18 CUMULATIVE IMPACTS

18.1 INTRODUCTION

This chapter provides responses to submissions received on the Queensland Curtis LNG (QCLNG) Project's draft environmental impact statement (EIS) related to cumulative impacts of the Gas Field Component.

The projects for which cumulative impacts are assessed are described in the draft EIS. It is not expected that all these projects will either proceed or proceed at the same time.

18.2 RESPONSES TO SUBMISSIONS

Table 3.18.1 provides a summary of the submissions received on cumulative impacts of the Gas Field, and a response to those submissions.

Table 3.18.1 Response to Submissions on the Draft EIS

Issue Raised	QCLNG Response	Relevant Submissions(s)
The number of proposed CSG and coal mining projects necessitates a comprehensive catchment plan and government control of Associated Water.	QGC will co-operate with any government or industry efforts to develop a comprehensive catchment management plan. Through APPEA, a joint study was commissioned in early 2009 between the four major CSG companies including QGC, Origin, Arrow and Santos to investigate the potential for aggregation of water for beneficial reuse and disposal. QGC, Origin and Arrow are further investigating opportunities to treat and supply CSG water to large beneficial users. Aggregation could mean fewer evaporation ponds, but the same volume of brine will require management.	34
Include Arrow and Origin in discussion of cumulative impacts from gas fields.	The methodology for inclusion or exclusion of projects from the cumulative impact assessment is described in *Volume 1, Appendix 1-6* of the draft EIS. As no published information, such as an Initial Advice Statement, was available on the development of Arrow's and Origin's gas fields, QGC cannot assess the cumulative impacts from these projects. It should be noted that as of the date of closure of submissions to the draft EIS, no information was publicly available on the development of Arrow's and Origin's gas fields.	32,
Water supply, sewerage and waste management should be assessed for all projects in the WDRC.	Without adequate information about the proposed water supply, sewage treatment or waste management options of other CSG projects in the WDRC, QGC cannot adequately assess cumulative impacts. QGC believes that it is more appropriate for these projects to make some assessment of the cumulative impacts, as they are chronologically after QCLNG's EIS release, or for DERM or DIP to co-ordinate an appropriate level of assessment based on the data provided to them through the various projects.	36
Concern about cumulative impacts to freshwater environments, air quality and groundwater aquifers.	*Volume 3, Chapter 18* of the draft EIS assessed the cumulative impacts of projects for which information was available, as per the criteria stated in Volume 1, Appendix 1-6 of the draft EIS. Without adequate information about the potential impacts on freshwater environments, air quality and groundwater of other CSG projects in the WDRC (Arrow and Origin), QGC cannot adequately assess cumulative impacts. QGC believes that it is more appropriate for these later projects to make some assessment of the cumulative impacts or for DERM or DIP to co-ordinate an appropriate level of assessment based on the data provided to them through the various projects. In regards to cumulative impacts on groundwater from other proposed CSG producers, QGC can supply the following comments:	25

Issue Raised	QCLNG Response	Relevant Submissions(s)
	• QGC does not have access to any other CSG operator's groundwater impact modelling output, and is not able to assess mutual interference affects. • The publicly available data in the GCLNG (Santos) EIS is insufficient to provide meaningful conclusions about potential cumulative groundwater impacts. Based on the hydrogeology studies conducted for the draft EIS, QGC believes that interference effects between QGC and Santos' Surat/Bowen basin activities will be unlikely, due to the large distance between these fields. • It is anticipated that the interference effect between QGC and Arrow and Origin CSG fields will be considerable, but of the order (with respect to the magnitude of drawdown) of that predicted in the draft EIS. This impact will, however, be felt over a more extensive area. As there is no publicly available information relating to the gas field development for either of these projects, neither of which were declared projects at the time of the publication of the QCLNG EIS, QGC does not feel able to provide any further comment on their cumulative impacts.	
Table 3.18.1 is difficult to interpret	Refer to *Volume 3, Chapter 18* of the draft EIS for a discussion of the content of *Table 3.18.1*	25
Develop constraints mapping that incorporates all constraints and describes management measures for various levels of constraints.	. Refer to Volume 3, Chapter 19, which includes a description of the objectives, development and application of constraints mapping.	32