

AGRICULTURE IN A GAS ERA: A COMPARATIVE ANALYSIS OF QUEENSLAND AND BRITISH COLUMBIA'S AGRICULTURAL LAND PROTECTION AND UNCONVENTIONAL GAS REGIMES

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ABSTRACT: The Australian Senate's *Interim Report on Unconventional Gas Mining* was released in June 2016, following heightened political awareness of continuing public outcry relating to unconventional gas exploration. In Queensland, the state government has supported the gas industry's headlong rush into this profitable resource sector, to the consternation of farmers who have few statutory rights to disallow access by resource companies to their agricultural land. In the early sections of this paper, we review current agricultural land protection legislation in Queensland and British Columbia; two Commonwealth states with similar socio-political and legal systems and growing unconventional gas industries. The review provides the basis of a critical analysis of 'active' adaptive management as a regulatory framework facilitating optimal coexistence between agriculture and unconventional natural gas. In the remaining section we apply the framework of 'active' adaptive management in a comparative legal analysis of the land protection and oil and gas agencies as well as agricultural land protection regulation in British Columbia and Queensland. In conclusion, we identify the Agricultural Land Commission system in British Columbia, Canada as exemplifying elements of 'active' adaptive management to assist in facilitating coexistence between arable land and unconventional gas operations.

KEY WORDS: Rural land protection; unconventional gas regulation; agriculture protection; natural resource management; active adaptive management

1. INTRODUCTION

The Senate Select Committee on Unconventional Gas Mining Interim Report ('interim report') into the operation of the unconventional gas industry (UG) was released in June 2016 (Commonwealth of Australia, 2016). The interim report represents the latest in a series of state and federal government inquiries into the Australian UG industry. It explores, among many policy issues, the viability of current Australian regulation in protecting agricultural land from UG activities and exploration.

The eighteen recommendations which emerge from the interim report display a heightened level of political scrutiny into the operation of the UG industry and its potential long-term effects on agriculture and rural communities. In its critical findings of UG industry governance and regulatory systems, the interim report reflects on the patchwork of differing policy approaches by state and territory legislation in stating, "The unconventional gas mining industry is a long way from having adequate regulation, oversight and operation" (Commonwealth of Australia, 2016: 25).

Coexistence is fundamental to adequate regulation and policy goals as defined by the Office of the Chief Economist as "prime agricultural land and quality water resources must not be compromised for future generations" (Office of the Chief Economist, 2015: 19). The issue of coexistence between prime agricultural land and UG extraction is explored in Chapter 3 of the interim report, which focusses on the land access regimes across different states and territories. Submissions to the inquiry note that many landowners "felt powerless, downtrodden and as if they do not have sufficient control over their land" (Commonwealth of Australia, 2016: 26).

Currently, there is no *prima facie* right for private landholders to deny a petroleum tenement holder access to their land in Australia. It is noted the Western Australian *Mining Act 1978* (WA) provides for a right of veto for landholders in relation to mineral tenement, but not to oil and gas tenements. However, its scope of applicability is limited, as Hepburn identifies, "the relevant [Western Australian] legislation...only imposes a qualified obligation to obtain consent from landholders where the land fits particular exemption requirements" (Hepburn, 2015: 4).

At a state government level, Queensland's *Regional Planning Interest Act 2014* (Qld), was enacted as a direct result of the unease between rural landholders and UG mining, primarily in the Darling-Downs region- the state's main gas-producing region (Taylor, 2015). The conflict between mining and agricultural industries is at its most obvious in the many small

rural towns and communities which populate this region, also home to the *Lock the Gate* protest group.

As at June 30, 2015, active well-heads in Queensland totalled 7 093, confirming Queensland's status as Australia's main UG producer representing 97.7 per cent (2015-2016) of total output derived from regional sources situated within the Surat and Bowen Basins. 5 107 of these well-heads are sited on private farming land, resulting in negotiated Conduct and Compensation Agreements (CCA's) between agricultural landowners and resource companies (Thomas, 2015).

This high level of exploration underlines the on-going contestation between agricultural land and UG extraction in the prime agricultural region of the Darling Downs. Recent events suggest contestation has reached a tipping point, given the recent farmer suicide in the Western Downs region of Queensland over a land access dispute with resource companies (ABC News, 2015).

Finding common ground to develop a mutually acceptable consensus position on land access between farmers and resource companies has been elusive and mired in conflict. Active adaptive management as a policy framework assists in anticipating and managing coexistence issues between competing natural resource sectors.

2. ACTIVE ADAPTIVE MANAGEMENT

British Columbia's ecologists coined the term 'adaptive management' in the 1970's as "a systematic process for continually improving management policies and practices by learning from the outcome of operational programs" (FREP, 2016). Active adaptive management has become an increasingly important policy paradigm for natural resource management.

One of the critical elements of natural resource management is recurrent decisions, made with regularity, in response to changing conditions and priorities with the aim of reducing 'ecological uncertainty' (Gregory *et al.*, 2012; Walter, 1988; McCarthy and Possingham, 2007; Runge, 2011). There are two pathways in the adaptive management framework to achieve the reduction of uncertainty; 'passive' and 'active' approaches.

A 'passive' adaptive management approach is based on optimisation by selecting differing management models and actions at a specific point in time (Williams and Brown, 2012). The underlying assumption is that optimisation continues to be stable and constant over differing time periods. In contrast, 'active' adaptive management anticipates optimisation via

‘learning’ and the fundamental supposition that changes will occur and re-occur over time. As a result, the anticipation of change and adaptation to it is the hallmark of ‘active’ adaptive management (McGowan *et al.*, 2009).

The adaptive management framework grew out of the management of natural resource projects and reflects the ‘precautionary principle’ in managing the impacts on natural resources. Kriebel *et al.* (2001) defines the precautionary principle as encompassing four elements: “preventive action in the face of uncertainty; shifting the burden of proof to the proponents of an activity; exploring a wide range of alternatives; and increasing public participation in decision making” (Kriebel *et al.*, 2001: 871). The ‘precautionary principle’ marks “a shift from *post-damage* control (civil liability as a curative tool) to the level of a *pre-damage* control (anticipatory measures) of risks” (COMEST, 2005).

Tan *et al.* (2015) identifies authentic adaptive management as integrating both the precautionary principle in conjunction with ‘learning by doing’ in regulatory decisions. However, they note that adaptive management does not justify “merely reacting to change or using information as it becomes available to modify decisions” (Tan *et al.*, 2015: 683).

Within this spectrum, Swanson *et al.* (2010) specifically refer to ‘active’ adaptive management as satisfying the following seven conditions:

“(#1) using integrated and forward-looking analysis; (#2) monitoring key performance indicators to trigger built-in policy adjustments; (#3) undertaking formal policy review and continuous learning; (#4) using multi-stakeholder deliberation; (#5) enabling self-organization and social networking; (#6) decentralizing decision making; and (#7) promoting variation in policy responses” (Swanson *et al.*, 2010: 24).

According to Schramm and Fishman (2010); “Adaptive management facilitates resilient and robust decision-making frameworks that can nimbly respond to new information and changes” (2010: 492). Complex and multi-scalar policies create an ‘adaptive capacity’, that is, the requirement to revise policy frameworks across regions, different policy sectors and government agencies. The intent of an active adaptive management framework is not to anticipate all the changes that may occur during the policy development process; rather it is based on the seven-step framework. When the seven-step framework is applied, it allows for change to occur throughout the public policy process, while preserving natural resources (Swanson *et al.*, 2010).

The term ‘natural’ resources, is specific in the policy context and refers

also to conditions which may lead to exploitation. Therefore, a 'natural' resource is defined as existing without human intervention, with regenerative capacity and whose management is necessitated due to its regenerative capacities (Epstein, 2010). In this definition, agricultural land and the UG extracted from beneath it comprise natural resources in need of management, as these resources have regenerative capacity without human intervention. Conversely, crops growing on agricultural land and the process of conversion of UG to Liquefied Natural Gas require human intervention and are therefore not naturally occurring resources. Natural resource management thus seeks to balance out the demands of differing resources to incorporate those that are strategic and in need of prioritisation due our fundamental dependence on natural resources (Epstein, 2010).

In Queensland, the state government has stated it has embraced adaptive management and applied it in the management of petroleum. Therefore, the traditional definition of a natural resource as one "afforded by nature without human intervention" has been broadly interpreted by the Queensland government to include all naturally occurring resources that are accessed and converted into commercial resources with human intervention, such as liquefied natural gas (LNG) (Queensland Government, 2013).

Coexistence between different natural resource policy sectors is an exemplar of active adaptive policymaking, where the interests of different stakeholders, regulatory bodies and private companies must all be managed equitably. This ensures the sustainable management of competing land uses occurs rather than one sector being privileged to the disadvantage of another.

3. QUEENSLAND'S LAND PROTECTION REGIME

Regional Planning Interests

The Queensland government adopted the *Regional Planning Interests Act 2014* (Qld) (RPI Act) and the *Regional Planning Interests Regulation 2014* (Qld) to deliver a 'responsive adaptive management' regulatory framework for the protection of agricultural land and the cumulative impact of UG mining (Queensland Government, 2013). The RPI Act identifies land use areas to be protected as 'of regional interest' to balance 'priority land uses' (such as farming on highly fertile land) and "supporting diverse economic development" that is likely to "contribute to

Queensland's economic, social and environmental prosperity" (s3, RPI Act).

The RPI Act acknowledges 'coexistence' in s3(c)(ii) defined as areas of regional interest, resource activities and regulated activities. This is the first mention of coexistence in any Queensland legislation regulating land protection. The RPI Act regulates four areas of regional interest including: priority agricultural areas; priority living areas; strategic cropping areas; and strategic environmental areas (s7 RPI Act). Priority agricultural areas (PAAs) are areas being used for highly productive agriculture and are strategically significant, for example the major agricultural areas of the Darling Downs, where a high amount of UG activity occurs (Thomas, 2015).

The RPI Act has brought about a significant overhaul of the previous *Strategic Cropping Land Act 2011* (Qld) provisions and prescribes a new approvals process in the creation of 'Regional Interests Development Approvals' (RIDA) for 'resource activities' and other 'regulated activities' that are carried out in 'areas of regional interest'. Carrying out a 'regulated activity' is defined in s17 of the RPI Act as likely to "have a widespread and irreversible impact on the area of regional interest". A 'resource activity' is defined as an "activity for which a resource authority is required to (be) lawfully carried out or an authorised activity for the authority or proposed authority under the relevant resources Act" (s12, RPI Act).

Two of the mentioned 'Resource Acts' are the *Petroleum and Gas (Production and Safety) Act 2004* (Qld) (PGPSA) and *Petroleum Act 1923* (Qld) which regulate the exploration and extraction of UG in Queensland. Further, a resource authority includes: petroleum licences to prospect; a petroleum lease; a pipeline licence and a petroleum facility licence (s13 (e) RPI Act).

However, key exemptions exist for exploration of both petroleum and minerals which do not fall under the definition of resource activities requiring an RIDA including: prospecting permits under the *Mineral Resources Act 1989* (Qld) (MRA Act); a petroleum survey licence; a data acquisition authority; or a water monitoring authority under the PGPSA Act. For example, a petroleum survey license provides resource exploration companies the right to enter land to survey the proposed route of a pipeline or the suitability of land for a petroleum facility license. It can be granted for a maximum of 12 months and allows the conduct of activities that have a 'minimal impact on the land', however, 'minimal' is not defined, and there is no area limitation on the licence holder. The RPI Act provides another layer of exemptions for resource activities requiring a RIDA where the activity is carried out for less than one year; the resource

activity is not 'likely' to have a 'significant impact' on the priority agricultural area or the resource activity represents 'pre-existing' resource activities (ss23 and 24 of the RPI Act).

Finally, a resource activity is exempt from the RPI Act and RIDA regime where a Conduct and Compensation Agreement applies; the applicant has entered into a voluntary agreement with the land owner; or the resource activity is not likely to have a significant impact on the priority agricultural area; and the resource activity is not likely to have an impact on land owned by a person other than the land owner (s22, RPI Act). It is noted the *Guide to Queensland's New Land Access Laws* (Qld) creates an offence for landowners to obstruct a resource authority holder from accessing their land once notice has been served on the landholder (Queensland Government, 2010: 4). In reference to s22(c) of the RPI Act, an 'impact' is defined as limiting the suitability of the land for priority agricultural areas (s 22, RPI Act).

The Australian Government Department of Environment's Matters of National Environmental Significance *Significant Impact Guidelines 1.1* provides guidance on what may constitute a 'significant impact' on a matter of national environmental significance under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). To determine whether an activity is 'likely' to have a significant impact, consideration needs to be given to the probability of the negative effects of the impact occurring. For example, to be likely, it is "not necessary for a significant impact to have a greater than 50 per cent chance of happening; it is sufficient if a significant impact on the area of regional interest is a real and not a remote chance or possibility" (DILGP, 2016c).

If there is scientific uncertainty about the impacts of an activity and potential impacts are serious or irreversible, the 'precautionary principle' is applicable. However, the definition of 'precautionary principle' offered in the RPI PAA Guidance note is a notably 'loose' definition of how this precaution will be monitored and enacted; "If there is scientific uncertainty about the impacts of an activity and potential impacts are serious or irreversible, the precautionary principle is applicable" (DILGP, 2016a). Accordingly, a lack of scientific certainty about the potential impacts of an activity will not itself justify that the activity is likely to have a significant impact on the area of regional interest.

Notification of an application provides the opportunity for the community to express their views about a particular proposal and for the government to consider these views when deciding whether to approve an

application. A priority living area application requires public notification and the local community's views are considered in assessing the level of impact of the proposal on the future of the town. Once a decision on the application is made by the chief executive, the applicant and 'affected land owners' must be notified. This is the only instance of requirement for public notification and community scrutiny available in the RPI Act.

According to s3 of the RPI Act, the onus is on the application to demonstrate that the applicant has taken all reasonable steps to consult and negotiate with the owner about the expected impact of activities. The applicant must also prove that carrying out the activity on the property will not result in a loss of more than 2 per cent of the land marked as priority agricultural land use. Guideline 9/14 states, restoring the land means that the land must be returned to its "pre-activity productive capacity or potential productive capacity". However, it also notes "restoring land to its pre-activity condition following the conduct of the activity will not be achieved like for like" (DILGP, 2016b).

The RPI Act was enacted in 2014 and to date, there has been little legal analysis and case law relating to the provisions, particularly with regard to priority agricultural areas. The wording of the RPI Act, places the emphasis on the applicant to manage consultation with the land owner and to restore land after extractive activities (Taylor, 2015). However, the legislation is also vague and inconclusive making the provisions difficult to challenge in a legal process. In addition, public notification is limited to priority living areas only with no mention of farmland and agricultural landowners in relation to resource activities.

The Gasfields Commission

The GasFields Commission ('GC') is governed by the *Gasfields Commission Act 2013* (Qld) ('GC Act') and was created, "to manage and improve the sustainable coexistence of landholders, regional communities and the onshore gas industry in Queensland" (s3, GC Act). The key functions of the GC are to: facilitate better relationships between landholders, regional communities and onshore gas industry; review the effectiveness of government entities in relation to the onshore gas industry; and advise Ministers and government entities regarding landholders and regional communities' coexistence with the onshore case industry (s7, GC Act).

The GC is an independent body mandated to monitor and advise on the specific issues arising from the coexistence between UG and agricultural land owners in prime arable farming regions in the Surat and Bowen Basin

regions of Queensland. The aim of coexistence between both industries is evident in the Commission's Charter and Terms of Reference that "Queensland's agriculture and onshore gas industries are vital to our economy, improving relationships between rural landholders, regional communities and the onshore gas industry is our core focus" (Gasfields Commission, 2014).

To promote coexistence, the Commission has established a Communities Leaders Council created pursuant to s 29 of the GC Act, for the purpose of assisting GC to identify issues affecting coexistence for landholders and regional communities. The GC Act requires the chief executive of the Commission to seek advice about any application for a resource activity that is either notifiable, or for which (in the chief executive's opinion) the "expected surface impacts are significant" (s7, GC Act).

The role of the GC under this provision may be similar to that exercised by the 'Independent Expert Scientific Committee' (s29, GC Act) in giving advice to the Commonwealth environment department under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). However, significant criticism of the GC has been the catalyst for an independent review. Anti-coal activist John Gordon from *Stop Brisbane Coal Trains* accused the Commission of being, "no more than a coal seam gas lobby group masquerading as an arm of the Queensland government" (Robertson, 2015).

The key aspect of the GC relevant to the active adaptive management principles of equity, engagement and transparency rests upon the adequacy of the negotiation process between the land owner and the resource applicant. The opportunity to revise a CCA as regulated by the PGPSA is limited, although the GC has been created to provide greater collaboration between agricultural and UG industries.

4. BRITISH COLUMBIA'S LAND PROTECTION REGIME

The Agricultural Land Reserve

Agricultural land protection in British Columbia, Canada is a form of provincial-level zoning that takes priority over local land use regulations by creating comprehensive land use regulations to protect the agricultural land base. The Agricultural Land Reserve ('ALR') comprises land that was zoned for agricultural purposes by the relevant local government authority since the establishment of the reserve in 1971.

In general, land in the ALR may not be subdivided, or used for a non-farm use, without the approval of the Agricultural Land Commission (ALC). Local governments must ensure that their by-laws are consistent with the Act, and regulations and orders made under the *Agricultural Land Commission Act, S.B.C. 2002* ('ALC Act'). The Commission may enforce the farm use restrictions by prosecution and Supreme Court order.

According to Noble, the ALC is a "powerful body because its legislation, policies and decisions take precedent over most municipal, regional, or provincial planning processes" (Noble, 2004: 50). The ALC holds the objectives of: preserving agricultural land; encouraging farming on agricultural land; and encouraging local governments, first nations, the government and its agents to enable and accommodate farm use of agricultural land in their by-laws, plans and policies (s8, ALC Act). On the written request of a person affected by its decision, or on the ALC's own initiative, the Commission may reconsider its decision and may confirm, reverse or vary it (s13, ALC Act).

The ALR incorporates both private and public lands that are, or have the potential to be used for farming, and have been identified according to the 'Land Capability Classification for Agriculture in British Columbia'. This classification system grades land through classes 1-7, assigning classes 1-3 as prime land (none to minimal land modifications), while assigning classes 6-7 as having severe land or climactic limitations for sustaining agriculture or grazing activities (ALC, 2013).

However, the provincial restrictions on the use of agricultural land do not apply to land lawfully used for a non-farm use established and carried on continuously for at least six months immediately before December 21, 1972. The protection lapses if the use is changed, other than to a farm use, without the permission of the Agricultural Land Commission and an enactment made after December 21, 1972 prohibits the use, or permission for the use granted if an enactment is withdrawn or expires. Lawful non-conforming status attaches only to the land that was actually being used for a non-farm use and not to the entire parcel (s23 (2), ALC Act).

Few jurisdictions have such a comprehensive and enduring history of public control over development and subdivision of agricultural land. By placing all farm-zoned land within the reserve, restricting development and non-agricultural uses, and requiring any applications for removal to prove 'no harm' to local agriculture, the ALR protects much of the private land in British Columbia.

Oil and Gas Commission Delegation Agreement

Pursuant to s26 of the ALC Act, the ALC can enter into an agreement to allow certain governments or authorities to exercise the ALC's power to decide applications for non-farm use. The ALC has exercised power to enter into an agreement with the Oil and Gas Commission (OGC) relating to certain oil and gas non-farm uses within the ALR (BCOGC, 2013). The OGC is consequently delegated the power of decisions over oil and gas activities on ALR land within Zone 2, identified as the Peace River Regional District and Northern Rockies Regional District.

According to s4 of the *Oil and Gas Commission - Agricultural Land Commission Delegation Agreement* ('the delegation agreement'), oil and gas activities and ancillary activities located on the identified ALR lands are exempt from an OGC application in relation to: oil and gas activity and ancillary activity sites representing a combined total area of less than 20 hectares; pipelines; and conversion of an existing oil and gas activity site to an oil and gas activity or ancillary activity site. The delegation agreement also states impact on agricultural land and agricultural operations can be minimised by locating activities preferably in land that is classified as Land Capability for Agriculture Class 7 (Class 8-7 has the greatest amount of land inventory in the ALR of 14 898 572 hectares, 167 540 hectares of which is land in the ALR (ALC, 2013).

In planning oil and gas activities on ALR lands, applicants are expected to minimise disturbance to ALR land and agricultural operations by limiting the extent of disturbance to what is necessary to safely and appropriately conduct the activity. Ultimately, minimising impact on agricultural operations will be achieved by determining the optimal combination of total area disturbed and location of the activity in relation to current and planned agricultural operations and agricultural capability of the land. In making an application to the OGC for permission to carry out an oil and gas activity on ALR land, applicants must submit an Appendix II Rationale Statement Form, a Schedule A Pre-Development Assessment and a Schedule B Reclamation Report completed by a qualified specialist. These reports include a statement and assessment of how the design and location of the proposed oil and gas activity addresses the guidelines set out in Appendix II of the delegation agreement.

The preservation of arable land is the starting point for all decisions relating to land access and land disturbance and as such, the ALR system is highly protective of its prime arable land. A series of regulatory checks

and balances are effective to safeguard the longevity of agricultural natural resources in the region.

5. APPLICATION OF ACTIVE ADAPTIVE MANAGEMENT

Queensland and British Columbia have adopted differing approaches to the protection of agricultural land and the coexistence with UG extraction. Both regions have similar contextual legal, historical and political backgrounds- yet they diverge in their regulatory regimes in managing natural resources. Following is a comparison of the two regulatory systems based upon the seven principles of active adaptive management applied.

Principle 1: Integrated and Forward-Looking Analysis

Recently updated in June 2013, the ALC created an historical overview of the ALC's position regarding oil and gas activities in the ALR, to provide a forward-looking analysis for future activities. Similarly, in 2009, the ALC conducted an audit of the previous OGC delegation agreement. The audit examined OGC approvals and related activities in the Peace River Regional District, (the region with the highest level of UG exploration in British Columbia) occurring in the 2006 and 2007 fiscal years – April 1, 2006 through March 31, 2008. The review recommended further integration of policy analysis and states the ALC and OGC wish to continue its one window streamlined regulatory approach to improve the review and approval process of oil and gas activities on ALR lands (BCOGC, 2013).

There is no comparable provision of delegation, integration or joint governance in the Queensland RPI regime with an oil and gas peak body. However, the chief executive empowered within the RPI Act may seek guidance from other ministries, such as the agricultural department in the case of assessing priority agricultural areas.

Principle 2: Built-in Policy Adjustment

The ALC Act, pursuant to s12(2)(b), establishes the creation and monitoring of annual built-in policy performance indicators including: deploying survey results; trends of problems foreseen by the committee; and a review of the panel's operations to encourage transparency and accountability (s7, Bill 24 - 2014 *Agricultural Land Commission Amendment Act* (Bill 24)). Similarly, Bill 24 stipulates a regional panel be

located in Zone 2; the largest shale gas region in British Columbia, located in North Eastern British Columbia.

Given the sensitivity of Zone 2, the commission has introduced additional monitoring principles including: economic; cultural and social values; and regional and community planning objectives (s4.3, Bill 24). Further, the ALC's governance policy contains the outline of the commission's structure and responsibilities, statutory functions and standards of conduct for commissioners in regional and executive committee meetings.

This is in comparison to the RPI Act whereby in s3 one of the purposes of the Act is to "identify areas of Queensland that are of regional interest because they contribute, or are likely to contribute, to Queensland's economic, social and environmental prosperity". However, there is no legislative mechanism to help monitor and define what the cultural, economic and social interests are and how they should be protected.

Principle 3: Formal Policy Review and Continuous Learning

The ALC Executive Committee which comprises the Chair and six Vice Chairs, meets to decide applications referred to it by the Chair or panels, discuss and develop policy and emerging issues, review land use planning initiatives and consider delegated reconsideration requests. Further, the ALC has a formal system of performance indicators to evaluate the performance of the ALC through priority actions and targets by ministerial order. For example, continuous learning has led to a shortened final application decision to be made within 60 business days of the receipt of any ALR application. The OGC may also order an independent audit of performance in relation to performing its functions, duties and management of the environment (s10, OGC Act).

The ALC is currently developing a compliance and enforcement system for all aspects of ALR rural agricultural land use decisions and has presented the Ministry of Agriculture with a formal plan including a staffing strategy; a compliance and enforcement framework, including written policies; and objectives and information presented describing a compliance and enforcement system which has been made available to the public (ALC, 2016).

The RPI regime does not provide a visible formal review process and a formalised learning process for policy decisions. However, the release of

the Senate Interim Report may create the impetus for formal review of the RPI Act.

Principle 4: Multi-stakeholder Deliberation

Amendments to the existing ALR regime in Bill 24 included provisions providing for extensive consultation with civic society and agricultural community groups to review and assess likely outcomes. In total, the process involved 9 days of face to face meetings in eight communities across British Columbia and by phone with Regional Districts. Meetings involved representatives from differing stakeholder groups, representing local governments, farm and ranch organizations and agricultural landowners. Deliberation with regional panels in key UG mining regions is an on-going process under the ALR terms of reference.

The GC has enacted the Gasfields Community Leaders Council for Southern Queensland (covering the Surat Basin) and Northern Queensland (covering the Bowen Galilee and other basins in central and North Queensland). These councils comprise representatives from local government, landholders and rural groups, community and regional development organisations and the onshore gas industry. The stated purpose of these councils is to assist in identifying issues affecting the coexistence of landholders, regional communities and the onshore gas industry (Gasfields Commission, 2014). Consequently, both the RPI and ALC regime include evidence of principle 4 in creating multi-stakeholder deliberation.

Principle 5: Enabling Self-Organisation and Social Networking

In 2014, the Ministry of Agriculture and the ALC *Strengthening Farming* program formed Agri-Teams to provide assistance to local governments, with land in the ALR, in order to encourage greater local self-organisation (ALC, 2014). The ALC's regional presence in Regional Panels, public hearings and public information meetings make deliberations of the ALC open and transparent and allows for social networking between local groups.

Further, hearings for government applications are public and owners are entitled to public hearings for applications for exclusion and inclusion of the ALR. In addition, s14 of the ALC Act states, "all persons must be afforded an opportunity to be heard on matters related to the application". As of 2002, the Commission's principal purpose is to preserve agricultural

land and to encourage farming (ALC Act, s6). This has been interpreted to mean that “lands that are otherwise suitable for agriculture and merit retention may be considered for exclusion to satisfy a pressing community need that cannot be reasonably addressed any other way” (BC Budget, 2004).

Under the RPI Act s34, some RIDA applications may be notifiable to the public under s13(1) of the RPI Act; “notifiable if the area of regional interest in which the resource activity is proposed to be carried out is a priority living area”. This is a limited application of public involvement and scrutiny of RPI decisions and notifications in priority agricultural areas is by default, not notifiable to the public. Managing frustration with the ‘deep uncertainty’ relating to UG regulation in Queensland has produced the formation of informal protest groups (Lock the Gate Alliance, 2015). Therefore, the opportunity for landholders and stakeholders to self-network and organise and provide information to the policy making process has been limited to informal activist groups in Queensland, rather than through formal policy deliberation processes.

Principle 6: Decentralisation of Decision Making

The ALC consists of 6 regional panels, with each panel including a Vice-Chair and two panel members who must reside in the regions where they are appointed and make decisions on applications from that region. Local governments are usually the first point of contact when someone decides to make an application under the ALC Act. The municipal council or regional board then decides whether to authorise the application to be forwarded to the ALC for decision. Local governments provide information to the ALC related to land use planning and zoning bylaws, and may provide comments specific to each application. Local governments do not have approval authority for ALR applications, but in some cases, they do have refusal authority pursuant to s25 (3) or 30 (4) of the ALC Act.

In contrast in Queensland, regional panels do not advise during the chief executive's assessment of an RIDA application (Roe *et al.*, 2004). However, the chief executive or an assessing agency may ask any other person for advice or comment about an assessment application (s46 (2), RPI Act) and the chief executive must consult the GC for advice about an assessment application if the application relates to a resource activity in a priority agricultural area; and either the application is notifiable; or the

expected surface impacts of the resource activity are significant. It is noted just two of 11 RIDA applications were classified as ‘notifiable’, and engagement with the Gas Fields Commission is usually at the chief executive’s discretion.

Principle 7: Promoting Variation

The ALC Act provides a dispute resolution process if the ALC and a local government disagree over a community issue involving land within the ALR. Competing land use interests have led to several integrated planning exercises. The Agri-Teams represent agricultural interests and ensure compliance with the *Farm Practices Protection (Right to Farm) Act 1996*, the *Local Government Act (Right to Farm Act)* and the ALC Act.

The *Right to Farm Act* ensures that farmers can farm in the ALR by protecting them from nuisance lawsuits, nuisance bylaws and prohibitive injunctions when they are using normal farm practices. The ALC Act also provides that zoning and rural land use bylaws created by local governments may be subject to provincial standards and the approval of the Minister of Agriculture. The British Columbia Farm Industry Review Board has been established to deal with complaints about farm practices, including the ability to order a farmer to improve or to stop poor farming practices. The Oil and Gas Appeal Tribunal and Surface Rights Board also review OGC decisions on ALR lands.

This is in comparison with Queensland’s RPI regime, whereby the Planning and Environment Court, acts as a ‘one size fits all’ court to deal with land and property law matters. The Planning and Environment Court can be accessed for appeals of the decision for lands classified under the RPI regime pursuant to the chief executive, as set out in Part 5 of the RPI Act. An appeal to the Planning and Environment Court must be initiated within 20 days after a decision notice was received or for an affected land owner after notice of the decision was published under s52 of the RPI Act. However, the commencement of an appeal does not automatically stay the operation of the decision appealed against.

6. CONCLUSION

A comparison of the seven adaptive management framework principles reveals that British Columbia has been more comprehensive, active, responsive and adaptive in its adoption of constraints and controls on non-agricultural land uses dating back to the 1970s. Conversely, in Queensland, the recent enactment of RPI Act in 2013 is in response to the conflict

between agricultural landowners and the UG industry, which places less emphasis on the preservation of agricultural land within the RIDA regime. Hence, the Australian Petroleum Production and Exploration Association (APPEA) can confidently predict, "By 2019, Australia will be the world's largest LNG exporter" (APPEA, 2016).

The strong performance of the UG industry in Queensland has been assisted by state legislation, including the RPI Act. This legislation supports the operation of UG projects in Queensland subject to minimal compliance with monitoring, reporting and adjustment of industry practices, with adverse impacts on agricultural lands. This is essentially a 'passive' adaptive management approach to natural resource management which has created tension between agricultural landowners and resource companies. As noted by the Senate interim report; "(it) highlights the lack of power and support landholders feel in relation to land access... (and) the overall level of complexity associated with land access involving unconventional gas mining" (Commonwealth of Australia, 2016, s3.13). The balancing act between the development of a profitable extractive gas industry and a viable and long-term agricultural sector is delicate and complex. Coexistence requires a policy framework adaptable and flexible enough to respond to changing policy environments including; disputes, complaints, public input, the management of prime agricultural and land access regimes. It also requires clear and transparent decision-making systems, administrative bodies and regulations and this is the intent of the iterative decision-making process at the heart of adaptive management methodology.

The comparison between the two regulatory regimes in Queensland and British Columbia suggests regulation of agricultural land protection is still in its infancy in Queensland. The RPI framework has taken neither an 'authentic adaptive management approach' nor adopted the 'precautionary principle' to protecting agricultural land. Rather, the RPI Act has taken a passive and reactive stance on natural resource governance, containing numerous exemptions to the protection of agriculture from the adverse effects of resource activity.

It remains to be seen whether the Queensland state government will heed the recommendations from the Senate interim report and take a more active adaptive management stance to coexistence in the gas-rich areas of regional Queensland.

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