Law Council
OF AUSTRALIA

Legal Practice Section

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Committee Secretary
Senate Standing Committees on Environment & Communications
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Parliament House
CANBERRA ACT 2600

By email: ec.sen@aph.gov.au

Dear Sir/Madam

SUBMISSION ON WATER USE BY THE EXTRACTIVE INDUSTRY

1. This submission has been prepared by the Australian Environmental and Planning Law Committee of the Law Council's Legal Practice Section (**the Committee**).[1] The Committee welcomes the opportunity to provide comments to the Senate Environment and Communication References Committee on the Water Use by the Extractive Industry inquiry.

Managing water abstraction

2. Water abstraction in each State and Territory is regulated by legislation, supported to varying degrees by administrative rules and policies and overlain by various intergovernmental agreements and national policies at the national level, including most relevantly, the Intergovernmental Agreement on a National Water Initiative 2004 (**NWI**).

3. Water resources legislation in each of the States and in the Australian Capital Territory includes statements as to the objectives of the legislation. Those statements include an objective that considers sustainability[2] and other objectives focussed on social and economic benefits. According to Gardner, 'Australian water resources legislation contains strong expressions of the development and use of water for social and economic benefits'.[3]

4. The challenge for regulators and for the courts, if called upon, is to find the balance between the application of sustainability objectives articulated in the relevant legislation with broader social and economic objectives.

[1] The Law Council of Australia is a peak national representative body of the Australian legal profession. It represents the Australian legal profession on national and international issues, on federal law and the operation of federal courts and tribunals. The Law Council represents 60,000 Australian lawyers through state and territory bar associations and law societies, as well as Law Firms Australia.
[2] For a detailed discussion of the objectives in State and Territory water legislation, see Alex Gardner, Richard Bartlett and Janice Gray, *Water Resources Law* (LexisNexis Butterworths 2009), Chapter 4, sections 4.5-4.22. The Northern Territory water legislation does not contain any sustainability objectives.
[3] Ibid, section 4.15

5. This conundrum is not limited to water resource management and is not limited to the extractive industry.

The National Water Initiative

6. State and Territory water resource management legislation should be consistent with and promote the terms of the NWI and the principles embodied in it.

7. The Productivity Commission is undertaking the latest review of the NWI and has released a draft report on its findings to date (**Draft Report**).[4] The Committee has previously commented on certain findings and recommendations in the Draft Report[5] and articulated its support for the majority of the key points made in the Draft Report.

8. The Draft Report notes that '[u]nder the National Water Initiative, States and Territories committed to establish water access entitlement and planning frameworks that adhere to the specific principles on the basis this would optimise economic, social and environmental outcomes'.[6] However, while many of the key elements of the NWI are largely in place, the Productivity Commission notes there are some substantial gaps or exceptions. Relevantly, these include:

   - Western Australia and the Northern Territory have still not enacted legislation that embodies the NWI principles around water access entitlements and separation of water access rights from land; and

   - Water use by extractive industries has not been incorporated into entitlement and water planning arrangements.

   These gaps are discussed below.

Legislative reform in Western Australia and the Northern Territory to embody the NWI must be completed

9. The Productivity Commission has found that implementation of water entitlement and planning reforms has contributed to improved environmental outcomes and promoted more transparent and inclusive decision making. [7] The failure of Western Australia and the Northern Territory to implement legislative reforms after more than a decade represents a significant gap in the legislative framework in these jurisdictions, both of which have a significant extractive industry on a sub-national and national level.

10. Successive Western Australian governments have consulted with industry, including the extractive sector, in relation to NWI-compliant legislation over many years and, in the absence of actually passing legislation, have undertaken water resources planning that embodies some of the NWI principles. However, ultimately these are merely administrative 'bandaids' and do not carry the weight of statute as intended by the NWI. Moreover, there is no significant industry opposition to implementation of NWI-compliant water entitlement planning and management reforms and thus no compelling reason for the Western Australian government not to proceed with these reforms.

[4] Productivity Commission, National Water Reform Draft Report, (September 2017).
[5] Law Council of Australia submission to the Productivity Commission on National Water Reform dated 23 October 2017.
[6] Draft Report, page 62.
[7] Draft Report, pages 68-70.

11. Notwithstanding any reform fatigue that may have set in,[8] the Committee supports the Productivity Commission's Draft Recommendation 3.1 and in particular paragraph a. with respect to reform priorities.

Incorporation of the extractive industry into the NWI framework must be progressed

12. When the terms of the NWI was agreed, it was acknowledged that there were certain issues with respect to the application of the NWI principles to the mining and petroleum sectors that were difficult to resolve. This resulted in the inclusion of paragraph 34 into text of the NWI:

> *The Parties agree that there may be special circumstances facing the minerals and petroleum sectors that will need to be addressed by policies and measures beyond the scope of this Agreement. In this context, the Parties note that specific project proposals will be assessed according to environmental, economic and social considerations, and that factors specific to resource development projects, such as isolation, relatively short project duration, water quality issues, and obligations to remediate and offset impacts, may require specific management arrangements outside the scope of this Agreement.*

13. According to the Productivity Commission, the intention of paragraph 34 was to provide flexibility, given the nature of the needs of the minerals and petroleum sector in relation to water abstraction.[9] Prior to its abolition, the National Water Commission stated its view that paragraph 34 was only intended to operate in 'exceptional circumstances'.[10]

14. The failure to address the extractive sector within the NWI negotiations, and the ongoing failure to deal with the industry in the years since, means that State and Territory governments have maintained or developed separate arrangements for regulating the take and use of water by the extractive sector in their jurisdictions. These arrangements are summarised in the Draft Report.[11]

15. In 2010, the National Water Commission believed that the extractive industry should be incorporated into water planning and management regimes.[12] In 2017, the Productivity Commission has said that to 'reflect the increased significance of water management issues associated with extractive industries since 2004, the Australian, State and Territory Governments should amend relevant provisions in the NWI to explicitly deal with their issues and outline guiding principles that ensure ongoing confidence in entitlement and planning arrangements'.[13]

16. The Committee endorses these views and the terms of Recommendation 3.1b in the Draft Report.

17. If the States and Territories are to continue existing water take and use rights for the extractive industry outside the NWI framework, there must be a compelling reason for

[8] See Australian Panel of Experts on Environmental Law, Technical Paper 3, section 2.4.2 and footnote 70.
[9] Draft Report, page 76.
[10] National Water Commission, Mining Position Statement (May 2010).
[11] Draft Report section 3.3, in particular Boxes 3.6 – 3.8.
[12] National Water Commission, Mining Position Statement (May 2010).
[13] Draft Report, page 80.

doing so which is clearly articulated by the relevant government to the public and stakeholders.

18. The ongoing failure to incorporate the extractive industry into the NWI framework – particularly in relation to resource planning and management – also means that the impact of the industry's use of water is not being systematically addressed in the context of the impact on Aboriginal peoples' connection to, and responsibility for, their land. The Committee considers that the current frameworks for recognition of Indigenous cultural flows under the *Water Act 2007* (Cth) and most State water rights systems remain inadequate. Aboriginal people often have the right to 'consultation', but generally no substantive rights or cultural entitlements. Cultural flows will not be appropriately recognised until water rights in Australia recognise substantive rights arising by virtue of Aboriginal custom. The ongoing National Cultural Flows Research Project may provide solutions to these issues and the impending findings of its final law and policy component should be seriously considered once they are available.[14] The recent introduction of the *Yarra River Protection (Wilip-gin Birrarung murron) Act 2017* (Vic) and its creation of a formal indigenous Council to advise on the use of that water system, also provides a model for consideration.

Lack of scientific knowledge around water and the extractive industry creates unnecessary risk

19. Water resources legislation at a State and Territory level focusses on the management of the water resource itself and the taking of water from a resource. Social, economic and environmental impacts may be addressed incidentally as part of water resource management planning processes but these matters, as affected by the taking, use and (ultimately) disposal of water by the extractive industry for a particular project, are more squarely addressed by State and Territory planning and development and environmental protection laws, in addition to Commonwealth oversight through the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

20. In many jurisdictions, mining operations are subject to industry-specific legislation regarding access to water, or other exemptions from water management legislation. In terms of both interception (de-watering) and consumptive use (use of water in cooling procedures), the sector's impact on water quality and quantity can be significant.

21. A significant issue is the use of underground water resources by the extractive industry, often in areas where there is no surface water resource at all but also where there may be no other significant user of water apart from a single mining or petroleum operation.

22. Despite over one hundred years of mining activity, knowledge of Australia's underground water resources remains patchy. This includes not only an understanding of how much of a resource exists underground and where it is located, but also an understanding how the extraction of water from underground sources affects and relates to surface water resources and dependant vegetation and ecosystems.

[14] See also Emma Carmody et al, 'The future of water reform in Australia – starting a conversation' (2016) 31(4) *Australian Environment Review* at 132 which advocates for a greater consideration of Aboriginal rights in relation to water as part of future reform of the NWI.

23. Clearly, gaps in knowledge and understanding can have serious environmental repercussions if too much water is allowed to be taken out – the underground resource can be depleted and unable to be replenished and dependent ecosystems can be damaged or destroyed entirely, with consequential impacts on land use and Aboriginal cultural heritage.

24. Closing the knowledge gap requires time and resources. Ideally, no extractive project should be approved under planning or environmental laws while such knowledge gaps exist. The recent recommendation made in the Northern Territory Fracking Inquiry Final Report that:

> *a strategic regional environmental and baseline assessment (SREBA), including a regional groundwater model, be developed and undertaken for any prospective shale gas basin before any production licences are granted for shale gas activities in that basin…*[15]

is a positive move towards this ideal.

25. However, where it is not possible or realistic to defer extraction until rigorous baseline data is available, regulators and courts must fall back on fundamental principles, such as the precautionary principle, to make decisions about proposed projects.

26. The precautionary principle is described in the Intergovernmental Agreement on the Environment in the following terms:

> *Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:*
>
> *(a) careful evaluation to avoid wherever practicable, serious or irreversible damage to the environment; and*
>
> (b) *Assessment of the risk-weighted consequences of various options.*

27. A recent example of the difficulty in applying this principle in practice is a Land Court of Queensland case involving the proposed Adani coal mine.[16] One of the many issues that the Land Court was forced to consider in this case was the potential impact that water abstraction associated with mining would have on the Doongmabulla Springs Complex. The Court was presented with different hydrogeological models from the various experts engaged by the parties and, despite consultation between those experts, there was no agreement on the conceptual model that best described the source of water feeding the Springs and therefore the likely level of impact that mining and the taking of water would have on the water resource, the Springs and the dependent ecosystem.

[15] Draft Final Report, Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2017, p120 <https://frackinginquiry.nt.gov.au/inquiry-reports>.
[16] Adani Mining Pty Ltd v Land Services of Coast and Country Inc & Ors [2015] QLC 48.

28. The Court applied the precautionary principle[17] and ultimately upheld the environmental authority that had been granted by the Queensland regulator for the Adani mine, although with some additional conditions.

29. The case highlights the problem with the gaps in scientific knowledge. Because there had been no direct, field data specific to the Doongmabulla Springs – no such studies having been done as part of the environmental impact assessment process at either a State or Federal level – the Court was forced to make a choice between models that the experts could not agree on.

30. For regulators at a State and Federal level, the way to apply the precautionary principle in practice to address scientific uncertainty at the approval stage is to apply an adaptive management approach to setting conditions. Chief Justice Preston of the New South Wales Land and Environment Court has described adaptive management as 'a step-wise or adaptive management approach, whereby uncertainties are acknowledged, and the area affected by the development plan, programme or project is expanded as the extent of uncertainty is reduced'.[18]

31. At a practical level, adaptive management conditions may require:

    - undertaking research to close gaps in scientific knowledge to be filled;
    - applying conservative management strategies to operations, including active monitoring, while scientific work is being completed;
    - periodic evaluation of monitoring results against existing models and taking action (including ceasing activities) if certain thresholds are met; and
    - adjusting models and management strategies as knowledge gaps are closed, with associated review by the regulator.

32. While adaptive management conditions are one way to protect the environment from the impact of mining or petroleum activity, to be effective there still must be a sufficient baseline of knowledge and understanding of the particular water resource for those adaptive management conditions to be effective in mitigating or minimising potential, irreparable environmental harm.

33. A greater emphasis and focus on data gathering by both government (for example through the bioregional assessments being carried out by the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development) and by proponents during the environmental impact assessment phase of project development will:

    - allow regulators to impose clear conditions that are effective and enforceable; and
    - provide more information and transparency upfront in the approval process so that the public and other stakeholders can be better informed and have confidence that regulators are not making decisions in a vacuum.

[17] Ibid, paragraphs 267-268
[18] *Telstra Corporation Limited v Hornsby Shire Council* [2006] NSWLEC 133 (24 March 2006), [163].

34. The effectiveness of adaptive management conditions can also be supported and enhanced by strong oversight and enforcement by the regulators at the State, Territory and Commonwealth level.

35. A stronger emphasis on information gathering and increasing scientific knowledge will also:

    - improve water resource planning processes within the NWI framework; and
    - improve the understanding of the cumulative impacts of water abstraction and use by multiple projects in a region.

    Cumulative impacts issues are not clearly considered in the NWI but a failure to manage cumulative impacts will ultimately cause harm to the environment and potentially cause additional harm to Aboriginal peoples' physical or spiritual connection to their land.[19] The Great Artesian Basin is one example where historical over-extraction (despite the Basin being Australia's largest source of groundwater) has led to harm to dependent vegetation systems but pressure continues to be placed on the Basin with the expansion of coal seam gas projects in Queensland and the potential for the Olympic Dam project in South Australia to expand significantly. However poorly understood the interaction of groundwater and surface water resources, aquifer recharge requirements and interception impacts may be, sustainable water management practices are more likely to be achieved where all water use is subject to the same assessment and governance framework. The Committee supports the integration of extractive industries into water management legislation to better monitor and manage cumulative impacts

Water produced by the extractive industry must be better managed

36. While the extractive industry takes water for consumptive use, the majority of water is abstracted simply to permit mining or petroleum operations to occur.[20]

37. Produced water has benefits outside of a particular mining or petroleum operation – it can be used to replace water abstraction in other areas or more allocated resources or to support the development of other industry or land use in a region. It also carries risk – gigalitres of water can potentially be released into the environment where it is not intended to be which has both environmental repercussions and, in certain circumstances, cultural or spiritual repercussions for traditional owners.

38. Some regulators have attempted to address the issues associated with surplus and produced water in the extractive industry. In May 2013, the Western Australian Department of Water (now the Department of Water and Environmental Regulation) released its *Water in Mining Guideline* and related *Strategic Policy 2.09: Use of mine dewatering surplus* as a means of providing at least a policy framework for the best use and management of water.[21] Section 1.2 of the Guideline lists the objectives for mine water management which include:

[19] See also Emma Carmody et al 'The future of water reform in Australia – starting a conversation' (2016) Australian Environment Review Vol 31 No 4, page 132.
[20] For example, approximately 70% of water abstracted in the Pilbara region of Western Australia is done for mine dewatering purposes ahead of active mining operations.
[21] Both policy documents are intended to be a response to NWI principles in that State – see the Water in Mining guideline, pages vii and viii. The policies are available at

- maximising water-use efficiency at all mine sites, particularly water-deficient sites, to reduce the need for water to be abstracted from the environment;
- optimising the use of mine dewatering surplus either on site or off site, to maximise efficiency and reduce adverse effects of releases to the environment; and
- minimising the adverse effects of abstraction and release of water on environmental, social and cultural values.

39. But these policies remain policies only. Without integration into statutory planning processes, there is arguably less incentive for mining companies to be innovative or develop better ways of managing surplus water requirements.

40. The failure of State and Territory governments to bring the extractive industry into the NWI framework and to address the use and production of water by the extractive industry in statutory water resource management and planning processes means that there is a potential for such produced water to be misused, either by not directing such water to a higher, more beneficial use or by allowing it to be discharged to the environment causing environmental harm.

Contact

41. The Committee would welcome the opportunity to discuss the submission further. Please contact Adjunct Professor Greg McIntyre SC, Chair, Australian Environmental and Planning Law Committee at in the first instance.

Yours sincerely

Jonathan Smithers
Chief Executive Officer

<http://www.water.wa.gov.au/__data/assets/pdf_file/0019/1819/105195.pdf> and <http://www.water.wa.gov.au/__data/assets/pdf_file/0018/1683/105196.pdf>.