

More research needed on coal seam gas exploration

A scientific study that brought data from major coal seam gas companies together for the first time has opened the doors for more research to be undertaken into the exploration and production methods for the Surat Basin in southwest Queensland.

Professor Steven Raine, a soils and water expert in the Faculty of Engineering and Surveying said that conclusions drawn by a study recently released into coal seam gas mining by the Australian Petroleum Production & Exploration Association (APPEA) need further investigation and interpretation to determine conclusive location specific outcomes.

He said that USQ had been commissioned to bring together a number of separate CSG studies conducted by industry groups as part of an overall assessment of the impact of coal seam gas extraction on aquifers in the Surat Basin.

Professor Raine said that the report was a scenario assessment of the cumulative water drawdown impacts in the Surat Basin and that the University had been asked to identify groundwater areas expected to be impacted by CSG projects in the region.

As part of the project two scenarios were considered where high and low volumes of water were taken from the Walloon coal measures.

He said information provided from several CSG companies was overlaid to estimate the impact that water extraction might have on the water pressure in surrounding aquifers.

“This is the first time that industry groups had collaborated to provide the public with scientific modelling and data information which would show the effects of underground water usage and resulting impacts,” Professor Raine said.

“Any conclusive interpretation of the modelling is however dependent on the changing nature of the coal seam gas mining operations and the overall extent of the drawdown of water reserves.”

He said the CSG companies involved in the study had taken a whole-of-industry approach in sharing their research and had fully cooperated with the university in making their results available for public analysis.

Professor Raine went on to say that the environmental impact of water drawdowns varied depending on the location and depth of the aquifers and on the volumes of water extracted.

He said that while there was little difference between the high and low volume water drawdowns in some aquifers it is difficult to make any substantive judgement on environmental impacts.

The study undertaken by the University did not comment on the extent of drawdowns at particular sites and any impact on water flows for either the Great Artesian Basin or other users.

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He said that recommendations provided in the report by the University were made to assist in developing a regional model and are not inferred for other Australian provincial areas.

Professor Raine called for further research to be undertaken including improved data collection and studies to understand the connectivity between the shallow aquifers used for agriculture and the deeper aquifers that were of interest to the coal seam gas industry.

A copy of the [CSG report](#) is available from the [USQ Surat Basin website](#).

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