



QUEENSLAND FARMERS' FEDERATION

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Submission

Mr Sanjeev Pandey
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Email: suratUWIR@rdmw.qld.gov.au

Dear Sanjeev

Re: Submission to the Consultation Draft Underground Water Impact Report (UWIR) 2021 for the Surat Cumulative Management Area

The Queensland Farmers' Federation (QFF) is the united voice of intensive and irrigated agriculture in Queensland. It is a federation that represents the interests of 21 peak state and national agriculture industry organisations and engages in a broad range of economic, social, environmental and regional issues of strategic importance to the productivity, sustainability and growth of the agricultural sector. QFF's mission is to secure a strong and sustainable future for Queensland farmers by representing the common interests of our member organisations:

- CANEGROWERS
- Cotton Australia
- Growcom
- Nursery & Garden Industry Queensland (NGIQ)
- Queensland Dairyfarmers' Organisation (QDO)
- Australian Cane Farmers Association (ACFA)
- Queensland United Egg Producers (QUEP)
- Turf Queensland
- Queensland Chicken Meat Council (QCMC)
- Bundaberg Regional Irrigators Group (BRIG)
- Burdekin River Irrigation Area Irrigators Ltd (BRIA)
- Central Downs Irrigators Ltd (CDIL)
- Fairbairn Irrigation Network Ltd
- Mallowa Irrigation Ltd
- Pioneer Valley Water Cooperative Ltd (PV Water)
- Theodore Water Pty Ltd
- Eton Irrigation Scheme Ltd
- Pork Queensland Inc
- Queensland Oyster Growers Association
- Tropical Carbon Farming Innovation Hub
- Lockyer Water Users Forum (LWUF).

The united voice of intensive and irrigated agriculture



QFF welcomes the opportunity to provide comment on the Consultation Draft Underground Water Impact Report (UWIR) 2021. We provide this submission without prejudice to any additional submission from our members or individual farmers.

Background

QFF notes that the Underground Water Impact Report (UWIR) for a cumulative management area (CMA) is a statutory report to provide for:

- an assessment of impacts from existing and proposed associated water extraction by resource tenure holders – i.e. coal seam gas (CSG), conventional oil and gas, and coal mining – including establishing existing impacts and making predictions of future impacts on aquifers and groundwater assets
- the impacts from coal mining are integrated into the cumulative assessment for the first time in the 2021 report
- proactive strategies for managing those impacts – such as make good of water bores ahead of actual impacts, a monitoring strategy and impact mitigation strategies for affected springs and connected watercourses
- assignment of responsibilities to individual tenure holders to implement strategies and for ongoing reporting.

The report for a CMA is prepared independently by the Office of Groundwater Impact Assessment (OGIA) every three years to iteratively update the assessment and management strategies in response to emerging data, information and issues.

QFF acknowledges the trends reported in the UWIR 2021:

- CSG is the dominant, and expanding, resource development activity in the Surat Basin from five major operators – QGC, Santos, Origin Energy, Arrow Energy and Senex.
- The existing and proposed production footprint has increased by about 8% compared to the previous UWIR but remains within the existing approvals.
- As at the end of 2020, there are approximately 8,600 CSG wells in the Surat CMA. This is likely to increase to 22,000 based on the current plans of approved development – about 5% higher than reported in the previous UWIR.
- There has been a significant increase in associated water extraction by CSG since 2014, to the current level of around 54,000 ML/year from about 8,600 wells.
- The majority (41,000 ML/year) of associated water extraction has been in the Surat Basin, while in the Bowen Basin it has remained relatively stable in recent years at about 9,000 ML/year.
- There are eight existing and proposed open cut mines coal mines in the Surat Basin with a footprint of less than two per cent of the CSG footprint.
- Four mines are operational – New Acland (Stages 1 and 2), Cameby Downs, Kogan Creek and Commodore – while another coal mine, Wilkie Creek, is currently closed. Extension of two existing mines – New Acland Stage 3 and Cameby Downs – is also under consideration and approvals are in place for the establishment of two large new coal mines – Wandoan and Elimatta. Approval for The Range mine is under consideration.
- Total associated water extraction by coal mines in the Surat Basin in 2020 has been less than 1,000 ML/year, which is less than two per cent of the overall associated water extraction in the Surat Basin.

QFF also acknowledges the impacts identified in the UWIR 2021. Including that a total of 702 water bores are predicted to be impacted in the long term (LAA bores), including 186 that have already been decommissioned or made good. Of the LAA bores, there are 108 that are likely to be impacted in the next three years (IAA bores) and will require follow-up make good arrangements.

The available data also indicates that approximately 90 mm of CSG-induced subsidence has occurred since 2015 in some mature gas field areas near the Condamine Alluvium.

Feedback - Subsidence

QFF is particularly concerned about the range of impacts, magnitude, and slope of the CSG-induced subsidence. QFF acknowledges that OGIA, in collaboration with the GasFields Commission Queensland, have established an ongoing engagement process with landholders and commenced several research initiatives to improve assessment methods and the collective understanding of subsidence. However, it is not appropriate for the UWIR to simply abstain responsibility for the management of subsidence and its impacts in the statement (page 99) “*while the assessment of subsidence is within the legislative scope of the UWIR, management actions in response to subsidence are currently beyond that scope*”.

QFF seeks to understand and have documented in the UWIR 2021, the administering authority with responsibility for the management actions in response to subsidence.

With regards to the UWIR, QFF suggests a further figure to support Figure 7.1 (in section 7.3.1). Whilst this graphic is useful, it implies that subsidence is highly localised and does not show the extent or scale of subsidence over an area.

Also on page 100, QFF questions the statement that “*the pattern of regional groundwater depressurisation in gas fields will be relatively uniform over time. This will result in relatively uniform subsidence within the active gas fields, gradually tapering away from the gas fields*”. Evidence to date from landholders and data presented in the UWIR does not support this statement.

Figure 7.4 is a useful image. QFF suggests it is further supported by similar imaging showing the cumulative impacts of subsidence over time.

Section 7.5, makes reference to four elements of a monitoring strategy including *conditional monitoring (a safety net)*. **QFF seeks further elaboration on the concept of the ‘safety net’ and asks for OGIA to provide a statement pertaining to the point at which the safety net would be reached or enacted, and the actions resulting.** QFF assumes that OGIA would call for an intervention such as referring the levels of subsidence to government or calling for a cessation of resource activities.

Greenhouse Gas Storage

This month the Morrison Government released its Long-Term Emissions Reduction Plan¹. In the carbon capture and storage (CCS) and carbon capture, use and storage (CCUS) section (page 54), Figure 2.6 identifies prospective CO₂ storage sites in Australia. QFF notes the site identified in the Surat Basin, specifically the CTSCo project.

The Queensland Government granted CTSCo a greenhouse gas (GHG) exploration permit EPQ10 in December 2019. As holder of the GHG permit, CTSCo is authorised to assess the greenhouse gas storage potential of the tenure area, and this includes the evaluation or testing of the underground geological formations or structures for GHG stream storage by injecting carbon dioxide or water into it. The Department of Environment and Science has issued an environmental authority (EA) for this GHG exploration permit.

¹ See <https://www.industry.gov.au/sites/default/files/October%202021/document/australias-long-term-emissions-reduction-plan.pdf>

The project involves exploration of the tenure area to determine a location for a potential demonstration project. CTSCo states on its website that a final investment decision for the project is due later in 2021².

QFF notes that under an exploration permit, while CTSCo may undertake injection trials, commercial injection activities are not authorised. A company would be required to apply for and obtain a Greenhouse gas (GHG) injection and storage lease (QL) to commercially develop a carbon dioxide storage site. QFF also understands that both an exploration permit and an injection/storage lease require an EA prior to tenure grant. In addition, under legislation (the *Greenhouse Storage Act 2009*) the Minister responsible for water must approve a proposed work program prior to tenure grant, to the extent it relates to potential groundwater issues.

The below map shows CTSCo’s exploration tenure. This is the only tenure granted for greenhouse gas storage site exploration in Queensland.



QFF notes that there are no CSG projects within the EPQ10 tenure area. CSG activity occurs immediately to the northeast of EPQ10, under petroleum lease PL 1011 located about 15 km southeast of Condamine.

Specifically, in relation to CSG activities QFF acknowledges that:

- The production of coal seam gas (CSG) may only be carried out under a petroleum lease (PL) granted under the *Petroleum Act 1923* (1923 Act) or the *Petroleum and Gas (Production and Safety) Act 2004* (P&G Act).
- The P&G Act and the 1923 Act does not provide for the long-term storage of carbon dioxide (CO₂) under a PL.
- CO₂ injection and long-term storage activities may only be carried out on a GHG injection and storage lease (GHG lease) granted under the *Greenhouse Gas Storage Act 2009* (GHG Act).
- The P&G Act and the 1923 Act have provisions requiring the decommissioning of wells, pipelines and the removal of associated infrastructure, prior to a PL ending or the land on which these are located ceases to be in the area of the PL. Non-compliance action may be taken by the Minister if the holder of a PL does not properly decommission wells or pipelines, or removes equipment and improvements.

² See <https://www.glencore.com.au/operations-and-projects/coal/projects/carbon-transport-and-storage-project>

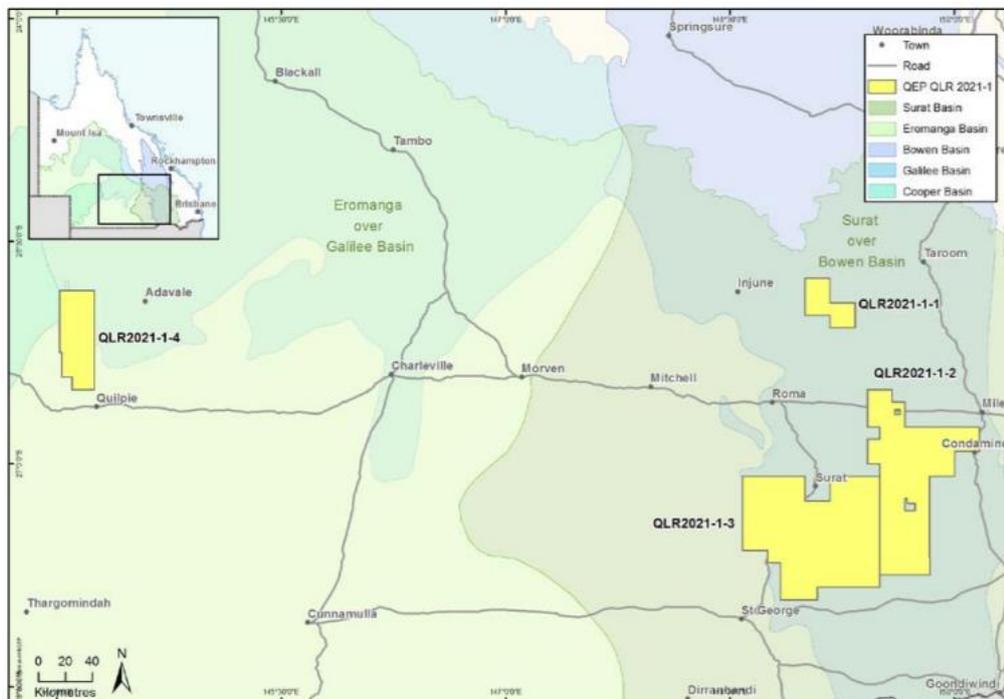
- With regards to rehabilitation, the resource company must remediate and restore the area of the PL once authorised activities for the PL have finished. Rehabilitation needs to also be in accordance with the environmental authority issued for the PL.

QFF notes that despite the current legislation, there are significant landholder concerns that there may be future transitioning/transfer of CSG assets to the carbon sequestration sector and this will negate the responsibilities of the CSG industry to remedy and rehabilitate. QFF suggests that the Gasfield’s Commissions includes in its scope, information for landholders on this subject.

The Queensland Exploration Program and the CMA

QFF notes the Expression of Interest (EOI) released by the Department of Resources (March-May 2021) allowing industry to nominate areas they would be interested in exploring for potential Carbon sequestration locations. Industry responses to that EOI are reflected in the Queensland Exploration Program (QEP) released 24 November³.

QFF recognises the eight areas identified in the QEP for petroleum exploration and critically, the four for Carbon sequestration, as per the map below (Figure 1 in the QEP).



While QFF acknowledges that the QEP program simply opens an application process for exploration and it is not granting tenure, the location of the Carbon sequestration projects are of significant concern.

QFF requests that OGIA are immediately instructed by the Administering Authority to commence investigations into the potential cumulative impacts of the identified Carbon sequestration in the CMA, noting the precautionary principle.

The ‘Precautionary Principle’ is set out in the Intergovernmental Agreement on the Environment and is designed to provide a mechanism to align the decision making between States and Federal Government, and to facilitate better environmental protection. Within this agreement, Section 3.5.1 states the precautionary principle as –

³ See https://www.resources.qld.gov.au/data/assets/pdf_file/0009/1588410/2021-queensland-exploration-program.pdf

“Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:

- 1. careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment; and*
- 2. an assessment of the risk-weighted consequences of various options”.*

If there are any questions on this submission, please do not hesitate to contact me directly at georgina@qff.org.au.

Yours sincerely

Dr Georgina Davis
Chief Executive Officer