Decision Impact Analysis Statement for the Queensland Lake Eyre Basin region:

Protecting the river systems, supporting sustainable economic activities, listening and responding to First Nations' voices

Queensland Government

Prepared by: Department of Environment, Science and Innovation

The Department of Environment, Science and Innovation acknowledges Aboriginal peoples and Torres Strait Islander peoples as the Traditional Owners and custodians of the land. We recognise their connection to land, sea and community, and pay our respects to Elders past and present.

The department is committed to respecting, protecting and promoting human rights, and our obligations under the Human Rights Act 2019.

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The Department of Environment, Science and Innovation (DESI) acknowledges the First Nations peoples of the Queensland section of the Lake Eyre Basin, and pays respect to their Elders past and present. DESI acknowledges the First Nations peoples' deep connections to their lands and waters, their customs, traditions, cultural heritage, knowledges, stories and systems, and notes that sovereignty was never ceded.

DESI is committed to shaping the future framework for the Queensland Lake Eyre Basin in partnership with the First Nations peoples of the region. DESI greatly appreciates the respectful engagement, knowledge, advice, information and general input provided by the Traditional Owners Alliance representatives.

DESI also appreciates the perspectives of and input from other members of the Lake Eyre Basin Stakeholder Advisory Group and all the submitters and respondents to the consultation process across a wide array of issues and interests.

February 2024

Contents

1. Summary

The Kati-Thanda Lake Eyre system is of outstanding ecological and cultural significance from a national and global perspective. The Queensland Lake Eyre Basin (Qld LEB) contains among the last remaining, largely intact and free-flowing arid river systems in the world. The clean flows of the Georgina, Diamantina and Cooper support a wide range of unique surface water dependent ecosystems – including 33 wetlands of national importance - and unique biodiversity along their courses. The river systems have extensive First Nations cultural significance and are also critical to other major industries in the region, including organic grazing and tourism, and regional communities in the Qld LEB.

The impact of gas and oil extraction on the floodplains has been a longstanding and major concern raised by Traditional Owners, conservation groups, graziers, scientists and others. There is particular concern about the ability of the current regulatory system to manage the cumulative impacts of development and notably, the surface infrastructure and greater risks of surface and groundwater contamination associated with hydraulic fracturing for deep, unconventional gas. Development has the potential to disrupt flows, fragment landscapes and cause irreversible impacts on water sources crucial to ecological functions and other key industries in the regions. Whilst the current regulatory approach incorporates spatially-specific regulatory prohibitions for open cut mining, dams and irrigated cropping in the Designated Precinct (DP) rivers/floodplains areas, it is silent on gas and oil in these sensitive areas.

The Consultation RIS was released on 2 June 2023 for 12 weeks consultation. This was supported by the provision of online mapping tools and information, a series of stakeholder briefings, and a series of community meetings in the Qld LEB region. Whilst not expressing preferred options, the Consultation RIS canvassed views on the following options:

Spatial options (extent of mapped protections)

- Option 1. Retain the status quo – no change to current spatial extent of mapped areas for protection.
- Option 2. Expand current Strategic Environmental Area / DP boundaries to add those river and floodplain areas, and special ecological features, considered to be of greatest ecological significance, to create a new regulatory map. These additions would largely be consistent with previously mapped areas of higher protection under pre-2014 river declarations, and would extend existing use provisions for such areas.
- Option 3. Build on the above option by including additional areas of ecological significance, adding to the breadth of spatial coverage of hydrological features.

Regulatory options (permitted future activities)

- Option 1. Retain the status quo – no change to current regulatory frameworks.
- Option 2. Augment the current regulatory regime to require a more detailed and comprehensive assessment approach to test for alignment, with pre-determined criteria for acceptable uses/activities within the DPs such as hydraulic fracturing, to provide certainty to industry regarding oil and gas extraction in the floodplains and rivers.
- Option 3. Not allow future unconventional oil or gas extraction as potential high impact activities in the regulatory mapped floodplains and rivers (i.e. the finalised Strategic Environmental Area / DP areas) of the Qld LEB.
- Option 4. Not allow any future oil and gas activities in the regulatory mapped floodplains and rivers.

Options for environmental attributes of the Qld LEB river systems

- Option 1. Retain the status quo – no changes to current environmental attributes.
- Option 2. Broaden the environmental attributes, to capture the full range of key processes and functions that are considered fundamental to the preservation of LEB's natural system, including geomorphic processes, riparian functions and wildlife corridors.

This Decision IAS considers and identifies how a range of outcomes, including protecting the river systems, supporting sustainable economic activities and listening and responding to First Nations' voices, can better be achieved. The Decision IAS sets out further analysis of existing and proposed activities within and outside of the DPs. It also reviews economic and scientific research, as well as all the feedback provided in response to the Consultation RIS. The Decision IAS assesses the benefits and impacts of each option canvassed and recommends the preferred approaches for the future management of the Qld LEB.

Expert environmental economic analysis conducted for DESI has advised, "Existing resource extraction in Qld's LEB, operating under current environmental regulations, will continue to generate positive ancillary income and negative externalities. Previous findings on the risks from future conventional and unconventional oil and gas extraction indicate that a risk-aware, precautionary approach to environmental and natural resource management is warranted. A precautionary approach is paramount to ensure long term sustainability of Qld LEB's environmental-social-economic systems." [1]

The question of how best to protect the Qld LEB's unique, intact, and ecologically and culturally significant river systems, while at the same time supporting sustainable economic activities and minimising the regulatory impacts on existing industries in the region, has been a key policy consideration for government. In doing so, it has been important to listen and respond to the voices of the First Nations Traditional Owners and Custodians of the Qld LEB region who have and continue to successfully use, manage and care for these river systems.

The Qld LEB region is of national and international importance in environmental, cultural and economic terms. Its cultural, hydrological and biodiversity values are unique and irreplaceable.

The region also generates great value and makes a major contribution to the Queensland economy and society in range of ways. Accordingly, the Decision IAS takes a holistic approach to the question of the Qld LEB's value and worth (see Section 6).

This Decision IAS for the Qld LEB recommends a set of regulatory changes that address the core objective to strengthen protections whilst supporting sustainable growth. In doing so, it draws on the full range of inputs and submissions to the Consultation RIS, further analysis and the importance of the precautionary principle in addressing risks and uncertainty.

A central question has been how to formally recognise and protect the most sensitive parts of the floodplains and watercourses of the region - the DPs – and better protect them into the future. Importantly, this needs to account for not just the risks, threats and mitigation approaches for individual projects or industries, but also the cumulative impact of development on the integrity and functioning of the river systems.

This recommended direction is based on the Qld LEB's unique features and values, specific settings and industry composition and scenarios for growth in the region. The recommended changes are not proposed to be applied elsewhere in Queensland as they respond directly to characteristics and risks to the rivers and floodplains of the Qld LEB.

This Decision IAS recommends:

- Spatial Option 3 – Builds on Spatial Option 2 (i.e. expand current Strategic Environmental Area / DP boundaries to add those river and floodplain areas, and special ecological features, considered to be of greatest ecological significance, to create a new regulatory map) by including additional areas of ecological significance, adding to the breadth of spatial coverage of hydrological features.
- Regulatory Option 4 – future gas or oil production within DPs prohibited as an unacceptable use with some transitional arrangements for certain proposed conventional extraction in the expanded DPs.
- Environmental Attributes Option 2 – Broaden the environmental attributes, to capture the full range of key processes and functions that are considered fundamental to the preservation of LEB's natural system, including geomorphic processes, riparian functions and wildlife corridors.

The recommended settings have been designed to avoid restrictions on current or future critical mineral

[1] Hasan and Smart 2023, p34. See Section 6 for full citation. A copy of this study forms Attachment 1 to this Decision IAS

projects, noting their importance to global decarbonisation. As such, it is confirmed that provisions prohibiting open cut mining in the DPs will be varied for critical mineral projects that may overlap with the additional DP areas. This means that critical mineral projects, including the infrastructure necessary for them, will remain subject to existing standard impact assessment and approval projects, rather than the application of unacceptable use provisions.

The recommended approaches are designed to better protect the river system support existing activities including current conventional gas production on and off the floodplains, and prevent future threats in clearly delineated sensitive areas where the risks are the greatest. The protections proposed are unique to the specific circumstances and values of the Qld LEB.

Future production outside the expanded designated precincts will be able to continue under the current regulatory regime. This means the majority of the Qld LEB will be unaffected. The enhanced protections will not be retrospective when it relates to existing resource authorities that intersect with the DPs, ensuring existing holders of Petroleum Leases will be able to continue gas operations within or outside the DPs, and holders of Authorities to Prospect can continue to explore. To enable the transition to the new regulatory regime, holders of existing petroleum Authority to Prospect or an Authority to Prospect with a Potential Commercial Area declaration over it in areas within the amended DPs will be able to submit Petroleum Lease Applications for conventional gas or oil before 30 August 2024. Any such applications, along with Petroleum Lease applications already submitted but undecided on 22 December 2023, will otherwise be assessed under the previous regulation. Petroleum Lease Applications away from the DPs are not affected by the changes. New Authority to Prospect Applications will need to be focused away from the DPs. However, the new regulations will not prohibit accessing deeper located resources from outside of the expanded DPs.

In better protecting the rivers and floodplains of the Qld LEB, this approach will help to safeguard the long-term prosperity of other industries and major sources of employment in the region. Improved protections will provide greater investment certainty in key industries such agricultural and tourism. This includes organic beef production, where the Qld LEB is already one of the largest and highest value production regions in the world. It will also support and require expanded land management and care for Country. All these activities are totally dependent on clean water, healthy land and soils, and thriving nature and natural values.

The above recommended approaches are consistent with the Queensland Resources Industry Development Plan, which indicates "The final proposed (Qld LEB) framework is intended to ensure more comprehensive protections for the rivers and floodplains while also providing regulatory certainty for activities including resources developments elsewhere within the basin."[2]

In response to First Nations peoples' priorities and aspirations, it is recommended that the Queensland Government commit to:

- improving formal recognition of Country and Cultural Heritage, and addressing the need for appropriate engagement and consultation beyond Native Title processes on matters relating to Country;
- working constructively and collaboratively with the members of the LEB Traditional Owners Alliance to consider how best to improve capacity to support engagement and participation in decision-making processes for the LEB region;
- examine how best to enable the realisation of First Nations people's aspirations for cultural, economic, social, and environmental opportunities and outcomes, including land and river management, First Nations-owned and managed tourism and business, and First Nations enterprises and entrepreneurialism (e.g. biodiscovery and traditional knowledge); and
- establish and maintain a dialogue and decision-making forum with the First Nations people of the Qld LEB region, their organisations and their representatives, about how to best protect the Qld LEB's river systems, safeguard cultural and ecological values for the long term across the region, and

[2] Queensland Resources Industry Development Plan 2022, Page 24. Link: https://www.resources.qld.gov.au/__data/assets/pdf_file/0005/1626647/qridp-web.pdf (accessed 29/11/2023)

support social and economic prosperity across the region, including social infrastructure such as housing and amenities.

This ongoing dialogue and decision-making process with the First Nations people of the Qld LEB region, their organisations and their representatives, will need to appreciate and accommodate differing perspectives and priorities across Traditional Owner groups. It will also need to give further consideration, over time, to how to best protect Country and Culture, using both Traditional Knowledge and new science to refine or update approaches.

Section 9 outlines further information about the implementation of the recommended changes.

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Tim Seelig © The State of Queensland

2. Introduction

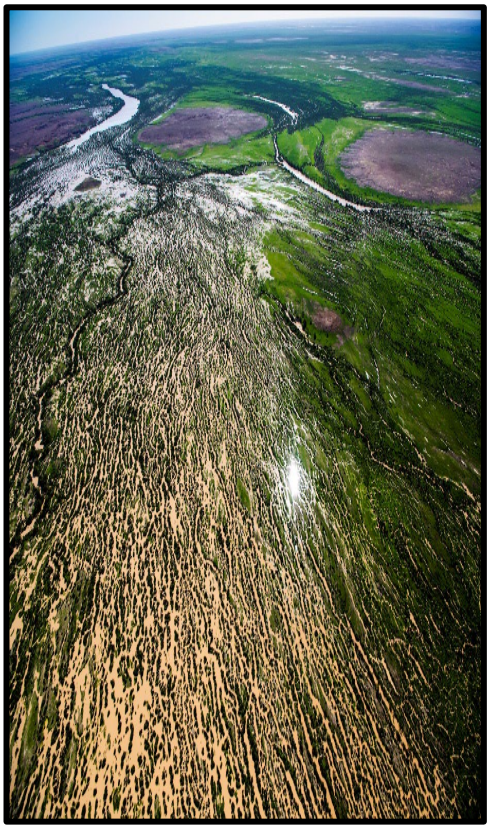
The Decision IAS[3] progresses the impact assessment process following consultation, and includes further review of options, and considerations of benefits, financial factors and other outcomes. This is to inform final recommendations for decision and implementation.

The Consultation RIS for the Qld LEB, which was released by DES on 2 June 2023 for twelve weeks' public consultation, contains a detailed analysis of the array of features, characteristics, activities and issues relating to the region. The intent of the Queensland Government to consider how best to protect the river systems, while supporting sustainable economic activities and hearing the voices of First Nations people, were outlined in that document.

Analyses of existing and potential future development were included along with economic and other data that related to them. That content helped focus discussion on the various spatial, regulatory and other options and propositions which were the subject of consultation. While the options themselves will be further reviewed below, the background and contextual materials in the Consultation RIS will not be repeated here. Instead, references will be made to relevant sections of that document, which can be accessed online: https://shorturl.at/nKLN7

The Decision IAS builds on the issues already examined, adds further information or analysis, draws on matters and comments raised in submissions and responses from public consultation, make conclusions and then recommendations on how outcomes can be delivered.

The Decision IAS examines the matters to be addressed (the problem), and the objectives of government action. It then examines the options and their impacts, and then possible responses to First Nations priorities and aspirations. Finally, it confirms the recommended approaches and discusses their implementation. The sections in the Decision IAS are drawn from the Queensland Government Better Regulation Policy of September 2023. The exception is the summary of consultations and the consideration of options sections, which have been combined given that consultation has already occurred, with views on a range of options already canvassed.



Gary Cranitch © Queensland Museum

3. Identification of the problem

The Consultation RIS contained a detailed discussion of 'the problem' (section 3.4), the 'Current challenges and responses' (section 4), 'Management of environmental threats' (section 5.2.4), and the 'Challenges to be addressed' (section 7). These sections are not repeated in the Decision IAS, but are taken as a foundation.

The Decision IAS process has further contemplated current and potential impacts and risks to the integrity and values of the river systems. This has included further consider of the risk assessments and causal pathways associated hydraulic fracturing for unconventional gas developed by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) as part of the bioregional assessment for the Cooper geological basin. CSIRO's work has been referenced by industry and others as an assurance that the existing framework is capable of moderating the threats from unconventional fracking activities on the rivers, floodplains and watercourses mapped as DPs, and is material to the impacts analyses of available options. DESI acknowledges the extensive work undertaken by CSIRO in examining causal pathways, the assessment of levels of concern for identified risks, and the potential scale of impact on the river systems and values of the Qld LEB.

[3] Replaces the previous Decision RIS instrument under the Queensland Government Better Regulation Policy of September 2023.

The Decision IAS has though considered further analysis of the adequacy of the existing regulatory system in light of the risks identified by CSIRO, noting that CSIRO did not, as part of their work, undertake a detailed evaluation of the scope and effectiveness of current regulation but instead made assumptions about its adequacy. This includes the Lake Eyre Basin Synthesis Report (Sustainable Minerals Institute, University of Queensland, 2022) which identified several impacts that do require additional attention and significant gaps in the current regulatory system.

The Consultation RIS offered an analysis of the potential risks associated with industrial-scale unconventional gas production using deep and intensive hydraulic fracturing. It flagged the rationale for taking a precautionary approach. This was not so much a critique of the current regulatory frameworks as it was an appreciation of possible future risks in the specific case of the floodplains of the Qld LEB.

There is currently no industrial-scale unconventional gas production within the DPs, but future unconventional production on floodplains has previously been proposed by industry. Previous studies have shown that unconventional production in floodplains represents a higher and unknown risk, and greater threat to ecological integrity and water quality. The current regulatory regime remains untested in its capacity to cope with managing the new level of risk of such activity. This yields an important opportunity for government to be proactive and take precautionary measures in managing river health. This also provides a means of providing greater investment certainty on where future unconventional gas development could take place, and where, with geographic precision, it cannot.

DESI has also considered extensive independent analysis of the risks of unconventional gas production in the domestic and international context. For example, the Northern Territory Fracking Inquiry[4] (the Inquiry) indicates that surface water contamination is a primary risk and outcome of incidents in large scale unconventional gas fields. The Inquiry also made a clear recommendation that it be prohibited in areas of high conservation value. From a precautionary approach, minimising future risks in unique and irreplaceable environments that also provide vital hydrological services to other industries, is sensible and consistent with national and State frameworks. The risks of contamination of surface water, alluvial hyporheic areas on the floodplains, adjacent soils or downstream waterholes and lower parts of the river systems are regarded as of potential concern (see CSIRO). These impacts could be spread widely and be extremely challenging to remediate.

The issue for government is therefore how best to anticipate and proactively manage future threats. Further, consideration must also be given to how to address potentially fundamental shifts in risk before they manifest as major problems or produce widespread or irreversible ecological or cultural impacts, which may have national and international ramifications.

This necessitates a broader method to managing risk, rather than sole reliance on the existing causal pathway tools such as the CSIRO Cooper GBA-Explorer[5], given the regulatory system is untested in managing large-scale unconventional gas production on floodplains.

For the purposes of this Decision IAS, a fully precautionary approach is being adopted, alongside an assessment of impacts and benefits of various options. The core premise for risks is as follows:

	Consequence				
Likelihood	**Insignificant**	**Minor**	**Moderate**	**Major**	**Critical**
Rare	Low	Low	Low	Medium	High
Unlikely	Low	Low	Medium	Medium	High
Possible	Low	Medium	Medium	High	High
Likely	Medium	Medium	High	High	Extreme
Almost certain	Medium	Medium	High	Extreme	Extreme

[4] Northern Territory Fracking Inquiry 2018, pages 22-40; 77-81; 144-160; 166; 259. Link: https://frackinginquiry.nt.gov.au/inquiry-reports/final-report (accessed 29/11/2023)

[5] https://gba-explorer.bioregionalassessments.gov.au/coo/

Between 'Rare' (which provides for unprecedented and unforeseen) and 'Possible' frequency, and 'Critical' consequences, the risk is 'High', but not 'Extreme'. Rare future incidents such as chemical contamination of surface water or other features on a floodplain which are not or cannot be mitigated, but would have critical impacts on local and downstream water quality, ecosystems, and cultural values, which would be regarded as 'High Risk'. The appropriate response is to avoid such High Risks into the future, through changes to the regulation of future activities. If the risk were to be regarded as 'Extreme', this might suggest that the appropriate action includes restricting or ceasing current activity.

In response to the Consultation RIS, clear concerns were expressed about both conventional and unconventional gas and oil extraction in the DPs, and the effectiveness of the current protections. In particular, respondents were concerned about the risks of contamination and cumulative impacts from intensive and industrialised fracking for gas and oil. The majority of respondents supported greater regulation to address this.

Consultation feedback on the draft 'Lake Eyre Basin Strategic Plan' has focused extensively on the unique ecological features of the LEB and the threats to the environment and other industries that are faced, including from gas and mining.[6]

It is acknowledged that there are a range of existing economic and social activities which take place within the Qld LEB region, each with capacity to impact on the rivers and floodplains. However, given the potential scale of impact both environmentally and economically, it is the future risks of contamination and interference with flow that are the core problems to be addressed.

It should be noted that in the case of the Qld LEB, the DPs occupy the same boundaries as the Strategic Environmental Areas (SEAs) for the region. This arises from the construct of the Regional Planning Interests legislation and regulation. Accordingly, they can be read as being synonymous for the purposes of, and all discussion of DPs within, this document.

[6] : https://www.dcceew.gov.au/water/policy/national/lake-eyre-basin/strategic-plan-consultation-summary#enviro-threats

4. Objectives of government action

Section 3 of the Consultation RIS discussed why the Qld LEB should be protected, and section 6.2 highlighted the position of the Queensland Government in terms of election commitments, policy imperatives and previous decisions.

In 2015 and in 2017, the Queensland Government committed to "Work with traditional owners, stakeholders and communities to ensure the State's Pristine rivers are protected…. Include a review of the extent to which the Regional Planning Interests Act provides adequate protection" (Government Election Commitment 958). In 2020, the Queensland Government committed to establishing a Qld LEB Stakeholder Advisory Group (SAG) to develop a Consultation RIS (GEC 2071), and to release two scientific reports commissioned by the government (GEC 2072).

The procedural elements of the latter commitment have been achieved through the convening of the SAG between late 2021 and July 2022, and the production and release of the Consultation RIS. Addressing the longer-term approaches of delivering rivers protection, ensuring sustainable economies, and hearing First Nations' voices, is the final piece of the process.

The Consultation RIS clearly indicated a risk-based precautionary approach to Qld LEB river protections, and this Decision IAS continues with that intent. As Hasan and Smart (2023) indicate[7], "…studies on the impacts of resource extraction activities detailed in Hall et al. (2018), Holland et al. (2020, 2021) and Huddlestone-Holmes et al. (2018) all assumed that adverse impacts should be covered (i.e. adequately managed) by current regulatory frameworks. This contrasts with findings from the Independent Scientific Expert Panel (Fielder et al. 2019) which suggested that the current regulatory framework would not deliver adequate protection of environmental values (Côte, 2022)."

As stakeholders from all sectors and perspectives have acknowledged, the river systems in the Queensland LEB are unique, critical to the region's economy, culture and ecology, and also fragile and sensitive to contamination or interruption to flows. The Decision IAS considers several unique factors: the rivers themselves are unique in ecological terms, given they are intact, function in the landscapes they travel through and where they end (terminal lakes and wetlands); the rivers hold unique cultural meaning and significance, and the unique challenges presented by the future prospect of full production-scale extraction of unconventional resources on the most sensitive parts of these river systems. The directions taken in this Decision IAS for the Qld LEB rivers are exclusive to this region, and its unique characteristics and conditions.

[7] Hasan, S. and Smart, J.C.R. *Economic analysis for Queensland Lake Eyre Basin Full Decision Impact Analysis Statement*. ARI Report No. 2023/010. Australian Rivers Institute, Griffith University, Brisbane. 2023. P33.

5. Consideration of options and consultation

5.1. Background to the process

The Consultation RIS outlined the history and process to the development and release of that document. As referred to above, the SAG was established in late 2021, and was chaired by former Natural Resources Minister, Mr Stephen Robertson. Membership of the SAG included representatives from Queensland Lake Eyre Basin Traditional Owner Alliance, Queensland Resources Council (QRC), Australian Petroleum Production & Exploration Association (APPEA), local government represented by the Mayor of Quilpie (also for AgForce) and the Mayor of Longreach (who also represented the Remote Area Planning and Development Board), Queensland Farmers Federation, Pew Charitable Trusts, Lock the Gate Alliance, Desert Channels Queensland, and the Australian Rivers Institute.

The SAG met five times between December 2021 and 12 July 2022. Its work across its five meetings included:

- a presentation of preliminary and evolving positions of stakeholders;
- an examination of current regulatory regimes;
- an examination of the spatial aspects of protecting the rivers and floodplains;
- special presentations from the Traditional Owners Alliance and by two of the larger gas companies operating in the Qld LEB;
- meetings in Longreach and Brisbane;
- a field trip to the Ballera Gas Centre and gas fields in the Cooper Basin;
- a discussion of a range of ecological, cultural, economic, social, land use and other issues concerning the Qld LEB region; and
- consideration at the final meeting of the likely scope of spatial and regulatory options for inclusion in the Consultation RIS.

The Qld LEB Consultation RIS was released by the Minister for the Environment and the Great Barrier Reef, Minister for Science and Minister for Multicultural Affairs for public consultation on Friday 2 June 2023. It was available for a period of 12 weeks, with comments, submissions and responses closing at 5.00pm Friday 25 August 2023.

All organisations and representatives who participated in the SAG process were provided with copies of the Consultation RIS and information about how to promote and respond. The release also attracted news media attention and was covered on several social media platforms.

To further promote the Consultation RIS, and to provide opportunities for questions and clarifications, DES provided the following:

- Online briefing for Mayors and Council CEOs (6 July 2023);
- Online briefing for the Qld LEB Traditional Owner Alliance Executive (28 July 2023);
- Online briefing for conservation groups and Environmental Defenders Organisation (28 July 2023;
- In person briefing and meeting with Santos representatives (11 August 2023);
- Online briefing for QRC, APPEA, and a number of resource companies (gas and minerals) including legal advisors (17 August 2023);
- Online briefing for researchers at the Centre for Biodiversity and Conservation Science, University of Queensland and the Biodiversity Council (18 August 2023);
- In person briefing for the Queensland Traditional Owner Alliance's representatives at their face to face meeting (21 August 2023); and
- In person community meetings and briefings across the Qld LEB region held in Winton, Boulia, Bedourie, Birdsville, Windorah, Longreach, Barcaldine, Dajarra, Camooweal and Quilpie.

A standardised set of presentation slides were used for each of these briefings, except in some of the community meetings where verbal briefings were provided to complement hard copy large-print maps of

each of the spatial options. Posters were also left at each of the venues about the consultation process, with a web address and a QR Code to link to the official website for information and responses.

The Consultation RIS was publicly available through DES' 'Have you say' website. Responses and submissions were invited through either an on-line survey or by direct email to DES' policyinitiatives@des.qld.gov.au email address.

A total of 20,009 submissions were received by email by the deadline of 5.00pm 25 August 2023, along with 373 survey responses received through the on-line instrument. This included long form submissions received from various sector peak bodies and representative organisations including First Nations groups, conservation groups, resource companies, local governments, scientists and other individuals with knowledge of or strong interest in the Qld LEB region. However, the vast majority of the submissions were broadly in the form of one of several templated-style emails. Following logging and checking for submitter duplication, a final pool of 17,090 unique email submissions were analysed and responses assessed along with the survey responses (verified as unique), resulting in 17,463 responses overall. Duplicated responses and a further 154 email submissions received after the deadline were disregarded.

The spatial options canvassed in the Consultation RIS were as follows:

- Spatial Option 1 – Status Quo – no change to current Strategic Environmental Area / Designated Precinct (SEA/DP)
- Spatial Option 2 – Expand the current SEA/DP boundaries to add those river and floodplain areas, and special ecological features, considered to be of greatest ecological significance, to create a new regulatory map.
- Spatial Option 3 – Build on Option 2 by including additional areas of ecological significance, adding to the breadth of spatial coverage of hydrological features.

Detailed discussion of each of these spatial options, and how and where they do or would operate, and what they represent in current regulatory terms, was provided in the Consultation RIS, and explained in briefings and meetings. An online mapping tool to enable macro- and micro-level examination of each of the options was specially developed and designed by DES to aid understanding of the intent and interrogation of the options. DES undertook some additional spatial examination in the Queensland Government's GeoResGlobe mapping resource, to respond to questions raised during briefings. DES also provided GIS shapefile data for the spatial options to a number of resource companies on request and made offers to provide these data to others.

It was stressed that there was no proposed return to mapping the whole Qld LEB region or the three river basins in their entirety as per pre-2014 approach, with associated regulatory impacts throughout. It was also indicated that under all the spatial options, more than 80% of the Qld LEB region remains outside the DPs. Option 3, which involves the greatest spatial expansion, increases protections by only 4.7% of the total land area of Qld LEB region.

The regulatory options canvassed in the Consultation RIS were expressed as follows:

- Regulatory Option 1 – Status Quo – no change to current regulatory frameworks.
- Regulatory Option 2 – Augmented Status Quo – augment the current regulatory regime to require a more detailed and comprehensive assessment approach to test for alignment, with pre-determined criteria for acceptable uses/activities within the DPs such as hydraulic fracturing, to provide certainty to industry regarding oil and gas extraction in the floodplains and rivers.
- Regulatory Option 3 – Not allowing future unconventional oil or gas extraction as potential high impact activities in the regulatory mapped floodplains and rivers (i.e the finalised Strategic Environmental Area/ DP areas) of the Qld LEB.
- Regulatory Option 4 – Not allow any future oil and gas activities in the regulatory mapped floodplains and rivers.

Analysis of how and where these regulatory options would operate, and what they represent in current regulatory terms, was provided in the Consultation RIS, and explained in briefings and meetings. It is important to note that oil and gas extraction is not being singled out, it is an area of focus on the basis of potential risks and threats it may pose to the rivers and floodplains into the future. Previous risks and threats, such as those that arise from intensive irrigation (or broadacre cropping), dams and open cut mining, have been the focus in the past, and were regulated as unacceptable uses in the rivers and floodplains mapped as DPs.

As with the spatial options, it was also highlighted in briefings and meetings that more than 80% of the Qld LEB region will be unaffected by any of the additional regulations proposed above, given any of the regulatory changes would only apply within the DPs.

In terms of the options for environmental attributes of river systems, there were two presented:

- Option 1 Retain the status quo – no changes to current environmental attributes.
- Option 2 Broaden the environmental attributes, to capture the full range of key processes and functions that are considered fundamental to the preservation of LEB's natural system, including geomorphic processes, riparian functions and wildlife corridors.

Some submissions highlighted that there should also have been reference to 'Aboriginal Cultural Heritage Values' within Option 2. This is in recognition that ecological and cultural values are indivisible from a First Nations spiritual and practical perspective, and that embedding the cultural element to the attributes of the river systems as sought by Traditional Custodians, is reasonable and is necessary.

5.2. Results of the consultation

The results of the consultation process are very clear, with unambiguous support for Spatial Option 3, Regulatory Option 4, and Environmental Attributes Option 2. More than 85 per cent of respondents supported broadening the environmental attributes definitions (option 2), but less than 1 per cent preferred option 1 – suggesting that this is not a favoured approach. Almost 14 per cent stated no preference at all. Given that many of these submissions were provided through a sector-led email campaign (i.e. a pre-filled email template) which did not indicate any Environmental Attribute options, this may be a simple factor of omission. The nature of Environmental Attribute options matter – and related choice – was more specific, nuanced and technically complex and it is possible that this complexity formed a barrier to enabling some respondents to identify a preference either way.

Data from all received submissions and on-line survey responses (n= 17,463):

Option preference	Spatial	Regulatory	Environmental Attributes
1	0.8%	0.7%	0.7%
2	0.1%	0.1%	85.4%
3	98.6%	0.1%	NA
4	NA	98.6%	NA
No option provided	0.5%	0.4%	13.9%
Total:	100.0%	100.0%	100.0%

5.2.1. Long form submissions on strengthening rivers protections

Fifty-one 'long form' submissions were received from representatives of the resources industry, conservation sector, First Nations groups, regional councils, agricultural peaks, academia, not-for-profit organisations, Members of Parliament and individuals. Twenty-seven of these long form submissions supported stronger rivers protections, with some variations in the preferred options. Twenty-one long form submissions were broadly not supportive of changes to the status quo. Three long form submissions were entirely neutral.

Long form submissions supporting strengthening rivers protections

Support for regulatory, spatial, and environmental attribute management change overwhelmingly came from graziers, the conservation sector, First Nations groups, academia, and Members of Parliament.

Of the twenty-seven long form submissions supporting changes, there was a strong consensus towards instating the strongest protections offered by government (regulatory option 4, spatial option 3, and environmental attribute option 2). Within the cohort, there were a couple of variations in combinations of preference for other regulatory options, spatial options, and environmental options.

There was a general view that oil and gas extraction (especially unconventional) present risks to preserving the integrity of the LEB and maximising the benefits that its natural values provide. There was a general view expressed that current regulatory and legislative mechanisms are not providing adequate protections, given that – as the CRIS established – the LEB is already being significantly adversely affected by resources activities. This cohort's view is that current legislative and regulatory frameworks are unable to address cumulative impacts, irreversible impacts to cultural heritage and ecosystem assets, changing resource industry practices, and activities that can affect natural values beyond the boundary of existing operating licences.

They raise concerns of pollution and contamination and associated adverse environmental, social, health and economic outcomes. Their concerns are increasing due to industry's growing footprint, and rising risk of industrial incidents. They argue that these developments require the strongest precautionary protections, which they perceive to be the most appropriate given the remoteness of the LEB, and limited capacity for on-site regulator compliance checks and enforcement actions.

A very small number respondents – while generally supportive of stronger protections – preferred a variety of spatial, regulatory or environmental attribute options on the basis that those strike a more 'palatable' balance of environmental protections alongside certainty for producers and communities.

There was consistent support of government strengthening how it collaborates and partners with the First Nations peoples of the Qld LEB, in the interests of protecting environmental values alongside supporting increased First Nations' agency in the management of Country. The conservation, academic, and First Nations submitters were most vocal on this point, and held that permanent capacities to exercise cultural authority and active and inclusive decision-making should be nurtured. Support was also expressed about assisting First Nations people to apply their traditional ecological knowledge and supporting them to partner constructively with government, industry and local communities.

Lastly, there were concerns around the consistency of government policy given that it has committed to emissions reductions, while petroleum and gas operations contribute to climate change in various ways.

Long form submissions opposed to strengthening rivers protections

Broadly, the resources sector (petroleum, gas, critical minerals and opal commodities), and four regional councils were opposed to changes to the status quo for spatial, regulatory, and environmental attributes. Almost half of these submitters did not express any views on environmental attributes.

Among this group of long form submissions, the general view was that protections are already adequate and there is no compelling case for change. Recurring narratives were that gas and oil activity is generally good for the region, bringing in economic development (i.e. jobs), funding community, and attracting a significant portion of State and local government revenue. Industry's view is that there is a good track record of the petroleum and gas industry operating in this area without incident, and so current regulation is good enough for conventional and unconventional exploration and extraction.

Issues raised included a questioning of the justification for why regulatory change may be needed, the evidence about systemic failures in the current regulatory framework, and why the focus of proposed regulatory changes is on the petroleum industry (as opposed to other users). Industry strongly contested the validity of scientific evidence used by government to support the options presented, and referred instead to industry commissioned studies that offer opposing conclusions on the risk profiles of current and future conventional and unconventional resource production in the Qld LEB.

A minority of this cohort indicated some acceptance that improved spatial and environmental attribute protections are needed, some prefer spatial option 2 and others environmental attribute option 2.

Other concerns raised included the notion of transition if any regulatory or legislative change were to occur as a result of this Decision IAS. Industry is seeking certainty around its capacity to operate in commercially profitable areas, in profitable ways. In practical terms, there were questions about the mechanics of how existing permits to explore might be affected and whether there would still be avenues to renew or convert these to extraction leases. There were also questions of whether environmental authorities could be amended to match changed extraction methods or intensities (e.g. increases to numbers of petroleum wells) and whether existing potential commercial areas will be affected.

There were also questions around how critical minerals activities will be supported, given the Queensland Government's Critical Minerals Strategy. Some proponents have requested that government provide targeted protections to enable them to continue to extract particular critical minerals commodities.

Long form submissions neutral on strengthening rivers protections

Two neutral responses were also received from a resources statutory body and a First Nations legal services organisation. While no preference was expressed, the key concern was ensuring that government engaged in proper engagement processes and partnerships with First Nations peoples to develop an acceptable set of options that is responsive to their aspirations for and interests in cultural, economic, social, and environmental opportunities and outcomes.

This cohort, while not having been part of advisory groups contributing to the development of options, expressed interest in being included in future discussions, given their existing relationships with industry, the agricultural sector and First Nations people of the Qld LEB.

5.2.2. Summary of on-line survey responses

By the close of consultations on the RIS, a total of 373 responses to the on-line survey were made. Those completing the on-line survey of options preferences were also invited to add open text comments to contextualise or expand on their preference responses. Overall, on-line survey respondents were mostly supportive of increased protections for the river systems and changes to the regulatory framework. There were also some comments supporting more protection spatially, or for specific values including First Nations and other heritage.

Comments were also made about the need for independent monitoring of the regulatory system and support for jobs associated with the Qld LEB's protection. Some respondents made comments that were out of scope of the Consultation RIS, including those related to climate change, renewables, and improved flooding infrastructure. Those who did not support regulatory changes were concerned about the impact of the regulatory changes on the minerals industry and possible supply shortages, indirect economic impacts and loss of royalties.

Some comments stated that there is no evidence of systemic failures of the current regulatory system and considered companies adequately comply with existing environmental regulations. Some respondents preferred current regulations, or alternate options such as assessment codes specific to the minerals industry.

Spatial Options

Most respondents to the on-line survey were supportive of expanding the spatial protection of the Qld LEB (62.7% preferring Option 3 and 6.2% preferring Option 2). The environmental significance of the Qld LEB was well recognised by respondents. Many comments were made about the international significance of the LEB including the many flora and fauna species that are supported by the river systems.

Many survey respondents were seeking further protections than those offered in the Consultation RIS and for the boundaries to extend to the entire Lake Eyre Basin. There were a few submissions noting that given the entire ecosystem is in-land and does not drain out to sea that the entire LEB should be protected to avoid any long-term impacts. It was noted that the floodplains area stretched a lot further during flooding events and may not be captured by these expanded boundary changes. Mention was made of the interconnectedness between upstream and downstream and effects that could occur within the river system and the flow on effects.

Those respondents who preferred the status quo (Option 1 - 31.1%) expressed that the current boundaries for protection were adequate and did not need further expansion. It was noted that industry is required to meet stringent guidelines and it provides royalties and employment to the region.

Regulatory Options

Protection of this ecologically sensitive area was well supported. Respondents to the on-line survey were broadly supportive of increasing regulation of activities in the area (63% preferred Option 4, 9% preferred Option 3), with 6.4% preferring Option 2 and the balance Option 1. Some respondents were also seeking greater protections than those offered by Option 4 in the Consultation RIS including the introduction of penalties for environmental damage. Respondents acknowledge the impacts such as pollution, disrupting the flow of surface water and the loss and degradation of habitats which could occur as a result of oil and gas industry projects in the LEB region.

Although outside the scope of the Consultation RIS, a number of respondents commented on the need to switch away from fossil fuels to address climate change concerns.

Some respondents expressed that the current regulatory framework was sufficient and were seeking less regulatory burden (Option 1 - 28.2%). There were comments around why unconventional oil and gas are seen as the only threat. Sustainable development should be able to include some mining activities which are following the guidelines, not impacting the environment and still providing economic benefit to the state and local economies.

Environmental Attributes

The majority of respondents to the online survey supported broadening the environmental attributes definitions (67.3%), with the remainder preferring no change. Respondents who chose to make a free text comment generally expressed support for broadening attributes, but some respondents preferred additional attributes and consideration of the LEB as a complete and connected system, existing attributes, or a reduction in attributes. One additional attribute sought was Aboriginal Cultural Heritage.

Supporting First Nations priorities and aspirations

In addition to the consultation on the various spatial, regulatory, and environmental attributes options, the Consultation RIS also indicated a set of proposed responses to First Nations peoples' priorities and aspirations. These will be discussed in detail in Section 7 below.

Frist Nations respondents to the on-line survey were supportive of First Nations proposed responses for the LEB (75%). Respondents are keen to see First Nations peoples actively engaged and informed on all matters. There was support for First Nations people to be represented on cultural heritage and environmental matters and to be actively consulted. It was noted that the LEB TO Alliance does not represent all native title holders in the Qld LEB region and a request for government to consult with all representative traditional owners.

5.2.3. Other comments

Some comments made were out of scope of the Consultation RIS, including relating to climate change. Some respondents expressed concern about the consideration of economic impacts and impacts on the minerals industry. These respondents also expressed their support for the environmental practices of the resources sector. Some comments were made in support of other industries including sustainable agribusiness and ecotourism. There were also respondents who expressed a desire for locals and/or Traditional Owners to be consulted in the process.

6. Impact analysis of the options

6.1. Direct standard economic considerations

Recognising and appreciating the significant value and worth that the Qld LEB region holds is not straight forward. It requires understanding how it contributes to the Queensland economy, how its river systems support parts of the economy and the people of the region, and the value of protecting and managing the river systems which are part of a unique, globally important and culturally significant landscape. The Consultation RIS discussed some of these elements as context for considering the options it provided.

This Decision IAS seeks to take a holistic approach to the question of the Qld LEB's value and worth, and include the varying ways of recognising what the region represents. There are important metrics relating to the broad economic value of the gas sector, which must be acknowledged. The 2023 Queensland State Budget reports that gas and oil royalties were some $2.332 billion in 2022–23, and Queensland Treasury estimated the value of Queensland liquefied natural gas (LNG) exports was some $23.4 billion in the year to May 2023.

According to the Queensland GasFields Commission (QGFC), in 2021 the oil and gas industry's direct contributions to Queensland's Gross Regional Product was $9.3 billion annually, with over $3.51 billion spent on local goods, services and community contributions with 2,500 local businesses. In 2021-22, QRC petroleum members reported spending $3.6 billion with 2,534 local businesses and 331 charities and sports clubs directly. Origin Energy has described Queensland's gas industry as an "export powerhouse", generating more than $80 billion in export earnings, making Australia one of the largest exporters of LNG in the world.

A report undertaken by Lawrence Economic in 2019 for APPEA indicated between 2011 and 2018 there was over $1.47 billion, or around $200 million per annum of direct oil and gas sector spending in Queensland's Southwest region. Santos indicates that over the past 10 years in south-west Queensland, it has invested nearly $2.5 billion, and:

- "Sustained between 250 and 450 direct jobs in exploration, development, operations and production,
- Paid more than $300 million in royalties
- Contributed more than $1 million in community investments
- Contributed more than $55 million in direct local government revenue to the shire councils (accounting for more than 60 per cent of the rates income for Bulloo Shire and approximately 30 per cent for Quilpie Shire)
- Paid landholder compensation payments totalling approximately $5 million
- In partnership with traditional owners, completed more than 1,000 cultural heritage assessments and invested over $10 million in the management of cultural heritage."

The regional and statewide data present a clear picture of an economically-significant sector, and while 'south-west Queensland' as defined by the QRC, QGFC and Santos takes in other gas-intensive areas such as the western section of the Surat Basin and a share of intensive activity there, so much of the data and figures are not necessarily Qld LEB-specific, there is no doubt that the sector is a major financial contributor to the Qld LEB region. There is no intention to disrupt these current activities and their economic outputs.

As the Consultation RIS indicated, the broad Cooper-Eromanga area has potential to be worth around $8.4B of conventional gas and a theoretical $15.8B of unconventional gas (assuming a long-term average reference price of $7/ gigajoule as proposed by Queensland Treasury Corporation). Again, while this geographic area captures a much broader geography that the Qld LEB itself, there are known and potential resources available across the region, including areas away from DPs (whether those be current or expanded).

Relatively minor geographically-specific constraints on future (unapproved) gas development in the DPs will have no impact on the capacity to extract gas from adjacent areas away from the DP. While recent surrenders of exploration tenures that were associated with unconventional exploration on or adjacent to DPs suggest there may be challenges with the viability of unconventional resource extraction on

floodplains, a precautionary approach to additional regulation of future production creates greater clarity and certainly for industry and the community in the Qld LEB.

Meanwhile, as the Consultation RIS indicated, beef cattle farming is the most widespread industry in the Qld LEB region, with a relatively even distribution of jobs across all of the 12 relevant local government areas. This agricultural sector generated in excess of $640 million in the 2018-2019 financial year, accounting for five per cent of Queensland's total agricultural output and comprising just over 10 per cent of Queensland's livestock. Previous ABS data from 2016[8] indicates this sector employed some 1,600 people in the twelve local government areas of the region.

Given the ecological and cultural values the Qld LEB contains, the Consultation RIS illustrated the Qld LEB region is also a key component of the broader tourism area known as Outback Queensland. Across the local government areas of Boulia, Winton, Longreach, Diamantina and Barcoo as well as Barcaldine and Blackall, there were 199,000 overnight visitor stays in the year ending March 2021 with a total expenditure of $112.8 million (Tourism Research Australia, 2021). As the Consultation RIS noted, this data related to when Covid-19 related border restrictions were in operation, which prevented many travellers from southern states coming to Queensland for outback tourism.

The tourism sector has capacity to grow significantly as a destination and thus revenue stream for the Qld LEB region, but to realise this potential protecting its natural values and it branding as a unique, intact and clean environment to visit and spend money in.

6.2. First Nations considerations

While the standard economic indicators relating to the gas sector should be appropriately acknowledged, they do not present the whole picture. There are the cultural values that are embedded in the rivers systems, and a need to account for the tangible and intangible worth First Nations people attach to them in historic, contemporary and prospective terms. During the pre-consultation RIS process with the SAG, representatives of the Qld Traditional Owner Alliance and other First Nations people from the region briefed key stakeholders on their cultural perspectives[9]:

> "The rivers and flood plains of the Lake Eyre Basin sustained generations of our people over tens of thousands of years. The basin provided and still provides food and water for us, as well as food and water for flora and fauna."
>
> "The basin is also the sites of our birthing places and our resting places. These are strategically scattered across the Lake Eyre Basin. These waterways are the foundation of our song and story lines, of the many birds and animals that represent our families. This also includes the names for our clans and language groups, all of which inform us of our place in this country."
>
> "The rivers were also our trading routes where we met, shared, and learnt from neighbours. The rivers of the Lake Eyre Basin give us our swimming holes, our fishing holes and our camping places, and they provide a place for us to connect with our culture."
>
> "These waters are the basis for the strong relationships between land, plant, animal and humans over tens of thousands of years."

These comments built on previously recorded First Nations voices and positions from the Qld LEB region on why the rivers are so critical[10]:

> "These rivers are the lifeblood of the Traditional Owner groups within the desert channel region."
>
> "It's water… It's the bloodline for all of us. Animals, birds, everything that's on this Earth. We need water and it should be looked after."
>
> "A lot of (our cultural) boundaries follow our water systems. That's how our people survived on these big waterways."
>
> "Water is the most important part of our lives really because nothing survives without it."

[8] Australian Bureau of Statistics. (2016). *2016 Census data –Country and connections | Australia state of the environment 2021 (dcceew.gov.au).* Retrieved from https://www.abs.gov.au/census
[9] June 2022 Traditional Owner Alliance presentation, used with permission.
[10] Rivers & Catchments: Recording traditional ecological knowledge case study 2012, recording used with permission.

"Rivers provide connections through the arid landscapes and the life revolved around them."

"Looking after and making sure that these creeks and waterways aren't infested with woody weeds, pests, feral species… White man calls it wildlife corridors or green corridors. Back in the old days Aboriginal people would have seen these as walking paths… They would have gone out during the daytime, hunted kangaroo… then they would have come back into the more wooded, shaded areas and set up their campsites and all that. They would have used the creek lines back in the old days to travel from one more permanent site to another."

"Not only trade routes but they camped on these great rivers… This is where you'll see [artefacts]"

"It's vitally important that we continue to monitor the river system. Have opportunities discussing with neighbours along the river. What are the good things that are happening and find solutions to rectify the bad things."

"And the river of course holds our dreaming, so that's of the utmost importance. We really have to care for it. There are really important traditional sites along the river on both sites. We have to care for those and maintain them. And the same would apply all the way down the river, you know the importance of it with the other Traditional Owners. There are certain areas that are sacred, certain parts of the river. Ceremonial areas plus sacred trees. We try and look after those."

At a previous SAG meeting, reference was made to previous statements and positions provided to government[11]:

"For the Traditional Owners, caring for country is more than a matter of economic prosperity, it is a sacred and ancient traditional responsibility carried forward from mother to daughter, father to son and includes social, environmental, and cultural considerations.

"Traditional people live by the seasons and think of country as their mother and of water as the sacred lifeblood, keeping them connected through hunting, fishing, and ceremonial practices. We are kept strong and understand our culture by connecting to the stories and songs that live in our country, and through them continue to observe our own traditional lore, customs, cultural boundaries and obligations."

and[12]

"Traditional Owners seek permanent seats at the decision-making table, so we can exercise our cultural authority, apply our traditional ecological knowledge and partner constructively with government, industry and local communities to ensure the healthy future of the rivers, floodplains and groundwater of our country."

"Traditional Owners from the Lake Eyre Basin region have been coming together for many years to discuss and advocate for the sustainable management of this unique and culturally and environmentally significant region. In accordance with customary laws and traditions, we have social, economic, cultural and spiritual affiliations with, and responsibilities for, the land and waters of the Lake Eyre Basin. Our People have lived and worked across these lands for generations and hold strong connections to the ancient and contemporary systems it supports... In addition to our connections to the extensive cultural heritage and sites of significance across this country, we also have strong historical and contemporary connections to the region's communities and to the tourism, pastoral and resources industries operating throughout the area."

"As the custodians of this country from time immemorial, we have deep knowledge of the lands and waters and we are bound together by the sacred trust placed in us to ensure the proper management the country for current and future generations, of both Indigenous and non-Indigenous Australians…we have a crucial contribution and role to play in the Government's decision-making about management of the Lake Eyre Basin."

[11] From Our Water, Our Future statemen, 2019.

[12] Traditional Owner Alliance 2020 submission, used with permission.

These are the voices, words and sentiments of the Qld LEB's First Nations people when it comes to valuing the river systems and all the things they support and enable in the region. It means "Traditional Owners have sacred responsibilities for the care and protection of our lands and waters, for this generation and future generations." [13] Further,

> "It is essential that there is harmony between the cultural significance, ecological security, and economic value of the Lake Eyre Basin, and recognising and balancing these considerations should form the pillars of decision-making about the Basin's future.
>
> "Traditional Owner groups of the Lake Eyre Basin must have a strong voice and be united with clear aspirations for the Lake Eyre Basin, and work to position themselves to gain a seat at the decision-making table for all issues affecting the Lake Eyre Basin floodplains, riverways, and water resources."

It is a core proposition of fully analysing the impacts of government's potential decisions that the values of the Traditional Owner groups of the Qld LEB are placed centrally into the calculus, and that their perspectives are taken seriously and respectfully.

There are additional important factors to take into account about the 'Total Economic Value' of the region's river systems, in terms of the worth that should be attached to unique and intact ecosystems, and the ecological functionality they provide including monetary and non-monetary factors.

6.3. Total Economic Value considerations

This section includes extracts from an environmental economics synthesis study commissioned by DES in October 2023, and undertaken by economists at the Australian Rivers Institute, Griffith University[14]. Their overall analysis is as follows:

"…the Qld LEB is in a largely intact state with unique environmental and ecological attributes of interconnected rivers, floodplains and other environmental and ecosystem assets. These unique environmental and ecosystems assets underpin delivery of a wide range of goods and services that are highly valued by society. Human interactions with the Qld LEB and its biodiversity, whether directly or indirectly, improve the quality of life and wellbeing of local communities, and of Queensland and Australian society overall. There are effectively no substitutes available for the Qld LEB's unique environmental and ecological attributes."[15]

"There is a need to account appropriately for the full breadth of benefits Qld's LEB provides to society, including those that are difficult to quantify in biophysical and/or monetary terms, and present them in a coherent framing. The total economic value (TEV) framework can provide this broader articulation – as explained further in the main body of the report. Within the TEV framework, economic value is defined as the importance, worth or usefulness of something to people, whether it can be bought or sold in a market or otherwise. A TEV framing can help inform the trade-off between development and protection of environmental and ecosystem assets in Qld's LEB by representing the wide spectrum of values society ascribes to the outcomes of preservation or further development of those assets." [16]

*"*Use values and non-use values are the two major categorisations of value within TEV. Use values are benefits individuals derive by physically interacting directly or indirectly with environmental or ecosystem assets that supply resources or services from which individuals obtain satisfaction or benefits. *Use value* includes *direct use value*, *indirect use value*, *option value* and *quasi-option value*. *Non-use values* on the other hand, can be generated without any physical connection to or interaction with the environmental or ecosystem assets that provide the services from which an individual obtains satisfaction or benefits.

[13] Ibid

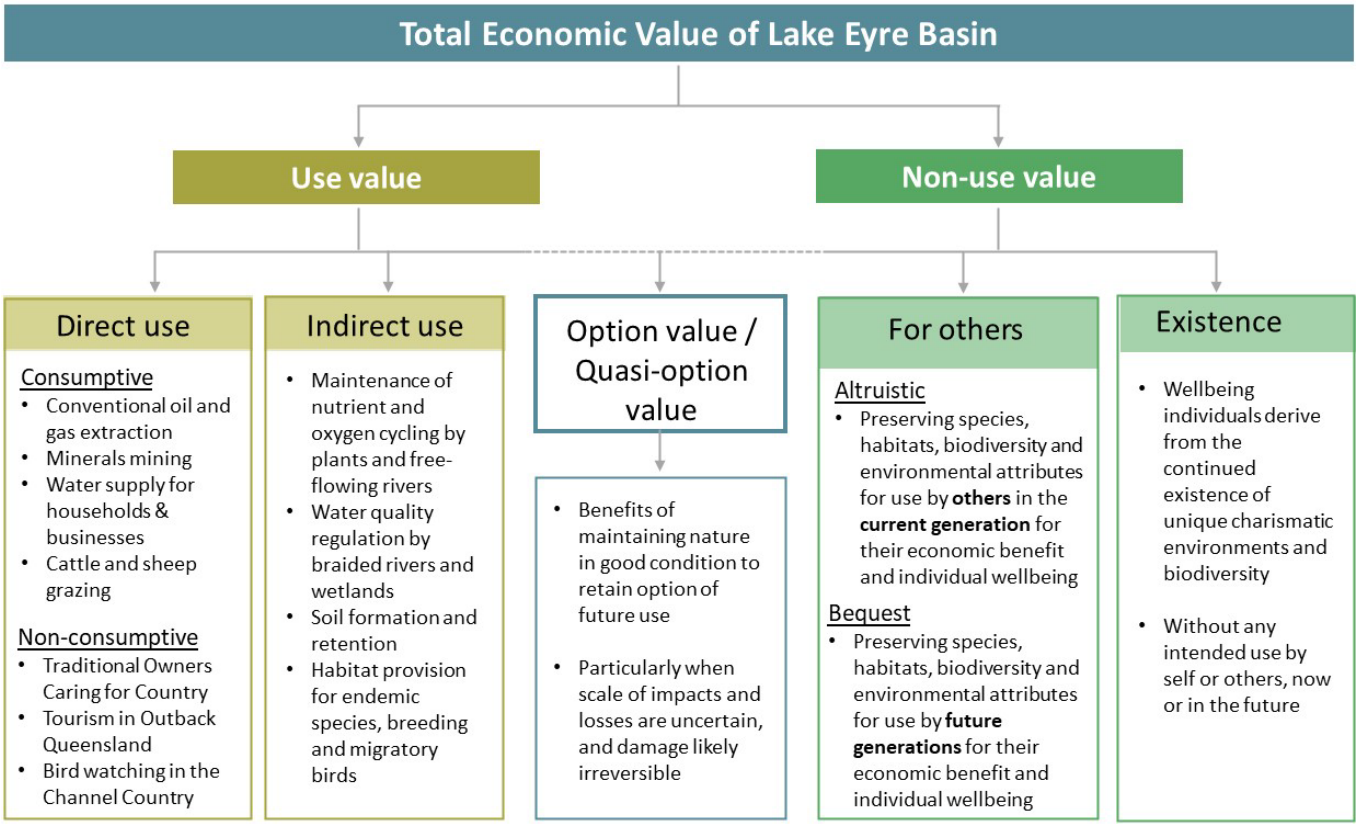
[14] Hasan, S. and Smart, J.C.R. 2023. *Economic analysis for Queensland Lake Eyre Basin Full Decision Impact Analysis Statement*. ARI Report No. 2023/010. Australian Rivers Institute, Griffith University, Brisbane

[15] Hasan and Smart 2023, p4.

[16] Ibid.

Non-use values stem from the value individuals place on use of the services environmental or ecosystem assets provide *by others* as distinct from use of those services for self *(altruistic and bequest value)*, or the value individuals place on the continued existence of an environmental or ecosystem asset itself – distinct from any use of that asset's services (*existence value*)" [17].

"The Consultation Regulatory Impact Statement (Consultation RIS) for Qld LEB (DES 2023) and the synthesis report (Côte 2022) indicate that multiple *use values* and *non-use values* are being provided by environmental and ecosystem assets in Qld's LEB in their current, largely intact state, with existing levels of resource extraction (conventional oil and gas) and economic activity (beef grazing and tourism). Use values and non-use values specific to Qld's LEB have been mapped across to the previously described TEV categories and are summarised in Figure ES1" [18] (see below).



"It is critical that key ecosystem assets comprising the Qld LEB remain in good condition so that they can continue to supply the regulating and supporting ecosystem services (e.g. water quality regulation, flow regulation, nutrient and soil cycling, pollutant assimilation and storage) that underpin the economic activity associated with consumptive and non-consumptive use value, altruistic value and bequest value derived by individuals, resident populations and the wider society in Queensland and Australia. Values delivered by the Qld LEB's environmental and ecosystem assets include oil and gas extraction, water supply for households and businesses, provision of fodder biomass for cattle grazing, habitat for flora and fauna that attract tourists and visitors, and healthy Country that can be cared for by Traditional Custodians…" [19] "Residuals, contaminants, wastes and disturbances from economic activity in the LEB (e.g. contamination and wastewater release, overland flow obstruction, vegetation removal and soil erosion) can be conceptualised as flows of 'pressures' returning from the economy to nature. In combination with resource extractions, these pressures on nature manifest as impacts on the extent and condition of environmental and ecosystem assets in the Qld LEB (e.g. impacts on extent: reduction in groundwater stock and reduction in area and persistence of floodplain wetlands; impacts on condition: reduction in surface and groundwater quality, impairment of ecological functions and processes,

[17] Ibid.

[18] Ibid, p5

[19] Ibid.

changes in ecosystem composition, fragmentation of habitat). The ability of ecosystem assets within Qld LEB region to assimilate, absorb and store residuals and wastes and thereby *regulate* pressures is thus a particularly important ecosystem service, whose impairment or loss could have far-reaching adverse consequences." [20]

"Notwithstanding the accompanying negative externalities, oil and gas production in Qld's LEB contributes ancillary economic benefits to local landholders and ancillary income to local governments in the region, as detailed in the Consultation RIS. Rates revenues from oil and gas leases make very significant contributions to the finances of some local governments in the region, particularly those in parts of the Cooper Creek sub-basin."[21]

"The inter-connected, highly variable and unpredictable nature of the LEB make it a challenging system to study (and manage). Consequently, it is difficult to predict the impacts of additional resource developments with high levels of certainty; knowledge gaps and uncertainties will inevitably remain. The inclusion of ecological, economic development and societal objectives in the Queensland Government's regulatory framework indicates a willingness to mobilise public investment to deliver on these objectives. A willingness to commit public investment to protect ecological functions and processes, and recognise and protect Traditional Custodians' cultural heritage, priorities and aspirations implicitly recognises the value associated with adopting a precautionary approach towards management of future oil and gas development in Qld's LEB" [22].

"The value of near intact, free-flowing river systems is difficult – but not impossible – to compile. The unique environmental and ecological attributes of Qld LEB in its current, largely intact state mean that there are effectively no substitutes for this unique, interconnected system of environmental and ecosystem assets and the services they supply. This non-substitutability significantly increases the value society places on retaining this unique collection of environmental and ecosystem assets as a near intact whole…" [23]

"The TEV framework can be used to articulate a wide range of values associated with human interactions with nature…Within TEV, economic value is defined as the importance, worth or usefulness of something to people, whether it can be bought or sold in a market (market values) or otherwise (non-market values) ... In the context of Qld's LEB, *values* refer to the *benefits* individuals, communities and society derive from services supplied by the region's environmental and ecosystem assets. The TEV of the Qld LEB thus comprises the sum of all these different value components that deliver benefits to people." [24]

"Minerals, oil, gas and timber are marketable goods and their extraction yields benefits immediately in the form of consumptive direct use value. Consumptive direct use values from extractive development are often accorded precedence over the benefits – in the form of non-consumptive use values, option values, quasi-option values and non-use values – that would be derived from protection and conservation. If natural resource management is informed solely by surpluses on the revenue returns from marketable commodities, the policies and regulations instituted are likely to favour resource extraction even though this may be sub-optimal for societal wellbeing….a full perspective on the TEV of preserving Qld's LEB in its current largely intact state with existing levels of resource extraction (conventional oil and gas) and other economic activity (beef grazing and tourism), land management and cultural heritage protection is critical for policy setting and decision making." [25]

[20] Ibid.

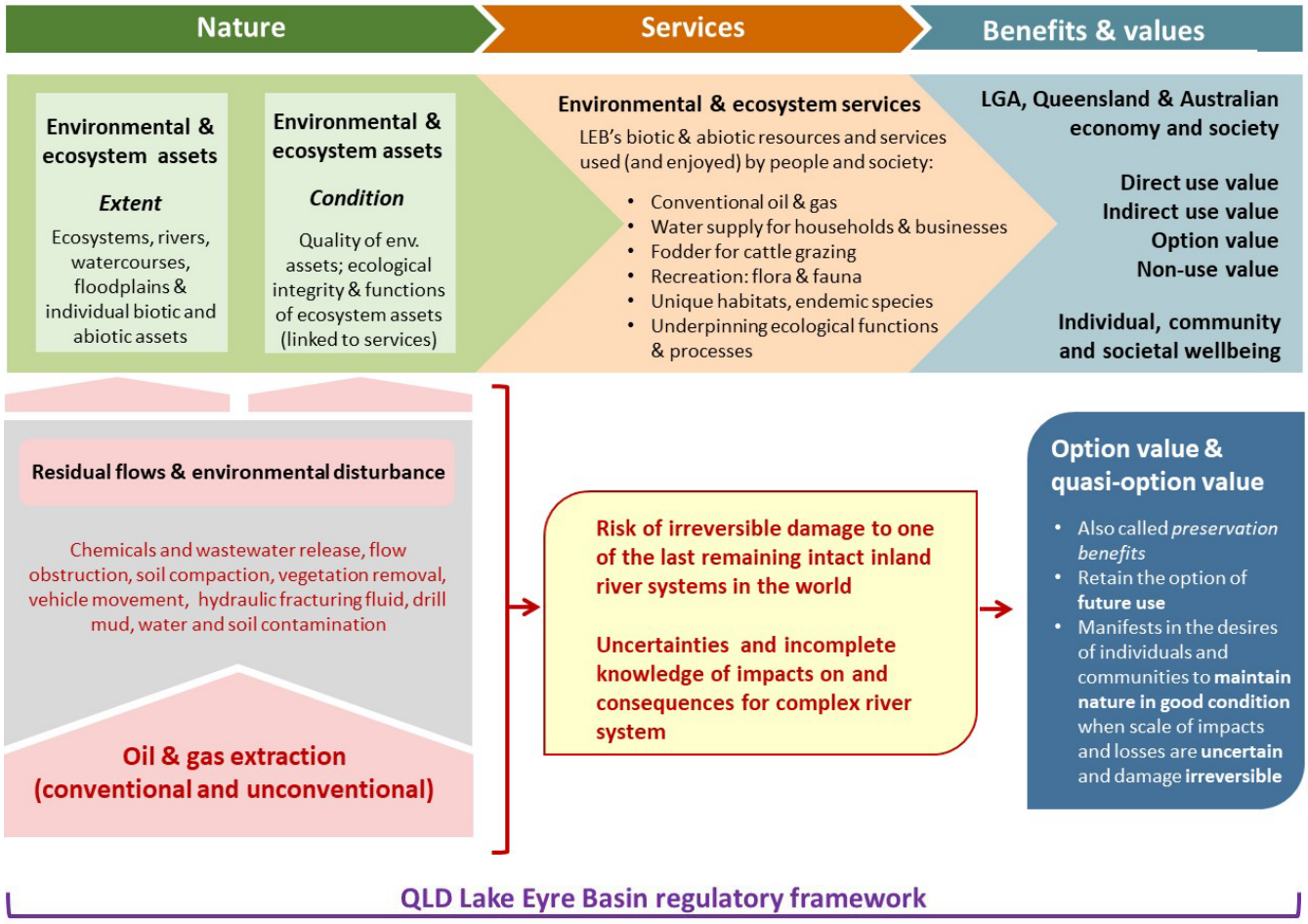
[21] Ibid.

[22] Ibid, p7.

[23] Ibid, p22.

[24] Ibid.

[25] Ibid, p26.



Proposed options for continued protection of the region's ecosystem condition and ecological integrity, First Nations cultural values, agricultural productivity, tourism and recreational activities:

Spatial options (extent of mapped protections) – Options 1, 2 and 3

Regulatory options (permitted future activities) – Options 1, 2, 3 and 4

Options for ***environmental attributes*** of the Queensland LEB river systems – Options 1 and 2

"Because resources and services from the LEB's environmental and ecosystem assets are scarce, choices and trade-offs are inevitable in managing the Basin's assets and resources…. conventional oil and gas from Qld's LEB trade on commodity markets at observable prices, so the net financial value generated can readily be calculated; however, the full cost of associated negative externalities is difficult to quantify and is therefore often overlooked." [26]

"Managing natural resources is particularly challenging because many of the goods and services supplied by environmental and ecosystem assets are not transacted in markets; hence, observable market prices are 'missing' for these important services. Reliance on market forces alone to inform trade-offs around resource use and service supply will thus likely result in trade-off outcomes that may not be welfare enhancing for society as a whole. This is particularly so if the damage costs from accompanying externalities are not properly accounted for." [27]

"…conventional cost-benefit analysis will tend to favour industries that generate large economic benefits in the near-term whilst the economic consequences of accompanying environmental damages only

[26] Ibid, p17.

[27] Ibid, p7.

become apparent further into the future". [28]

"Qld's LEB in its current state comprises a unique collection of environmental and ecosystem assets of national and global significance which deliver multiple values to human society across the full spectrum of TEV. Considerable uncertainties surround the impacts of further development, and the risk of irreversible loss is substantial. In combination, these features act to substantially increase the benefit of the 'learning' that could be gained by postponing further development.

"Existing resource extraction in Qld's LEB, operating under current environmental regulations, will continue to generate positive ancillary income and negative externalities. Previous findings on the risks from future conventional and unconventional oil and gas extraction indicates that a risk-aware, precautionary approach to environmental and natural resource management is warranted. A precautionary approach is paramount to ensure long term sustainability of the QLD LEB's environmental-social-economic systems.

"There is a strong case for preserving the environmental and ecological functions and processes supplied by environmental and ecosystem assets in Qld's LEB until we have a better understanding of how the cumulative impacts of oil and gas developments and climate change will affect the suite of use values, non-use values and option values which environmental and ecosystem assets in the region currently deliver to local residents, regional businesses, and Queensland and Australian society more broadly." [29]asso

6.4. Bringing the impacts and benefits components together

In assessing the overall impacts across the economics, the cultural values and the other approaches to recognising 'worth' of the Qld LEB and its river systems, the following propositions have been assumed:

- There is no plan to cause disruption to currently approved (conventional, including with hydraulic stimulation) gas production, or exploration tenures ready for gas production where a Petroleum Lease application has been received noting that:
    - The ecology of the region is already impacted to some extent by the conventional gas industry, but future possible threats from unconventional extraction in DPs will be significantly higher.
    - Contemporary assessment of risks and the capacity to manage unconventional extraction highlights the need for additional protections to be introduced within the DPs.
    - First Nations cultural values needs better recognition, both as a core component of environmental attributes, and also of what needs greater protection.
    - Long-term non-monetary worth (TEV) of intact ecosystems and avoided costs of irreparable damage are higher than future economic contributions from gas.
    - Employment data for Qld LEB specific area are not entirely clear. The Consultation RIS included published ABS data (2016) of people living in the area and employed in oil and gas extraction industries. 2021 Census Community Profiles indicate that there are up to 49 people who live in the region and work in oil and gas, but this could be an overestimate due to broader local government geographic boundaries used by the ABS (Quilpie and Bulloo Shires include areas outside of the Qld LEB).
    - Other financial data is not LEB specific and takes in other major gas production areas.
    - Volumes of gas from Qld LEB (noting it is reported as a subset of total Cooper/Eromanga, which includes areas in South Australia and other areas outside of the Qld LEB) remain as reported in the Consultation RIS. This means the Qld LEB represents around 5% of the total east coast gas supply, and its future supply – based on prospective (commercially recoverable) and contingency (potentially recoverable) estimates – is estimated to be lower still as a proportion of overall potential supply..

[28] Ibid, p20.

[29] Ibid, p7-8.

  - Industry is not required to (and does not) consistently report production and economic impact data on the basis of Qld LEB geographic region, with information often being aggregated at a company or basin level. Furthermore, information (e.g. on exploration effort and investment) provided is not required to distinguish between activities within and outside the DPs. As a result, this makes detailed analysis challenging.
- Targeted regulation of gas in the DPs is anticipated to have limited impacts on total production in the Lake Eyre Basin, through a combination of factors:
  - The enhanced protections will not be retrospective when it relates to existing resource authorities that intersect with the DPs, ensuring existing holders of Petroleum Leases will be able to continue gas operations within or outside the DPs and holders of Authorities to Prospect can continue to explore;
  - Substantial parts of tenures currently available for petroleum resources industry development in the Qld LEB fall outside the DPs and will be unaffected and remain available for future production.
  - Protections proposed would apply to the surface activities only, meaning gas underlying floodplains can still be accessed through directional drilling away from the DPs
  - The scale of development of new gas areas is modest by comparison with other gas basins in Queensland, in part due to technical, logistical, financial viability and other commercial challenges. However, it is also acknowledged that the Queensland Government has not released areas in the Cooper Basin for the last three years while the Qld LEB policy settings were being determined.
  - For the Cooper Creek system, there will be very limited changes to the main DPs, with the exception of a small addition in the eastern section (near Eromanga) being included in Spatial Option 3; and
  - There are few ATPs which are solely based on the DPs – the majority include areas off the DP.

- There is no plan to constrain critical mineral mining, noting that:
  - Access to critical minerals is important to decarbonising the economy, and to support the Queensland Energy and Jobs Plan (QEJP)[30] and the Queensland Climate Action Plan[31].
  - There is currently no production scale mining of critical minerals in the Qld LEB.
  - Underground mining will be unaffected by the proposed expansion of the DPs and regulatory changes. As discussed elsewhere in this document, open cut mining for critical minerals in the expanded DP areas will also be unaffected. Beyond open cut mining, industry has access to suitable alternative methodologies to access and extract other materials whilst generally avoiding extraction in water courses (in stream mining).
  - Current Exploration Permit for Minerals (EPMs) are mostly away from DPs.

Notwithstanding this, and recognising that both open cut and underground critical mining requires a range of essential surface infrastructure, the settings have been designed to avoid imposing additional constraints on future critical mineral extraction in the NWMP where there may be overlap with the expanded DPs. It is thus intended that regulatory provisions for critical mineral mining will vary from other regulatory changes, to provide certainty for industry seeking to develop these resources. This will mean that a regulated prohibition on open cut mining in the added DPs will not apply in the case of critical mineral mining in those areas. However, existing site-specific assessment and approval processes will continue to apply to such projects.

In the context of economic considerations, it is important to appreciate that the Qld LEB is not only a region of unique ecological ancient features and of deep past and contemporary cultural heritage and values. It is also a region of historic traditional economies, song lines and trade routes. The first 'mining

[30] Queensland Energy and Jobs Plan, https://www.epw.qld.gov.au/energyandjobsplan. Accessed 29/11/2023.

[31] Queensland Climate Action Plan, https://www.des.qld.gov.au/climateaction/theplan/qld-climate-action-plan. Accessed 29/11/2023.

industry' was based around quarrying rock for tools and making a range of stone products on Mithaka Country, which were traded and exchanged for other goods and services. This was clearly a sustainable economy, which supported communities over millennia and left the rivers and the landscapes intact.

6.4.1. Analysis of environmental, economic, and cultural impacts of spatial considerations

An analysis of potential benefits and challenges of each of the spatial options was provided in the Consultation RIS (section 8.1, 8.1.1 - 8.1.3), along with a description of what each spatial option represented. This included highlighting that any spatial extension of current mapping and concurrent existing regulations would not be retrospective in affecting existing operational activities. It was also confirmed that any spatial extension would not restrict activities adjacent to the DPs or those underground, including those underneath rivers and floodplains providing there is no direct interaction with the surface and shallow subsurface hydrological processes.

On this basis, the environmental impacts for the spatial options follow a linear projection: the greater the areas captured as DPs, the more ecologically sensitive areas are included and thus protected. While the analytical origins of Spatial Option 1 are not entirely clear, and some anomalies have been identified with the accuracy of the mapping, Spatial Options 2 and 3 were both previously developed through extensive ecological science. It also follows that environmentally, Spatial Option 2 improves on the current DPs (Spatial Option 1), and that Spatial Option 3 provides the widest benefit.

Culturally, the same principle will apply. First Nations Cultural Heritage and cultural values embedded in the river systems will also receive greater recognition through expansion of the DPs, and Spatial Option 3 provides the greatest benefit. This is further considered in the Environmental Attributes section below.

The only potential direct economic impacts from changes to the mapping of the DPs *per se* (prior to considering any future regulatory changes) flow from the extension of the existing regulatory regime, which prohibits open cut mining, dams or broadacre cropping within the DPs. This would not be retrospective and would only apply to future activity, with an exception made for critical minerals where the extension of the automatic prohibition on open cut mining will not apply. It is worth noting that there are no EPMs in the Cooper which would be affected by any of the expansions of area as offered in the Spatial Options (i.e., given their location, an expansion of DPs will not create a new overlap with existing EPMs). There are also no known future plans for dams or broadacre cropping (none have been raised in submissions).

Similarly, there are no known future plans for dams or broadacre cropping in the Georgina or Diamantina systems (again none have been raised in submissions), however there are some EPMs which overlap with the Spatial Options. Most EPMs are not potentially affected. If the holder of an existing EPM finds themselves to be subject to an expanded DP, they will still be able to continue exploring under existing site-specific provisions.

As outlined above, recognising that both open cut and underground critical mining requires a range of essential surface infrastructure, the proposed settings have been designed to avoid imposing any additional constraints on future critical mineral extraction in the NWMP where there may be overlap with the expanded DPs. It is therefore proposed to vary regulatory provisions for critical mineral mining to provide certainty for industry seeking to develop these resources.

6.4.2. Analysis of environmental, economic, and cultural impacts of regulatory considerations

Impacts on resources industry

DES has undertaken a detailed analysis in the Qld LEB of all the existing Petroleum Leases (PLs) granted for gas and oil production, all the existing Authority to Prospect permits (ATPs) and ATPs with Potential Commercial Area declaration required for gas and oil exploration and allowing assessment of prospects for petroleum production, all the Mining Leases (MLs) granted for minerals mining production, and the EPMs required for mineral exploration, including critical minerals.

Gas/oil production and exploration and the DPs

With minor exceptions, most of the gas and oil resources are centred around the Cooper Creek river system, while the minerals activity is mostly found in the Diamantina, and to a lesser degree the Georgina, river systems. It should be noted that there are a small number of ATPs in the Georgina, and some small scale (opal and gemstone) current mining sites in the eastern Cooper system (around

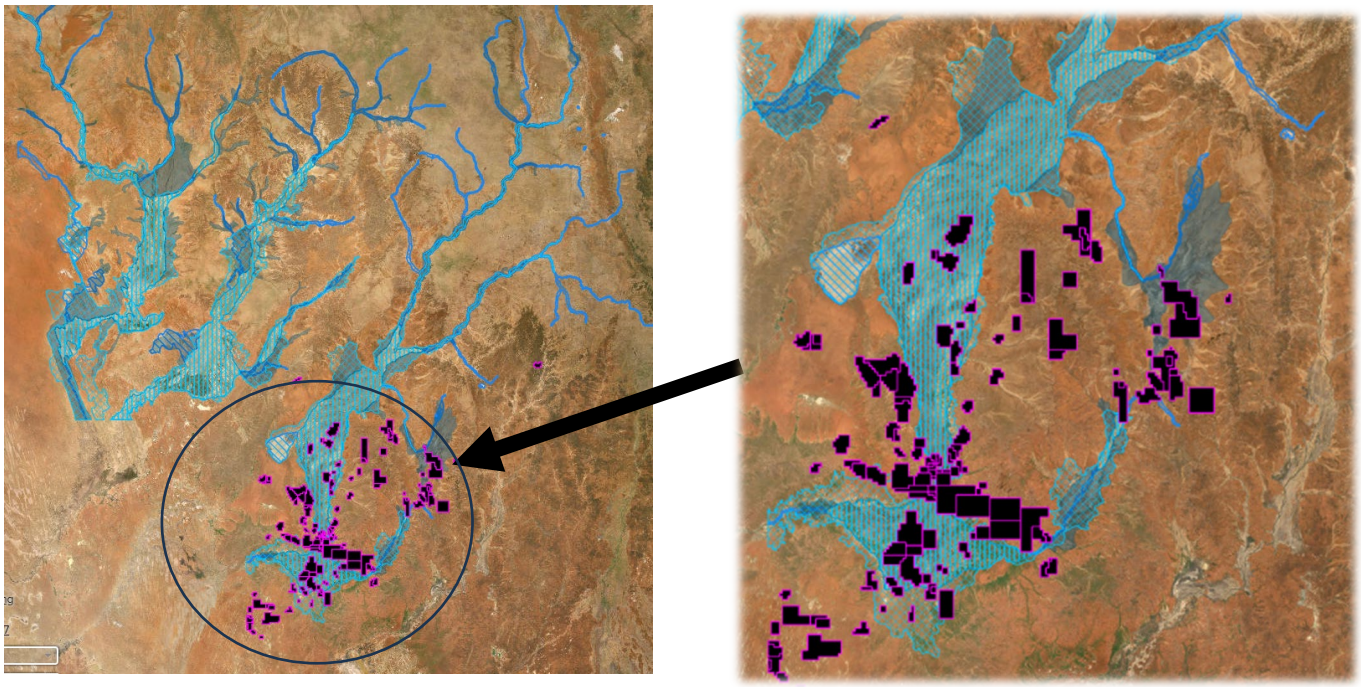
Eromanga and Quilpie) as well as near Winton in the Diamantina system.

The examination of PLs and ATPs enables an analysis of what is happening on the ground and where it is occurring, with particular reference to the DPs (current and potential petroleum and gas activity). For the Cooper Creek system, this indicates there are 124 PLs in existence, with 71 of these PLs intersecting (in part or whole) with the DPs. However, some have passed their expiry dates but subject to renewal applications and may remain for rehabilitation or other non-producing purposes. By way of contrast, many have long-run expiry dates into the 2030s, 2040s or even 2050s, lawfully prescribed in alignment with the regulatory provisions of the *Petroleum and Gas (Production and Safety) Act 2004*. Each PL commonly has multiple well heads or points of extraction, and this includes sequenced patterns of extraction over time: older wells where gas or oil has been exhausted and retired, and newer ones opened within the same PL. However, the level of concentration is low compared with major gas fields in Queensland (particularly the Surat Basin, which includes extensive coal seam gas extraction but commonly without the need for intensely industrialised fracking), and even compared to sections of the LEB in South Australia.

Of the 124 PLs in the LEB, 53 (42%) are located entirely away from the DP. A further 34 PLs (~27%) are located partially in the DP with some areas of the PL outside the DP, in some cases substantially so. Another 37 PLs (~30%) are located exclusively in the DP, but of those most have expiry dates that have either passed or will expire within the next ten years. Only a handful of PLs located in the DP have longer expiry dates stretching out to 20-30 years. While PLs have expiry dates, tenure holders have an entitlement to renewals. Accordingly, these PLs are likely subject to renewal applications to continue to production.

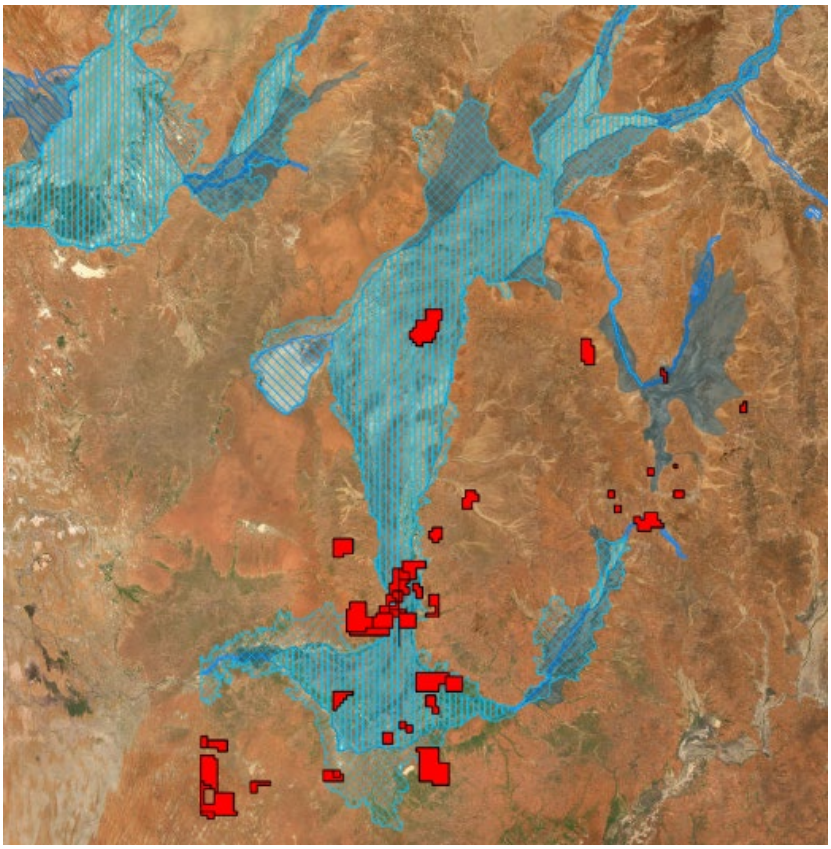
All of the PLs in the DP appear to be authorised for conventional gas and/or oil, and from a detailed examination of satellite imagery, this appears to be current practice. There is no clear evidence of unconventional gas or oil extraction in the Qld LEB taking place in the Cooper DP, although some conventional extraction is occurring using methods such as hydraulic stimulation. PLs that were previously earmarked for potential unconventional extraction have recently been surrendered.

Existing Petroleum Leases (PLs) in the Qld LEB (Cooper system in Queensland)



Andrew Picone, © The Pew Charitable Trusts

Spatial Option 3 and PL applications:



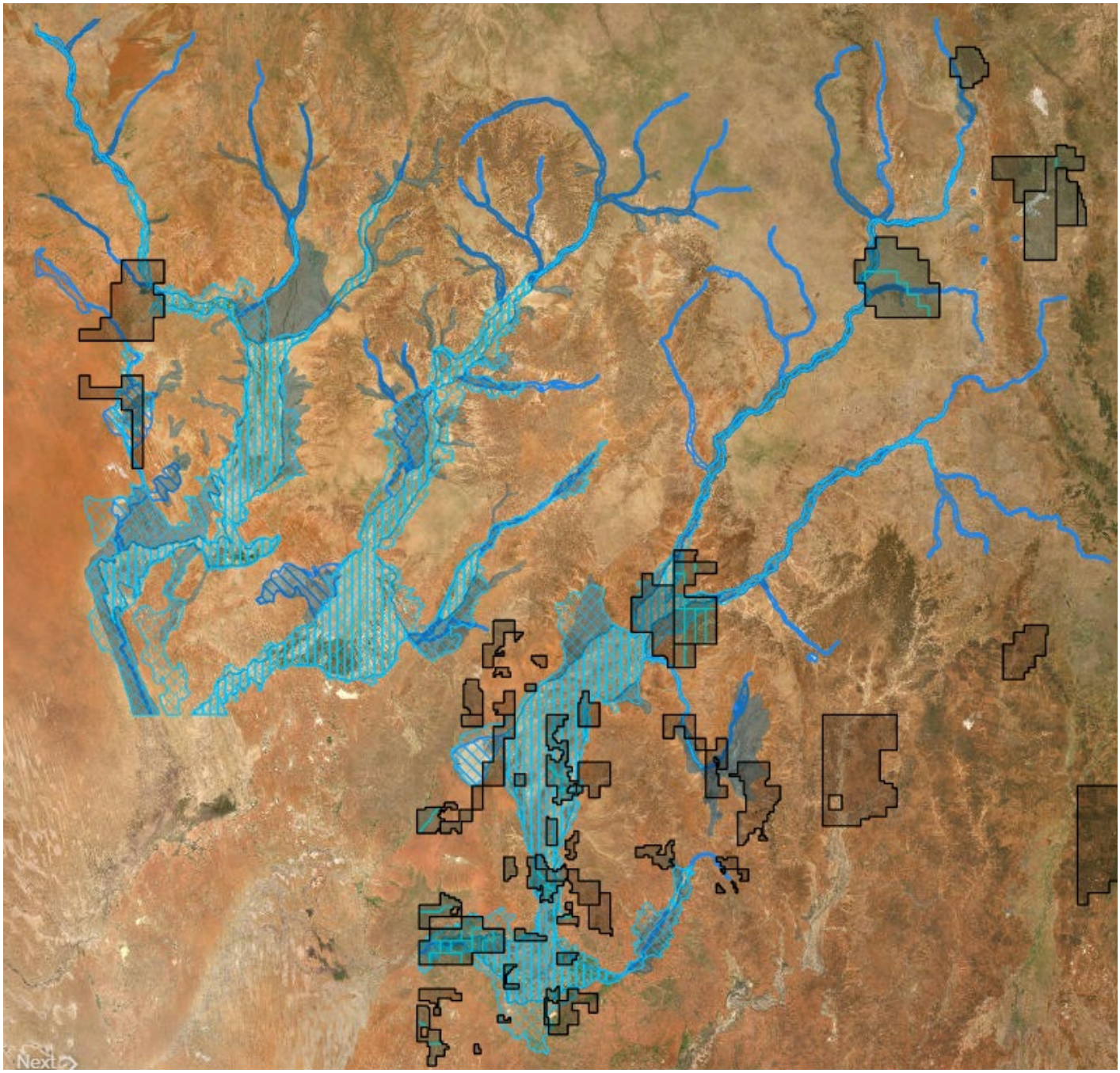
There are a relatively small number of PL applications which have been lodged with the Department of Resources since 2018, however, this may have been influenced by the policy uncertainty that has existed in the Qld LEB while the Qld LEB policy settings were being determined. To maximise certainty for planned gas extraction, it is proposed that activities under already submitted PL applications, expected to become production PLs, be considered as existing production activities under the existing framework.

Turning to ATPs, which indicate where industry is looking for suitable future extraction areas, there are 28 ATPs granted in the Qld LEB, again almost all in the Cooper system area. These tend to have shorter timelines with some about to expire, and almost all due to expire within the next five to ten years (the longest one expires in 2034). Although these ATPs maybe subject to renewal applications or have the ability to be renewed in the future. Of all the ATPs in the Qld LEB, ~29% are located entirely away from the DPs. The balance are located partially in the DP, in some cases with modest areas within the DP., while others have more substantial overlap. Of note is the fact that there are no ATPs located exclusively within the DP, and it is understood that some of the ATPs partially located in the DPs are undergoing partial surrenders.

It is not proposed that ATPs be considered as 'existing production', but they would be considered as existing exploration, and would continue in that context .

There are also a number of Potential Commercial Areas (PCAs) that have been declared over a small number of the ATPs discussed above. These PCAs are where exploration is ongoing, and proponents are considering their next steps, but no PL application has been submitted. They take in a mix of areas – some entirely within the DPs, some entirely off the DPs, and some partially within the DPs, but overall these are much smaller and more specific areas in their geographic focus. All of the PCAs are within the boundaries of granted ATPs. These PCAs are not in the position to commence production and therefore submit an application for a PL, however, the exploration activities have determined that resources is commercially viable.

Spatial Option 3 and ATPs (gas/oil exploration) with PCAs (not PL applications) overlaid (in turquoise):



Current activity and future consideration in the gas and oil space could suggest that after several decades of extraction, the conventional resources in DPs overall are starting to deplete. Remaining approved activity appears to be based on a small number of long-term PLs (some of which are in and precede existing DPs), and some exploration in areas which overlap current DP footprints.

However, as the Consultation RIS highlighted, the prospects of a scaled up, fully-operational unconventional gas and oil industry in the Qld LEB is a long-term possibility. Proponents will need to make commercial decisions based on resource availability, production capacity, logistical challenges and financial viability. Fully operational unconventional extraction on floodplains and in watercourses is likely to add significantly to the costs and logistics, impacting feasibility considerations. Having said that, the capacity to develop an unconventional gas and oil industry in the Qld LEB remains, provided it occurs outside of the DPs.

Notwithstanding the capacity to seek to regulate either just unconventional gas/oil in the DPs (Regulatory Option 3) or both conventional and unconventional gas/oil in the DPs (Regulatory Option 4), on the basis of the different resources (formally defined by Geosciences Australia and CSIRO) and very different

methodologies and processes, there is one further consideration in comparing the two options.

This relates to a risk management question arising from claims from the gas/oil industry about its existing conventional operations, namely that 'fracking is common if not ubiquitous' on and off the floodplains in the Cooper. There is no clear evidence that this 'fracking' is anything more than stimulation of conventional wells, absent of full-scale intense fracking with accompanying high level water use and management, and a substantially larger industrialised footprint associated with unconventional resource extraction, as discussed in the Consultation RIS. However, it is prudent to regulate all future gas and oil (i.e. by treating both conventional and unconventional gas/oil as unacceptable activities on the floodplains (i.e. Regulatory Option 4), from a precautionary approach. It should also be noted that such a way forward is much simpler administratively, although this is not the primary motivation.

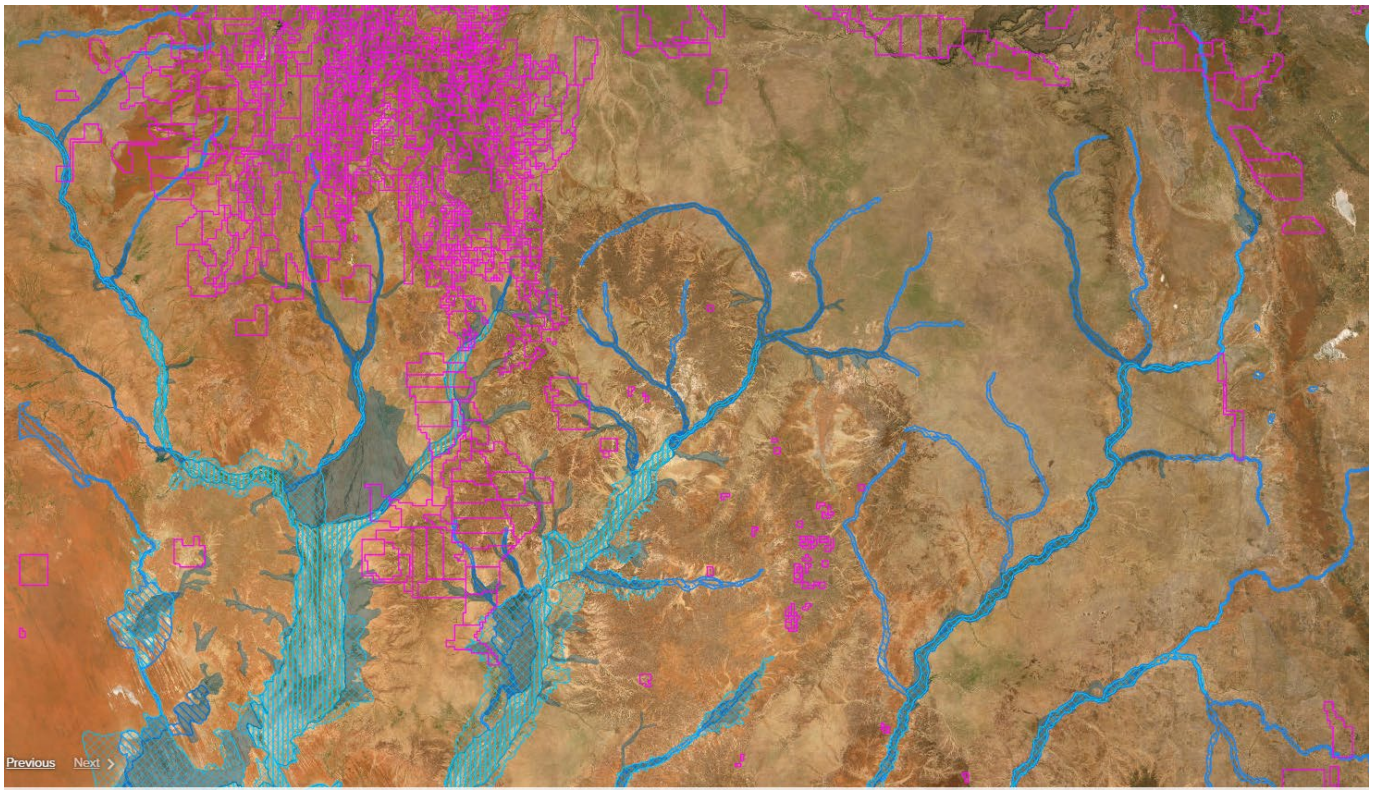
Minerals production and exploration and the DPs

There is little evidence of already operating mineral mining in the Qld LEB. Beyond a few smaller phosphate mines and small-scale opal/gemstone mining activity, mineral mines are all located away from the DPs.

Both the Diamantina and Georgina areas of the Qld LEB have a significant number of EPMs, covering considerable parts of the region. In a small number of cases, the EPMs partially overlap with existing DPs. With expanded DPs, a number of other EPMs would also partially overlap with a DP. However, it should be noted that many of these EPMs involve quite large areas, and any expanded DPs in the Diamantina and Georgina simply indicate formally where watercourses or flooding aggregations are located. In practice, regardless of the mapping these are still watercourses or floodplain areas, making them unsuitable for open cut mining.

Nevertheless, recognising that both open cut and underground critical mining requires a range of essential surface infrastructure, the proposed settings have been designed to avoid imposing additional constraints on future critical mineral extraction in the NWMP where there may be overlap with the expanded DPs. It is proposed to vary regulatory provisions for critical mineral mining to provide certainty for industry seeking to develop these resources.

Spatial Option 3 and EPMs (minerals exploration):



Conclusion about economic impacts in the DPs of regulatory changes

In terms of the economic impacts from a combination of spatial and regulatory changes, in the Cooper area, Spatial Option 3 adds in some minor boundary changes over the current DP, and the only larger area of expansion is near Eromanga (mostly to its north and northeast). This is an area where there are three existing PLs, and three ATPs, with the latter inclusive of exploration within and outside of Spatial Option 3 expansion. In the case of the Georgina, there are no PLs, but two ATPs which already straddle the existing DP and which would have some small additional areas captured in both Spatial Options 2 and 3. However, it should be noted that while the Queensland Government continued to assess PL applications in the region, in some cases it awaited resolution of Qld LEB policy settings before finalising them.

In the context of all existing PLs being unaffected by either spatial or regulatory changes, transitional arrangements for PL applications, and the capacity to focus on gas or oil resources away from the DPs in the future, as existing development has done in practice, overall it is estimated there will be relatively limited potential impact on gas and oil extraction across the entire Qld LEB region. The corollary of this is that impacts in the economics of this sector are similarly limited at worst, and most likely neutral over time and overall. The loss of some potential areas of future extraction, as yet proved viable or approved to proceed, is offset by resource availability outside of the DPs. In terms of impacts on specific companies, analysis indicates these are spread across the sector.

As the focus in the northern parts of the Qld LEB is on critical new economy minerals, and these are expected to be found deeper geologically, where underground rather than open cut mining, there is no apparent capacity to better map the DPs while also enabling wide ranging exploration and future production of critical mineral mines in areas outside of any new DPs. Only 44% of the North West Minerals Province (NWMP) overlaps with the Qld LEB region and Spatial Option 3 represents an addition of just 3% of the total NWMP area being mapped as DP.

The Consultation RIS concluded that "the impacts of any of the spatial options are expected to be negligible in practice" for new economy minerals mining in the NWMP. This conclusion remains following further detailed analysis of locations of EMPs and potential mapping of DPs. Notwithstanding this, regulatory provisions for critical minerals mining will be varied to provide certainty for industry seeking to develop these resources.

While the resources sector has expressed a preference for the status quo across spatial, regulatory and other considerations. This does not address the concerns of many stakeholders in terms of priority risks nor the overall scale of development and associated cumulative impacts. The status quo also does not properly address the benefits from moderate improvements to better mapping and protecting the most sensitive parts of the rivers, floodplains and watercourses of the Qld LEB. Status quo also places constraints on opportunities to maximise the total economic value of the region over the longer term, which will exist in both monetary and non-monetary terms.

Environmental and cultural impacts of regulatory changes

As with the spatial impacts analysis, the environmental impacts of regulatory changes follow a linear projection: the stronger and broader the regulatory changes, the more ecologically sensitive areas are protected from the highest threatening activities.

While there are several aspects to the regulatory regime already in place which apply to the Qld LEB, none apply a truly precautionary approach to gas and oil in the DPs, in the same way that are currently applied to open cut mining, dams and broadacre cropping (via prohibition in the DPs).

It follows that environmentally, Regulatory Option 4 provides the strongest protections from both the potential risks arising from large-scale, fully operational industrialised unconventional extraction in the DPs, and also the prospect of conventional extraction in the DPs becoming more industrialised and employing some features of unconventional in terms of contamination risks, footprint and interruption to overland flow.

Culturally, First Nations values and heritage embedded in the river systems will also receive greater protection through stronger regulation. It is noted that there are First Nations people who work in the existing resources sector. Their employment and incomes will be unaffected by any regulatory changes as such changes will not be retrospective, and anticipate continuation of current activities.

6.4.3. Environmental attributes analysis, including inclusion of Aboriginal cultural Heritage

The definitions of environmental attributes of the river systems (areas classified as DPs) are important on three main fronts. Firstly, these provide a description of the hydrological and environmental processes, and the features and functions these areas represent. Secondly, they can also reinforce the cultural values and significance these areas hold, and the cultural heritage these areas represent. Thirdly, and notably, the environmental attributes of the DPs form part of the criteria for assessing RIDA applications and aid in the tests of whether certain activities will avoid widespread or irreversible impacts.

The existing definition of environmental attributes under the Regional Planning Interests legislation includes only reference to 'natural hydrological processes', 'natural water quality in the stream channels and aquifers and on flood plains', and 'beneficial flooding of land that supports floodplain grazing and ecological processes'.

The Consultation RIS included an alternative option to broaden the environmental attributes, to capture the full range of key processes and functions considered fundamental to the preservation of the LEB's natural system, including geomorphic processes, riparian functions and wildlife corridors. This would extend the definition to:

- specifically cite systems/locations and connectivity such as braided channel networks, terminal wetlands and lakes, aquifers, off-stream water bodies and adjacent floodplains;
- identify hydrological variability, and ensuring explanations of water quality include physical, chemical and biological attributes, which provides a context for water quality analysis; and
- reference geomorphic characteristics, riparian function (including vegetation) and wildlife corridor functionality.

Through the submission process, Traditional Owners from the Qld LEB region have sought for express inclusion of reference to Aboriginal Cultural Heritage within the definition of environmental attributes, to clearly highlight the cultural values and significance these areas hold, the cultural heritage these areas represent, and the indivisibility of nature and culture, of people and places, and what needs protection. Such additions to the list of defining elements for environmental attributes supports cultural outcomes as

well as environmental ones, and ensure economic activities within the DPs are ecologically sustainable. While including this element to the Environmental Attributes is one potential approach, there are alternative pathways via assessment, ongoing dialogue and improved recognition to achieving the intent.

6.5. Assessment of expected negative impacts / ecological and cultural outcomes across all options in Qld LEB

Option/ Negative impacts, ecological/cultural outcomes	***Spatial 1***	***Spatial 2***	***Spatial 3***	***Reg 1***	***Reg 2***	***Reg 3***	***Reg 4***	***Env. Att. 1***	***Env. Att. 2***
Current (existing conventional gas/oil production *including PL applications*)	None	None	None	None	None	None	None	None	None
Future (potential conventional gas/oil including in exploration phase)	None	None	None	None	None	None	Limited**	None	None
Future (potential unconventional gas/oil including yet to be explored)	None	None	None	None	None	Min - None*	Min - None*	Min -None	Min -None
Existing mining underground	None	None	None	None	None	None	None	None	None
Prospective mining underground	None	None	None	None	None	None	None	None	None
Existing mining open cut	None	None	None	None	None	None	None	None	None
Prospective mining open cut	None	Limited#	Limited#	None	None	None	None	None	None
Local govt existing gas income	None	None	None	None	None	None	None	None	None
Local govt future gas income	None	None	None	None	None	Min -None	Limited##	None	None
More protection of ecology	No	Better	Best	No	Less	Better	Best	No	Best
More protection of cultural	No	Better	Best	No	Less	Better	Best	No	Best***

Notes

\# It is not obvious that there will be future critical mineral-related open cut mining in future DPs, for a range of economic, logistical and site-specific approval factors

Local govt income which is dependent on petroleum sector payments of rates and sponsorship is not expected to be impacted to any great degree, as all existing petroleum projects will continue, most prospective conventional projects can continue under Reg 4 if kept out of DPs, and potential unconventional projects that might otherwise occur on DPs are unlikely to get off the ground in practice due to costs and logistics.

* Impacts are regarded as none as potential unconventional projects on DPs that might otherwise occur are unlikely to get off the ground in practice due to costs and logistics, but in any case the apparent availability of unconventional resources not in the DP, or close to the edge means extraction could occur from outside the DP.

** Reg 4 impacts on prospective conventional projects regarded as limited as future areas (cf current ATPs) are either completely or partially OFF current or future DPs.

*** Greatest protection of cultural values is dependent on inclusion of Aboriginal Cultural Values under Environmental Attributes Option 2, and also under spatial option 3 and reg option 4, as these deliver the widest extension and the broadest regulation of petroleum and mineral activities in the DPs.

Scenarios

Scenario 1: Status Quo = Spatial Option 1 + Regulatory Option 1 + Environmental Attributes 1:

Aspect	*Negative impacts in Qld LEB*
Granted conventional gas/oil	None
Prospective conventional gas/oil	None
Potential unconventional gas/oil	None
Existing mining underground	None
Prospective mining underground	None
Existing mining open cut	None
Prospective mining open cut	None
Local govt existing gas income	None
Local govt future gas income	None
More protection of ecology	No
More protection of cultural	No

Scenario 2: Increases in DPs and Regulation of future unconventional in DPs = Spatial Option 2 + Regulatory Option 3 + Environmental Attributes 2:

Aspect	*Negative impacts in Qld LEB*
Granted conventional gas/oil	None
Prospective conventional gas/oil	Limited
Potential unconventional gas/oil	Min -None*
Existing mining underground	None
Prospective mining underground	None
Existing mining open cut	None
Prospective mining open cut	Limited#
Local govt existing gas income	None
Local govt future gas income	Min -None
More protection of ecology	Better
More protection of cultural	Better***

Scenario 3: Increases in DPs and Regulation of all future gas in DPs = Spatial Option 2 + Regulatory Option 4 + Environmental Attributes 2:

Aspect	*Negative impacts in Qld LEB*
Granted conventional gas/oil	None
Prospective conventional gas/oil	Limited**
Potential unconventional gas/oil	Min -None*
Existing mining underground	None
Prospective mining underground	None
Existing mining open cut	None
Prospective mining open cut	Limited#
Local govt existing gas income	None
Local govt future gas income	Limited##
More protection of ecology	Better
More protection of cultural	Better***

Scenario 4 Maximum increases in DPs and Regulation of future unconventional in DPs = Spatial Option 3 + Regulatory Option 3 + Environmental Attributes 2:

Aspect	*Negative impacts in Qld LEB*
Granted conventional gas/oil	None
Prospective conventional gas/oil	None
Potential unconventional gas/oil	Min -None*
Existing mining underground	None
Prospective mining underground	None
Existing mining open cut	None
Prospective mining open cut	Limited#
Local govt existing gas income	None
Local govt future gas income	Min -None
More protection of ecology	Better
More protection of cultural	Better***

Scenario 5: Maximum increases in DPs and Regulation of all future gas in DPs = Spatial Option 3 + Regulatory Option 4 + Environmental Attributes 2:

Aspect	*Negative impacts in Qld LEB*
Granted conventional gas/oil	None
Prospective conventional gas/oil	Limited**
Potential unconventional gas/oil	Min -None*
Existing mining underground	None
Prospective mining underground	None
Existing mining open cut	None
Prospective mining open cut	Limited#
Local govt existing gas income	None
Local govt future gas income	Limited##
More protection of ecology	Best
More protection of cultural	Best***

Scenario 5 Maximum increases in DPs and Regulation of all future gas in DPs achieves the most benefits:

- This scenario facilitates a range of sustainable development activities and keeps opportunities open.
- Capacity of existing regulatory requirements to deal with full scale production of unconventional extraction in the DPs is an unknown, risks have been identified through recent research and a precautionary approach is needed. It provides a means of proactively regulating unconventional extraction on DPs.
- This scenario is NOT singling out oil and gas as the only risks in DPs; rather it is adding this new risk to the list of existing list of risks within the DPs that are addressed through regulatory prohibition.
- It is explicitly NOT a blanket ban on oil and gas, as the regulatory effects are limited to within the DPs only, and this does not set precedent as the scenario is unique and specific to Qld LEB.
- Critical minerals are not targeted, and the proposed settings have been designed to avoid imposing additional constraints on future critical mineral extraction.
- Regulation will have limited impacts on production and economic output from the Qld LEB. Logistical challenges in existing development may already be protecting LEB floodplains through low intensity but this can still be a risk.

- Justification for regulation is not that the State has insufficient capacity to regulate activities in more remote areas, but that regulation is required for risks that cannot be fully conditioned under an EA.

6.6. Consideration of alternative approaches not included in the Consultation RIS

Based on the Commonwealth's study, *Qualitative (screening) environmental risk assessment of drilling and hydraulic fracturing chemicals for the Cooper GBA region Technical Appendix for the Geological and Bioregional Assessment: Stage 2 (2020)*[32], certain findings, qualifications and highlighting of need for further research on the safety and contamination risks involved with a number of chemicals used in fracking were made.

The CSIRO Cooper GBA online risk tool – the GBA-Explorer - meanwhile appears to indicate that for the 'Hydraulic fracturing' 'Activity', there are only two causal pathways indicated "Possible but not material"; and "Possible, material and unavoidable but can be mitigated". According to this tool, there are no causal pathways indicated that are "Possible, material, unavoidable and cannot be mitigated".

This implies that any and all risks from hydraulic fracturing can be mitigated (managed), in every circumstance (foreseen, unforeseen, present and future). This seems to be because it is assumed current regulatory systems, largely framed around approvals conditions, will cope with or adapt to all future risks, known and unknown, under scenarios that may be unpredicted or not previously experienced. Such a conclusion appears to be made in other parts of the Cooper GBA work.

There are two problems with this. One is the lack of reconciliation between the findings and qualifications, plus the need for further research, about a number of fracking chemicals, with the assumptions and conclusions made with the GBA-Explorer tool about hydraulic fracturing. The second is more conceptual: it is not in the nature of objective, independent scientific analysis to be so categorical about assumptions or results.

Inadvertently, this may have resulted in a downplaying of risks from fracking chemicals when it comes to water contamination. The proposition that all risks can be mitigated is difficult to accept when considering future fracking on a floodplain. CSIRO has assumed current regulatory systems, largely framed around approvals conditions, will cope with or adapt to unknown future risks. Its own analysis of fracking chemicals didn't appear to be suggest such certainty.

DES notes the some (implied) level of qualification of 'total and absolute' certainty about every aspect of hydraulic fracking, particularly in specific sensitive places and sites where overland flows can be moderate as well as large, with differing potential effects in carrying materials into waterholes, being held in alluvial hyporheic areas on the floodplains as well as flowing further downstream.

However, it appears that the petroleum industry uses this analysis to claim that it is either effectively 'risk-free' or that risks can in all circumstances be managed with current approaches, and extends this claim to scenarios such as full-scale production of unconventional resources on floodplains or in rivers in the Qld LEB. In practice, this is an untested proposition and makes significant assumptions which represent a gamble with the sensitive and fragile rivers systems under examination here.

Consideration has been given to adjustments to the existing regulatory system, such as creating higher operating standards or more detailed conditions to assess and manage unconventional extraction, including fracking and the other components of greater industrialised activities on the floodplains. The difficulty with this as an approach is that it would establish a case by case approach, fail to provide high levels of certainty and predictability for industry or the protection of the rivers and floodplains, and retains the inherent risks associated with a different form of development in areas where the risks are greatest. It is not judged to be an effective means of finding a solution to the various objectives of government, the scientific and cultural imperatives, economic factors, and other present/future considerations.

The current regulatory system has managed existing conventional gas production, but it is not the best fit

[32] Kirby, JK., Golding, L., Williams, M., Apte, S., Mallants, D., and Kookana, R. (2020). *Qualitative (screening) environmental risk assessment of drilling and hydraulic fracturing chemicals for the Cooper GBA region. Technical appendix for the Geological and Bioregional Assessment.* Department of Environment and Energy, Bureau of Meteorology, CSIRO and Geoscience Australia.

for addressing increased pollution risks associated with unconventional gas production on rivers and floodplains. Rather than causing investment ambiguity, spatially-specific regulation have the capacity to confirm the substantial areas where future production can continue, which offers greater investment clarity and certainty than any process under the current regulatory means which is at the same time capable of providing better ecological and cultural values protections in the rivers and floodplains of the Qld LEB.

7. First Nations responses to priorities and aspirations

The Consultation RIS for the Qld LEB sought to recognise the extensive presence of First Nations cultural heritage across the region, and highlight opportunities to fully support Traditional Owners' expressed need for greater cultural, economic, social, and environmental opportunities and outcomes.

Section 8.4 discussed some of the key concerns and potential responses, which included critiques of the ways that the Federal Native Title system and the Queensland Aboriginal Cultural Heritage Act operate in practice. The intent in highlighting these issues was to provide the basis for exploring approaches which could deliver:

- Improved formal recognition of Country and Cultural Heritage (a greater say on Country and management of Country);
- Improved support for engagement and participation in decision-making; and
- Realisation of aspirations to grow First Nations-owned and managed enterprises.

The proposed First Nations responses in the Consultation RIS were not framed as options, but as suggested points to discuss with the Qld LEB Traditional Owners Alliance and First Nations people from the region. DES met directly with a number of First Nations people and groups across the region through the consultation process. While only a small number of formal submissions and survey responses from First Nations people or organisations were received, the Qld LEB Traditional Owners Alliance convened a two-day face to face meeting with a group of First Nations people from across the region to discuss their collective formal responses. They flagged the need to recognise that other groups might adopt different positions (one has flagged Reg Option 2), and that ongoing engagement was important.

The Traditional Owners Alliance has indicated its support for Spatial Option 3 but with a call for a future review/update of boundaries based on new scientific assessment of waterways, tributaries and floodplains that have the most significant environmental values, led by and in partnership with the Traditional Owners Alliance, and in consultation with the local Traditional Owners to harness their knowledge.

The Traditional Owners Alliance has indicated its support for Regulatory Option 4 with greater attention on conventional ancillary infrastructure (roads, pipelines) and involvement of local Traditional Owners and the Traditional Owners Alliance in monitoring, and other improvements to the current regulatory system, including an end to self-assessment, establishment of external environmental and cultural monitoring, and greater enforcement.

The Traditional Owners Alliance has indicated its preference for Environmental Attributes Option 2 but with "Aboriginal cultural heritage" added.

The Traditional Owners Alliance also indicated its endorsement of all the elements the entire Section 8.4 the proposed First Nations responses, and that there are also other responses from government that First Nations people are seeking. These include additional, proportionate funding for Country specific (clan or group-based) First Nations Rangers, supported by the Traditional Owners Alliance, and the importance of housing and social infrastructure to support this.

The Traditional Owners Alliance is also looking for "permanent seats at the decision-making table", to exercise cultural authority, apply traditional ecological knowledge and partner constructively with government, industry and local communities to ensure the healthy future of the rivers, floodplains and groundwater of our country. They have also made a request that the Queensland Government "establish a First Peoples' Environmental and Cultural Heritage Agency to support the LEB Traditional Owners Alliance and Traditional Owner Clan Groups with investigative and prosecution pathways."

Finally, the Traditional Owners Alliance would like Queensland to engage with other jurisdictions for whole of LEB protections.

"Not only does our cultural intuition tell us that mining has no place on the floodplains, but it is also backed by many scientific studies that support the exclusion of gas and oil from the rivers and floodplains. However, we recognise the right for Traditional Owner groups to make their own decisions for country that may be outside of the views of the majority of Traditional Owner Groups that make up the LEB TOA making this submission."

8. Conclusion and recommended option

As the Queensland Government Better Regulation Policy (2023) indicates, "Governments are often faced with decisions about whether to impose costs on the community to safeguard the environment or reduce social harms. However, making such trade-offs is difficult because, while estimating the costs on the community can be straightforward, measuring environmental and social benefits is difficult."

In the case of the Qld LEB, while the challenges in measuring environmental and social benefits exist, estimating costs is more straightforward because of the limited impacts that are anticipated from the preferred approach. As the analysis of various scenarios combining spatial, regulatory and other options indicated, the combination of Spatial Option 3, Regulatory Option 4, and Environmental Attributes Option 2 with adjustment to include Aboriginal Cultural Heritage Values produces the best outcomes for the environment and for First Nations people, while avoiding impacts on existing industry and at most substantially limiting any possible impacts on future activities which may not develop in any case.

The Consultation RIS did not indicate recommended options or preferences for the government, as it was seen better to have a more open consultation process, where various options were canvassed without prejudice. The responses received on the Consultation RIS, and the overwhelming 'stated preference' arising from these is acknowledged as an appropriate means of assessing the value the community places on one approach over another. While the analysis of negative and positive impacts has not been shaped by the aggregate outcomes of the consultation process, the submissions, particularly those from companies, peak bodies and various experts, have certainly informed the analysis. Nevertheless, the consistency in both processes suggests an outcome that is both best in terms of overall outcomes, and agreeable in the public domain.

8.1. Recommended Spatial Option

Option 1 has some identified existing mapping flaws which would make it hard to justify. Option 2 is essentially what was previously protected at the higher level under Wild Rivers, does not extend much of the Cooper floodplain (where most of the gas is), and includes some additional areas in the Georgina and Diamantina River systems, as does Spatial Option 3.

There is overwhelming support for Spatial Option 3. This is also what most Traditional Owners sought. It is noted that in general the gas/oil and mineral mining industries prefer Option 1 (no change), but there was some level of acceptance of preparedness to work with expanded DPs.

As indicated in the earlier scenarios and impacts analysis, Spatial Option 3 on its own has almost no negative impacts across the issues of concern, but offers the best outcome culturally and ecologically.

Accordingly, it is **recommended that Spatial Option 3 be adopted as the preference of government**, with a commitment to further analysis and review to examine First Nations cultural values and cultural heritage matters adjacent to the new DPs over time.

8.2. Recommended Regulatory Option

The current regulatory regime under the *Regional Planning Interests Act 2014* and the subordinate *Regional Planning Interests Regulation 2014* (i.e. as per Regulatory Option 1) is silent on gas and oil, despite this sector being both an established industry in the region (conventional) and a proposed new, potential industry in the region (unconventional). Regulatory Option 2 was rejected by almost every submitter or respondent, including those from the gas/oil sector, for whom it would have provided greater certainty in undertaking fracking, as well as those from the mineral mining sector.

In aggregate, the submissions and other responses conveyed a common narrative of concerns about gas 'fracking' and threats to the integrity of the ecological and cultural values in the river systems. The Consultation RIS indicated that conventional gas and oil is not risk-free, but has been in operation for decades in the region without major incident on the floodplains. Rather it was highlighted that unconventional extraction poses future threats and risks on the floodplains through deep and intensive fracking, and significantly greater industrialised operations and site footprints in those areas.

Regulatory Option 2 suggests that future hydraulic fracturing and other potentially high-impact activities

would be a pre-determined as acceptable on the DPs. It does not serve to "protect important environmental values" nor effectively manage the risks to other users of the floodplains (e.g. organic grazing; Traditional Owners). Furthermore, the current regulatory framework deals on a project-by-project basis and does not provide adequate consideration of cumulative impacts. This was an important finding of the NT Fracking inquiry.

As indicated in the earlier scenarios and impacts analysis, Regulatory Option 4 has limited negative impacts across the issues of concern, but offers the best outcome culturally and ecologically. In combination with Spatial Option 3, this overall assessment remains the case.

Numerically, there was overwhelming support for Option 4. This is also what most Traditional Owners sought. It is noted that resource peaks and sector companies generally preferred Regulatory Option 1. Option 4 regulates unconventional gas and oil and also captures future conventional gas as a precautionary approach into the future.

Accordingly, it is **recommended that Regulatory Option 4 be adopted as the preference of government,** with a commitment to further involving Traditional Owners in project monitoring.

8.3. Environmental Attributes Option

The current definition of environmental attributes is based on a subset of the attributes previously attached to rivers systems protection in the Qld LEB. It is unclear why this change was made, but it has resulted in a partial description of the ecological and hydrological processes within DPs which should be recognised and used as criterial for Regional Interests Development Approvals.

Numerically, there is overwhelming support for Option 2, although for this issue there was a higher level of no specific response. Generally, the resources sector preferred Option 1, but there was some openness to Option 2. The Traditional Owner Alliance supported Option 2 but on the basis that 'Aboriginal Cultural Heritage' was also included.

Accordingly, it is **recommended that Environmental Attributes Option 2 as described in the Consultation RIS be adopted as the preference of government.**

8.4. A commitment to ongoing dialogue and engagement with First Nations people and groups in the Qld LEB region to support further analysis and consideration of Aboriginal Cultural Heritage values is also recommended. Recommended confirmed responses to First nations priorities and aspirations

The Queensland government has an important opportunity to address inequities and inadequacies in how Country is formally recognised and acknowledged, and how First Nations Traditional Custodians of the Queensland LEB are supported and enabled to care for their Country, consistent with the Queensland government's Path to Treaty process. This will create a series of positive impacts for First Nations people, who play critical roles in the communities of the Qld LEB, who care for the rivers and adjacent lands, and who should be at the centre of the future management of the Qld LEB region.

This can be supported by confirming a series of responses to First Nations peoples' priorities and aspirations already expressed in position statements, submissions, presentations and meetings. In confirming these responses, the Queensland Government can demonstrate it has heard the voices of the Traditional Custodians on the rivers and lands of the Qld LEB, and has acted accordingly. These will support strengthened connections to Country and to Culture, show respect and recognition of the First Nations peoples' contributions and provide practical and tangible economic and social outcomes.

Improved formal recognition of Country and Cultural Heritage

The Queensland Government recognises the extensive presence of First Nations people's Cultural Heritage across the Queensland LEB region, and accepts First Nations people's concerns for their Country and the expressed need for appropriate engagement and consultation beyond Native Title processes on matters relating to Country. This involves formally supporting a broader understanding of First Nations Traditional Custodianship that goes beyond Native Title processes, to ensure enhanced

engagement and consultation in approvals processes.

Improved capacity to support engagement and participation in decision-making

The Queensland Government acknowledges expressed concerns about the capacity and resource constraints of First Nations' peoples relative to multi-national resource operators and the consequent imbalance in power that this causes. The Queensland Government will explore opportunities for investment in training and funded professional positions for First Nations peoples in administration and governance, and in the areas of legal and technical expertise could assist in ensuring a more level playing field for effective engagement and improve capacity to engage with government, and participate in decision-making processes for the LEB region.

Realisation of First Nations peoples' broader aspirations

The Queensland Government will examine how best to enable the realisation of First Nations peoples' aspirations for cultural, economic, social, and environmental opportunities and outcomes. This could include resourcing land and river management roles, promoting First Nations-owned and managed business, and enabling First Nations enterprises and entrepreneurialism such as those based on biodiscovery and traditional knowledge. The key objective overall is to ensure that outcomes which protect ecological and cultural values in the Qld LEB region are of direct and tangible benefit to the Traditional Custodians, whose ancestors have protected and relied on the region sustainably over millennia – a legacy which continues to the present day. An immediate practical example of this is to facilitate a greater role in both on-ground management and monitoring of activities in the Qld LEB.

Accordingly, it is **recommended that government agree to the adoption of the above set of responses to Qld LEB First Nations peoples' priorities and aspirations, with a commitment to continue dialogue and negotiation in acknowledgement of these and additional priorities, processes and protocols which have been raised in submissions from Qld LEB First Nations people and organisations**.

By way of final comments on impacts analysis, improving protections in the Qld LEB is consistent with the Queensland Government's commitment to the Path to Treaty. It is also noted that resource companies and their peak bodies have developed various 'ESG' or environmental policy statements, and indicate their support for First Nations respect and need for involvement in decision-making affecting their Country. The above recommendations are quite consistent with these principles and objectives.

The above recommended approaches are also consistent with the Queensland Resources Industry Development Plan, which indicates "The final proposed (Qld LEB) framework is intended to ensure more comprehensive protections for the rivers and flood plains while also providing regulatory certainty for activities including resources developments elsewhere within the basin."

The combination of these approaches will mean there is capacity to expand gas productions away from the DPs and that gas can continue to be extracted in the floodplains where there are existing approvals in place. This will provide long-term certainty for industry and supply in to the East Coast market. Further, regulatory provisions for critical mineral mining will provide certainty for industry seeking to develop these resources. These protections would be unique to the specific circumstances and values of the Qld LEB. This is a balanced and targeted approach that brings improved protection of among the last free-flowing river systems in the world, and the unique cultural and environmental values they support. This will also be beneficial to the grazing, tourism and regional communities dependent on the river systems, and better ensure the total economic value of the region is maintained into the future.

9. Implementation, compliance support and evaluation strategy

The recommended options endorsed by the Queensland Government are:

- Spatial Option 3,
- Regulatory Option 4,
- Environmental Attributes Option 2.

Expanding the DPs consistent with Spatial Option 3 will be affected through the replacement of the current regulatory map (and GIS layer) with the publishing of a new one (under s4(1)(a) of the RPI Regulation). Publishing of an updated map, release of a new mapping layer, and public availability of relevant shapefile data will all occur once the regulatory changes have been finalised.

Changes to the regulation of activities in the expanded DPs will be affected via amendments to the RPI Regulation to achieve Regulatory Option 4 - future gas or oil production within Designated Precincts prohibited as an unacceptable use, and the amended Environmental Attribute definition. Special provisions for critical mineral mining in the DPs will also be incorporated. Discussions with the Office of Queensland Parliamentary Council regarding regulatory drafting will follow the release of this Decision IAS.

To enable the transition to the new regulatory regime, it is confirmed that holders of existing petroleum Authority to Prospect or Potential Commercial Area declared over Authority to Prospect in areas within the amended DPs will be able to submit Petroleum Lease Applications for conventional gas or oil until 30 August 2024. Any such applications, along with Petroleum Lease applications for conventional gas or oil already submitted on 22 December 2023, will otherwise continue to be assessed under the existing framework.

In considering Environmental Authority applications in the DPs, DESI will consider the additional environmental attributes, and the cumulative impacts of activity, and the suitability of the proposed design, construction and operational practices.

DESI will also examine opportunities for First Nations involvement in on-ground site inspections, activities monitoring and other compliance work to the extent possible under the EP Act.

In implementing the above regulatory changes, DESI will engage with the Qld LEB Traditional Owner Alliance, industry (peak bodies and individual companies), local governments, First Nations people from the region, conservation groups, and with the broader Queensland public in raising awareness of the changes, their intent and implementation and their effects in practice.

Further and broader engagement with First Nations people from the Qld LEB region will also be undertaken to ensure that government's regulatory changes properly consider impacts on their Cultural Rights under the Queensland *Human Rights Act 2019*.

Finally, DESI will create a formal evaluation framework, consistent with the DESI Evaluation Strategy, to capture these regulatory changes, including the building of a program logic for the approaches to support the monitoring, review and assessment of the efficacy of the interventions.

Attachments:

Consultation Regulatory Impact Statement for the Queensland Lake Eyre Basin.

Hasan, S. and Smart, J.C.R. 2023. Economic analysis for Queensland Lake Eyre Basin Full Decision Impact Analysis Statement. ARI Report No. 2023/010. Australian Rivers Institute, Griffith University, Brisbane.