## *1.* Legislative and policy framework

### *2.1 Violation of basic human rights*

In 2015 the Human Rights Commissioner Tim Wilson, in a speech at the Castan Centre for Human Rights law conference at Monash University, said Australian governments must give farmers more rights when mining companies are negotiating access to potential gas or coal reserves on their property.

Mr Wilson went on to say the laws as they stand do not help the impasse by giving mining companies licence to gain access to a farmer's property so they could prospect and extract resources. "It is not done on the basis of consent or respect for the farmer. And that's when you get conflict and I would argue, a human rights violation".

Mr Wilson also pointed out that "it's important to focus on the cause of the problem. Many people will see a mining company trampling on the rights of the farmer. But the issue is not the miner. **The miner is only doing what the law allows them to do. The issue is the law and whether it properly respects the surface property rights of the farmer. Only government can legally facilitate this violation and absent the necessary respect for rights."**

### *2.2 Unlevelness of the playing field*

I urge the Committee to gain an understanding and appreciation of the unlevelness of the playing field as far as the landholder is concerned. As acknowledged by a recent **Productivity Commission report**, there is an asymmetry of capacity and yet none of it is of the farmer's making.

The CSG Miners are major multinational companies and have vast resources, both financial and technical, plus significant political influence. In contrast, many farmers have little or no formal training, are busy running the farm and are not experienced in dealing with a large industrial corporation who have lawyers at 20 paces. Often they feel isolated, not knowing who to talk to about these matters.

For the farmer the costs of any conflict with a CSG Miner are totally and utterly personal, often with adverse impacts on physical and mental health, plus lost time and financial costs. The costs for a CSG Miner cannot be said to be the same, certainly not as personal.

Politicians and bureaucrats need to understand and appreciate that from the moment an Exploration Licence is granted, the lives of affected landholders are placed in limbo.

The farmers face many unanswerable questions about what might happen and how best to deal with the situation, for example, should they commit to capital improvements or will this be a waste of money. A great sense of uncertainty and anxiety is ever present.

The most insidious impact is the fact that the landholders' capital investment in their properties is effectively frozen. Proximity to a CSG wellfield and the possible future development of CSG detracts buyers. Real estate agents freely admit that properties in such areas are not able to be sold at the usual market rates.

What of those landholders who need to sell because they have become too old or infirmed to manage a rural property? What of those landholders whose life plan anticipated selling this property within the next few years?

### *2.3 Need genuine stakeholder engagement and true collaboration*

The typical model of big business lobbying politicians on policy positioning – in isolation of the community - is now broken, out of date and must be changed. This old style model is a formal, hierarchical, top down, 'stand and deliver' approach where a policy is framed by an elite group in isolation from the broader populace.

However, in today's world digital connectivity means people are connecting and engaging with others without being physically close. This connectivity has generated a more collaborative society. People now obtain information, form opinions and make judgments about politicians and policy through social media. Furthermore, the general public is cynical about policy makers and is sensitive to issues of trust and inequality.

People are now the experts. They want more and better information about change, they want to have a direct say and they want leaders to be upfront and set examples rather than just telling people what to do. Hence the old hierarchical, 'stand and deliver' approach is out of step with the way policy should be conceived and advocated in the modern world. The top down approach no longer works and needs to be swiftly changed.

Thus, moving forward Governments **need a much more collaborative process** when it comes to policy formulation and to ditch the old style command and control mentality. The process needs to:

- recognise the legitimacy of the general public to have a say and to respect and absorb their values and aspirations; and
- recognize the legitimacy of local communities to manage resources that affect their livelihoods.

### **2.4** ***Precautionary principle*** ***to underpin legislation and policy***

It is recommended that a strict precautionary approach to be adopted to ensure that the CSG industry is only permitted to operate if it can satisfy the fundamental principles of Ecologically Sustainable Development.

The industry, by its own admission – see elsewhere below - does not really know what the impact will be on the groundwater system – and this resource is one of the most precious in rural Australia and one that underpins a vibrant agricultural industry.

In addition, the CSG industry fails to provide adequate compensation to rural landholders and imposes on the landscape a spiders web of unattractive industrial infrastructure. (See photos on the internet of the Chinchilla, Qld landscape).

The spread of the CSG industry is insidious as farmers and others are being asked to accept infrastructure on their properties - and compromise their farming enterprises – for nominal financial compensation. At least in the case of a coal mine the proponent usually purchases the property and fairer compensation is usually received.

Governments are complicit in the advance of this industry before proper process and due diligence has been completed, all because of the attractiveness of the short term dollar. It is time to modify how we measure wealth, and to base our 'progress' on the adoption of a true triple bottom line approach where environmental, social and economic parameters are all properly accounted. The current GDP measure

favours short term economic gain, no matter what the social or environmental costs. The development of the CSG industry is a classic case in point.

It is recommended the policies, procedures and laws regarding the CSG industry be significantly tightened to safeguard:

a) the community's right to have a proper say in the formulation of policy; not having deals done in a back rooms between big business and big government;
b) the environment, especially potential water and salt impacts;
c) the farmers right to determine what happens on their land, and to say no to CSG activities;
d) our rural social fabric; and
e) Australia's long term sustainable wealth generation capacity.

### *2.5 The assessment and determination process for major mining and energy projects*

There is widespread acknowledgement that the current assessment and determination process for major mining and energy projects requires major reform.

In NSW in 2013 the then Commissioner of the Independent Commission Against Corruption The Hon David Ipp AO QC in his report entitled 'Reducing the Opportunities and Incentives for Corruption in the State's Management of Coal Resources' (October 2013) stated that '*an efficient and effective policy and regulatory environment was one where opaqueness, uncertainty and discretion were eliminated from the decision making framework'.*

Deficiencies with the current decision making frameworks across Australia include:

a) the community's lack of trust in the process due in part to the opaqueness in how decisions are reached;
b) the consultation process creates the *impression* that the community can influence outcomes, that it will be listened to and hence people work hard and prepare submissions and attend public hearings, etc. However the **public input process lacks real teeth and the community input is often treated in a token manner.** For instance, concerns raised in submissions are often summarily dismissed by proponents without the ability to cross examine and interrogate various assertions in an open forum; and
c) the assessment process gives excessive priority to the short term dollar.

As a result of these shortcomings the community is left with an imbalance of short term economics dictating the terms over proper management of natural, cultural and human resources, usually to the detriment of true, long term sustainability.

It is recommended that the legislative and regulatory system be changed to one that is founded on the principles of Ecologically Sustainable Development. This would provide a sophisticated, integrated approach that gives priority to maintaining healthy ecosystems first, followed by the delivery of enhanced social wellbeing and ultimately long term economic benefits.

A suggested blueprint for moving forward is outlined below:

i. **Upfront, prepare regional or catchment wide strategic plans that are underpinned by the *values and aspirations* that communities wish to see reflected**. These values would be articulated in the core principles of the plans. The plans would be based on the Ecologically

Sustainable Development model and provide a vision for future development and land use management in that region.

ii. **The regional strategic plans would be founded on community participation that is characterised by meaningful engagement, transparency and accountability and where community input is seen as an integral driver, not a burdensome extra.**

iii. To overcome the 'advocacy' nature of environmental impact statements which result in projects being painted in the best possible light, developers would no longer be allowed to hire their own consultants. Instead proponents would pay a fee into a fund and consultants allocated by an independent arbiter.

iv. Assessment of projects by Government would be underpinned by the Precautionary Principle and start with reaffirming the correlation between the regional strategic plan and the proposal.

v. The process for the public to make submissions in response to a project EIS would be modernised to enable parties to provide input via social media and the planning department would provide rapid (ie at least weekly) responses to facilitate better dialogue.

vi. A Development Assessment Commission (DAC) chaired by a Judge would determine major projects. Parties would be able to be self-represented and the legal rules of evidence would not apply. Cross examination of evidence would be a key aspect of DAC's work. Members of the DAC would be appointed via an independent, transparent process, say on the recommendation of relevant professional bodies.

vii. A third party merit review process would enable parties to challenge the factual basis of any development decisions in the courts. In a democratic society like Australia this provision is vital. This option will reduce the scope for opaque deals between proponents and government and catch poor decisions.

viii. The functions of strategic planning and development assessment within Government would be separated.

ix. The regulatory monitoring and compliance function of Government would be strengthened to reinforce implementation of consent conditions; and

x. Internal and external measures to protect against regulatory capture would be introduced to relevant government departments.

The assessment and determination process needs to be more objective, transparent and inclusive. Broader society needs a process that it can trust. It is time to bring our planning and assessment laws into the twenty first century.

## 2. Access arrangements

I would like to dispel the assertion by the CSG industry that it has signed 'x' thousand land access agreements therefore most farmers are supportive of the industry.

Let us be clear about this; most farmers sign because they are put under pressure by the companies and tight time frames to do so, they fear the costs involved of going to court to fight the matter and they feel they have no real choice. They suffer in silence due to the unlevelness of the playing field.

It also fails to acknowledge that many farmers do not understand the ramifications for them and their farming enterprise in signing over rights to the Miner. Also many agreements were signed in the early days of the industry before farmers became better informed of the impacts and their rights.

It is recommended the Committee redress the imbalance experienced by rural landholders.

Historically, the laws on minerals and petroleum have clearly facilitated the extraction of resources as quickly and as easily as possible. Indeed, mining in Australia has enjoyed a special status under the law since at least 1851, when the first mining legislation codified that the ownership of minerals vests in the Crown.

These laws give CSG proponents undue leverage over landholders to ensure exploration activities and access arrangements are quickly established. It is time they were changed to give landowners a more equitable say.

The current provisions disadvantage the landholder in a number of ways:

i. As disputes heard by the various land and environment courts are costly, landholders seeking to object to access arrangements are disadvantaged financially when compared to large corporations with deep pockets. This hurdle may rule out some landholders obtaining a fair and equitable outcome;
ii. Geographical remoteness from capital cities and farm duties creates challenges for landowners to attend Court and preparatory legal meetings compared with CSG proponents; and
iii. If arbitration occurs, in practice the determination often relates to what conditions will be attached to access arrangements, as opposed to whether an access arrangement should be granted at all. It is recommended that recognition be given that access arrangements may be unacceptable in some pre-determined areas, highlighting the need for proper strategic planning, including the development of no-go zones for CSG extraction.

## 3. Environmental impacts of unconventional gas mining

### *4.1 Regional hydrogeology poorly understood*

It is reasonable to conclude that wherever CSG mining is proposed (or already under way) throughout Australia the regional hydrogeology is inadequately understood.

This is clearly evident from studying a submission by Queensland Gas Company (QGC) to the Queensland Department of Environment & Resource Management (DERM) seeking amendments to the consent conditions for extraction in the Ruby area. In a document seeking a review of the original decision dated 12 July 11QGC acknowledges that:

a) There is no regional groundwater model for the Ruby Area– the Queensland Water Commission is currently developing one (p33);

b) QGC will be "*better able* to map groundwater contours" once the baseline bore assessments have been completed. The results from the monitoring of such bores is "many months" away (p33); and

c) Information regarding the location and types of aquifers *"will be much better"* once baseline assessments are completed (p32).

Clearly QGC did not have accurate, quantitative information about the groundwater system that it will impact yet government approval was being granted. So how can the regulator accurately determine the risks and impacts? It cannot.

Across Australia government's need to avoid making the same mistakes that have occurred in Queensland.

What all CSG proponents should establish before deciding on the merits or otherwise of CSG extraction is:

- a robust, independently verified, regional model to evaluate impacts of aquifer dewatering and fraccing practices;
- a specific local model to evaluate dewatering and fraccing consequences;
- model outputs that quantify the anticipated drawdown and how it propagates laterally and vertically over time;
- model outputs that quantify fraccing and aquifer interconnectivity risks;
- a scientifically supported quantification of the long term changes to water quantity and quality in the aquifers; and
- all model predictions rated for detailed statistical sensitivity and uncertainty analyses.

It is recommended that state government regulatory agencies require such modelling and analytical work BEFORE there is any consideration of impacts.

The CSG industry has without doubt been 'learning by doing'. This is risky state of affairs and the industry should be paused indefinitely until the community and regulators know the facts about what the impacts may be on the groundwater regime and how to adequately manage the salt mobilised and brought to the land surface.

In abovementioned Ruby example QGC proposed to construct 1,200 wells. Each well has an area of disturbance of 1 ha during construction. Each megalitre of CSG water brings up approximately 5 – 8 tonnes of salt that was previously stored safely underground.

The paucity of detailed evidenced-based information is akin to 'jumping into a pool of water head first without knowing how deep it is'. Hence this industry could potentially cause major damage to the hydrogeology of the Great Artesian Basin, Australia's main food producing catchment.

Based on a prudent, scientific approach, it is recommended the CSG industry be halted until there is accurate, quantitative data on exactly what the hydrogeology picture is. Then and only then can the impacts on the baseline environment be realistically determined.

### *4.2 Groundwater experts urge caution*

The independent groundwater leaders in Australia have for several years urged caution in how the nation approaches CSG extraction and development. See below regarding advice from Geosciences Australia and the National Water Commission.

In September 2010 Australia's premier geotechnical organisation, Geosciences Australia (GA), released a review of potential groundwater impacts from CSG mining in Queensland's Surat and Bowen Basins. GA concluded that 'the overriding issue in CSG development is the **uncertainty surrounding the potential cumulative, regional scale impacts of multiple developments'**. GA also stated that the information provided in EIS documents is **not adequate for understanding the likely impacts of widespread CSG development** across the Surat and Bowen Basins; nor will any level of information or modelling that can be provided by individual proponents.

Any reasonable observer would surely deduce that GA's message is that the community cannot trust any models, and that we won't know what will happen till it has happened. Taken at face value, this is a totally unacceptable situation.

GA recommends a process for 'staged adaptive management of CSG development' along the following lines:

i. Apply the precautionary principle. Assume excessive groundwater extraction will have impacts. GA recommended that there should be explicit requirements to minimize and mitigate any groundwater impacts during gas production;

ii. A regional-scale multistate and multilayer model of cumulative effects of multiple developments, and a regional-scale monitoring and mitigation approach should be developed to assess and manage these impacts; and

iii. Whatever modelling is undertaken, there is very high level of predictive uncertainty involved, so proponents should consider actions to minimize potential impacts on water balances.

In addition, in December 2010 the National Water Commission (NWC) issued a Position Statement on CSG and Water. Inter alia, the NWC states:

Extracting large volumes of low-quality water will impact on connected surface and groundwater systems, some of which may already be fully or over allocated, including the Great Artesian Basin and Murray-Darling Basin.

Impacts on other water users and the environment may occur due to the significant depressurisation of the coal seam, including:

- changes in pressures of adjacent aquifers with consequential changes in water availability;
- reductions in surface water flows in connected systems; and
- land subsidence over large areas, affecting surface water systems, ecosystems, irrigation and grazing lands.

The production of large volumes of treated waste water, if released to surface water systems, could alter natural flow patterns and have significant impacts on water quality, and river and wetland health.

The practice of hydraulic fracturing to increase gas output has the potential to induce connection and cross-contamination between aquifers, with impacts on groundwater quality.

The NWC is concerned that CSG development represents a substantial risk to sustainable water management given the combination of material uncertainty about water impacts, the significance of potential impacts and the long time period over which they may emerge and continue to have effect. Therefore, an adaptive and precautionary management approach will be essential to allow for progressive improvement in the understanding of impacts, including cumulative effects, and to support timely implementation of 'make good' arrangements.

It is recommended that a precautionary and adaptive approach to managing and planning for CSG activities be adopted to enable improved management in response to evolving understanding of current uncertainties.

The NWC persuasively argues for the careful, transparent and integrated consideration of water-related impacts in all approval processes.

Clearly there is a strong and consistent message from GA and NWC. It would be prudent to follow their advice.

### *4.3 Require a salt management plan*

Each megalitre of CSG water extracts approximately 5 – 8 tonnes of salt that was previously stored safely underground. The issue of how to adequately manage millions of tonnes of mobilised salt is yet to be resolved. Clearly answers to this issue are required if Australia is to embark on coal seam water extraction.

## 4. Compensation and insurance arrangements

Landholders should be entitled to fair and reasonable compensation for any compensable loss suffered, or likely to be suffered, as a result of the exercise of the rights conferred via an exploration or production lease/licence.

Holders of a petroleum title are usually "liable to every person having any estate or interest in any land injuriously affected, or likely to be so affected, by reason of any operations conducted".

Compensation is a blunt tool that cannot always properly assess the variety of circumstances and motivations of landowners. For instance, it may be that a price can be determined for the value of the crops destroyed, or prevented from being planted, but there may also be land where no amount of compensation can place the farmer in the position he/she was in prior to CSG extraction. For example, there may be land areas of special spiritual, psychological or amenity value.

Policymakers be mindful that landowners are carrying the risk of:

a) Disturbance and interference to aquifers ;
b) Changes to surface water flow regimes;
c) Disruption to farming enterprise activities (for instance well heads connected by roads and pipelines, production water storage facilities, construction camps, etc) and how that impacts on the movement of heavy, wide machinery, cropping and livestock activities;
d) Loss of rural amenity;
e) Loss of control regarding persons accessing your freehold land; and
f) Visual and noise impacts.

## 5. Compliance and penalty arrangements

Whilst Governments trot out the spiel that regulations/consent conditions are the most rigorous in the world and the independent regulators will enforce compliance, I know from personal experience this is not so.

The regulators are part of the government machine, the government wants the royalties and jobs created by the industry and thus the regulators are influenced by their political masters. In addition governments usually under-resource the regulatory agencies hence much of their work is rudimentary and rarely proactive and assertive. Further, the better compliance staff are often poached to work for the miners.

Based on experience I'd suggest the community is badly let down by the performance of our regulators.