" have been reached or not and must compensate all affected parties, not just the bore owner (i.e. sharefarmer, lessees, neighbours etc.).

Make good obligations should apply to the water resources accessed by the wider community as well.

Subject to appropriate scientific research, purified CSG water must be re-injected into associated aquifers or substituted for existing groundwater use wherever possible. Managing and maintaining the local water balance is important because current users will rely on this water into the future.

Wherever possible, water must be beneficially used in the area of extraction and not piped kilometres away.

CSG Companies must continue to co-contribute to the science enabling the understanding of impacts of CSG activities on the water balance. The community must be kept fully informed of the outcomes of these water balance studies.

All CSG Companies must provide a Water Management Plan detailing the quantity and quality of water extracted and how it will be beneficially treated to prevent environmental harm. The industry should not progress until these plans are shown not to contain unacceptable risks.

## The property rights and values of landholders

CSG companies must commit to minimising adverse social impacts. Some of the issues of concern include the high costs of living in mining towns, competition for skilled labour, stretched government services (e.g. health and local councils) and increased demand on infrastructure (e.g. Warrego Highway). Social impacts must be properly assessed (at both the personal and community level) and any adverse social impacts must be adequately addressed and/or compensated. Gas field development in rural residential areas such as Tara must be managed with care and consideration and the residents treated with respect. Some areas should be “off limits” to CSG operations.

### Compensation

Compensation should be attractive to landholders. Landholders must be fully compensated for their time (including time taken to do the necessary research to be informed), for any loss in productivity, for any loss of amenity, for any reduction in land or business value and for any costs of legal representation. CSG companies must commit to adopting best management practices in all aspects of exploration and production activities as and when they become available or understood. The following points must also be taken into account:

Compensation should be for a term and be subject to review to allow for unforeseen impacts that may arise;

Compensation must make allowance to reflect the compulsory nature of the imposition ( i.e. allow a premium to reflect the compulsory nature of the acquisition and the social dislocation and upheaval it causes) ;

Compensation must account for interference;

CSG companies must compensate for their infrastructure’s impact on preventing landholders adopting innovation (new and more efficient agricultural practices).

### Loss of privacy and security

Once an agreement is negotiated, landholders must face a huge adjustment to the way they live. Many landholders feel that they have lost their privacy, lost control of their property and their lifestyle. While CSG companies are required to advise landholders if work is commencing on site, the landholder can have any number of workers coming and going from their property at all hours of the day and night. For example, some families whose children previously roamed freely around the property on horse/motorbike no longer feel comfortable or safe as they cannot be sure who is on their property and/or where vehicles or equipment are at any one time. Landholders are also having to adjust to disturbances such as traffic, lights, noise and dust.

### Impacts on Land Values

There is concern that uncertainty surrounding CSG activity is affecting property values. It is important to note that agreements made with CSG companies lie with the land - so future purchasers will be bound to any agreements made.

### **Loss of confidence to expand**

Due to uncertainty of what CSG development will occur on their properties in the future, many landholders across the Surat Basin have indicated a lack of confidence to develop and expand their property and/or operations. BSA fears that a lack of confidence to develop agricultural businesses will hurt Australia's food and fibre production.

### **Review of existing agreements**

Where current compensation agreements are considered by the landholder to be unfair, the Government must appoint an independent commissioner to allow review of these agreements. The following circumstances warrant such review:

- Landholders didn't have independent legal advice;
- Age, language, lack of understanding etc. can be shown to have been a factor warranting review;
- Older agreements, regardless of whether legal advice was obtained;
- Where older highly objectionable clauses were inserted (e.g. where these agreements have compromised all make-good obligations, all future rights, all material change rights etc);
- Where misleading or deceptive conduct led a landowner to error or mistaken impression without which they would not have entered into the agreement;
- Where reasonably unforeseeable consequences/interference to the landowner have manifested after the agreement; or
- Any other circumstances where justice reasonably requires.
- This review process should be enacted in the legislation and the right for review guaranteed.

## **Sustainability of prime agricultural land and Australia's food task**

### **Land impacts**

CSG operations must not result in any permanent land contamination and they must not have any serious impact on productivity. The following points also need to be addressed:

Any mining or CSG operation must not unreasonably interfere with normal farming and livestock operations.

All CSG Companies must provide a Land Impact Statement which details the total area of land in the gas fields, the quality of this land and how much land will be temporarily disturbed and how much will

be removed from productive agriculture for the life of the project. This information must be provided to all affected parties.

CSG infrastructure must not be located closer than 500 metres from residences, schools, or intensive livestock operations without specific landholder agreement. Allowances should be made to enable landholders to negotiate greater separation distances where topography or particular circumstances warrant it.

Well spacing and infrastructure must not be intensified without landholder agreement.

No CSG operations to be conducted on the Condamine Alluvium flood plain or any like susceptible area or aquifer until scientific studies and CSG technologies (directional drilling etc), can assure all stakeholders that there will be no adverse impacts on the aquifer or overland flow of the flood plains.

Developments must be planned area-wide and all stakeholders fully informed and allowed to have input.

Landscape function must be understood in order to protect the land from erosion and to avoid adverse impacts on native flora and fauna.

Subsidence risks must be clearly understood.

No land should be accessed while ever issues remain unresolved in the Land Court.

After CSG operations cease, land must be fully rehabilitated to a pre-CSG development standard to ensure full productivity.

### **Salinity**

Any salt derived from CSG activities must not have any detrimental impact on the environment.

Brine should be removed from the surface environment and preferably used for industrial purposes.

### **Drilling Standards**

Robust well construction standards must be developed, legislated and rigorously enforced. These standards need to clearly demonstrate the Government's determination that wells must not become a source of unintended inter-aquifer leakage or contamination. The development of these standards must have landholder input. The current standards for water bores can be used as a guide to developing the standards for drilling CSG bores.

### **Organic farming operations / Biosecurity**

Landholders' fear that their products and marketability could be compromised by CSG activity – costing them money and damaging their reputation and that of their industry. For example organic farmers risk losing their accreditation status if their properties are compromised. This has been the experience of primary producers in Canada (link to surface rights paper).

## **The social and economic benefits or otherwise for regional towns and the effective management of relationships between mining and other interests**

### **Legal costs and stress**

BSA believes it is critical that landholders seek their own independent legal advice when being approached by CSG companies. The CSG company access and compensation agreements are complex and require vast amounts of time, research and legal knowledge in order to traverse. The legislation currently requires the CSG companies to pay "accounting, legal or valuation costs reasonably incurred by the landholder to negotiate or prepare a Conduct and Compensation Agreement".

However, costs associated with resolving disputes may not be required to be covered by the CSG companies. BSA believes it is unfair that innocent landholders who did not have the option to say no to this industry may now be faced with unexpected legal costs. BSA has case studies of landholders feeling pressured and caught off-guard – signing documents without legal advice and now regretting their actions.

### **Conflicts of Interest**

BSA is very concerned that landowners have a lack access to professional services due to conflict of interests. Many solicitors, banks, land valuers and other consultants cannot provide services to landholders because they are already working for or representing CSG companies. This has caused great frustration with landholders who feel in some cases they cannot get an unbiased opinion on matters such as land value.

### **EIS process – time and disclosure**

Before projects commence, CSG companies are generally required to formally set Terms of Reference, and then in some cases they have to develop an Environmental Impact Assessment and/or obtain an Environmental Authority. The Environmental Impact Statements (EIS) and Environmental Authorities (EA), are then made available for public comment. BSA objects to the way in which many of the CSG companies advertise these EIS and/or EA submission periods. In many cases these are advertised once in the newspaper – rather than writing directly to affected landholders. The time periods for making submissions are also a great concern. There have been as little as five days to respond.

The language used in EIS/EA notices can be misleading, using broad terminology and inadequate mapping. So it's sometimes the exact location of the project is unclear.

The EIS and EA documents are often very lengthy and complex. BSA has viewed some that are 13,000 pages long. There is often little consideration made to what else is happening at that time – eg. harvest, tax-time – that would hinder landholders from being able to respond. BSA would like to see a more open process where CSG companies are proactively engaging the landholders who are set to be impacted.

## **Competition for Labour / Staff**

Businesses within the Surat Basin are already suffering from untenable competition for staff with reports of business being unable to survive in this climate. This could be an early warning sign of a developing “Dutch Disease” (ie. the adverse effect on a country's other industries that occurs when one industry substantially expands its exports) in Great Artesian Basin communities as agency, effort, resources, social capital and labour is redeployed towards the booming energy sector at the expense of others.

## **Crime**

There is some evidence to suggest that an increase in mineral development can impact on communities’ crime rate. Professor Kerry Carrington has called on mineral developers and contractors to address the impacts of their activities on crime rates after her study which found “alcohol-fuelled violence and social disorder were rife in some regional communities located alongside large populations of mine and construction workers housed in camps.”

## **Other related matters including health impacts.**

### **Well Stimulation such as hydraulic fracturing (fracking)**

All chemicals used in CSG operations must be safe, must be registered and must be disclosed to landholders and State Government. The unknown effect of well stimulation on the interconnectivity between coal seams and other aquifers is a major concern. More research in each particular gasfield must be undertaken before fracking or other techniques are used to stimulate gas flows.

CSG companies must provide detailed information on proposed well stimulation including the chemicals to be used, quantities injected, and the fate of these chemicals throughout the stimulation process. Landholders require this information to meet their Quality Assurance obligations.

Companies must inform landholders at least 10 days prior to any scheduled well stimulation activity and must provide a full report on completion.

The results of any ground water quality monitoring program must be promptly provided to landholders. Any water contamination must be immediately advised to landholders and emergency water supplies implemented immediately if necessary.

BSA would like to see at least ten percent of all CSG gas wells fully and independently audited each year, by suitably trained personnel, to ensure compliance with all obligations. Results of these audits must be publicly available.

### **Mental Health implications**

Members of Surat Basin communities have indicated concern about the increasing incidence of deteriorating mental health levels. Research done by Dr Jo Anne Everingham from the Centre for Social Responsibility in Mining, University of Queensland, found that in other parts of Australia rapid

and expansive mineral developments can lead to a sense of disorientation called 'Solastalgia'. Solastalgia can be described as "home-sickness at home" because the home environment has been radically altered. That is your home suddenly no longer feels like your home, your community suddenly no longer feels like your community. BSA has been encouraging members of the community to seek help if required and look out for each other.