



Australian Network of Environmental
Defender's Offices Inc

Submission to the Senate Standing Committee on Environment and Communications regarding the *Environment Protection and Biodiversity Amendment Bill 2013*

4 April 2013

The Australian Network of Environmental Defender's Offices (ANEDO) consists of nine independently constituted and managed community environmental law centres located in each State and Territory of Australia.

Each EDO is dedicated to protecting the environment in the public interest. EDOs provide legal representation and advice, take an active role in environmental law reform and policy formulation, and offer a significant education program designed to facilitate public participation in environmental decision making.

Submitted to:

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Introduction

ANEDO welcomes the opportunity to assist the Senate Standing Committee on Environment and Communications (**Committee**) with its inquiry into the Environment Protection and Biodiversity Amendment Bill 2013 (**EPBC Bill**). As public interest environmental lawyers with 25 years' experience litigating, advising, educating and engaging in legislative processes, we have an in-depth understanding of the strengths and weaknesses of environmental laws at both a State and Commonwealth level.

EDO offices have brought dozens of cases under State planning, resource management and biodiversity laws in respect of mining exploration, production and expansion activities.¹ We have also published numerous reports, discussion papers, peer-reviewed articles and educational materials regarding mining, natural resource management and the law.² Finally, we have extensive experience advising in respect of water law and policy at both a State and Basin level.³

Based on this experience, it is clear that Australia's water resources can be significantly compromised by mining activities and this is an environmental issue of national significance. Indeed, the Commonwealth Government conceded the latter in respect of Basin water resources when it passed the *Water Act 2007*. However, this Act applies to one basin and does not regulate the impacts of mining. Accordingly, there remains a regulatory gap that needs to be addressed by requiring all Australian water resources are afforded a greater level of statutory protection under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*.

As noted in our recent submission to the Committee regarding the retention of federal environmental assessment and approval powers, Commonwealth oversight of matters of national environmental significance (**matters of NES**) is vital for the following reasons:

¹ Recent EDO cases involving mining activities include: *SHCAG Pty Ltd v Minister for Planning and Infrastructure and Boral Cement Limited* [2013] NSWLEC 1032; *Fullerton Cove Residents Action Group Incorporated v Dart Energy Ltd* [2012] NSWLEC 207; *Hunter Community Environment Centre Inc v Minister for Planning* [2012] NSWLEC 195; *Illawarra Residents for Responsible Mining Inc v Gujarat NRE Coking Coal Limited* [2012] NSWLEC 259; *Buzzacott v Minister for Sustainability, Environment, Water, Population and Communities (No 2)* [2012] FCA 403; *Queensland Conservation Council Inc v Xstrata Coal Queensland Pty Ltd & Ors* [2007] QCA 338. Note that many of these cases involved impacts on water resources.

² See for example: *Mining Law in NSW* available at: http://www.edo.org.au/edonsw/site/pdf/pubs/Mining_Law_in_NSW.pdf; http://www.edo.org.au/edonsw/site/pdf/pubs/110628mining_law_discussion_paper.pdf; and http://www.edovic.org.au/downloads/files/fact_sheets/edo_vic_your_rights_against_coal_mines_fact_sheet.pdf.

³ ANEDO has prepared submissions in respect of the Proposed Basin Plan; the Murray-Darling Basin Ministerial Council s.43A Notice; the *Water Amendment (Long Term Sustainable Diversion Limit Adjustment) Bill 2012*; and the *Water Amendment (Water for the Environment Special Account) Bill 2012*, amongst others. Available at: http://www.edo.org.au/edonsw/site/policy_submissions.php#3

- Only the Commonwealth Government can provide national leadership on national environmental issues;
- The Commonwealth must ensure that we meet our international obligations;
- State and Territory environmental laws are not up to standard;
- States fail to administer and enforce their own environmental laws;
- States are not mandated to act (and do not act) in the national interest;
- States directly benefit from the projects they are assessing.⁴

ANEDO therefore supports the inclusion of a ninth matter of NES designed regulated mining activities which are likely to have a significant impact on Australia's water resources.

Executive Summary

ANEDO strongly supports the inclusion of a new matter of NES in the EPBC Act to protect Australia's water resources from the impacts of mining ("**water trigger**"). However, to ensure that an effective trigger is established, we recommend further amendments to overcome constraints that will limit its efficacy.

We therefore recommend the following amendments:

1. Broadening the "water trigger" to cover other forms of mining likely to have a significant impact on Australia's water resources. Specifically, in addition to CSG developments and large coal mining developments, the Bill should also apply to all large mines that excavate beneath the water table and to unconventional gas exploration and production activities.
2. Limiting the categories of mining development exempted from the "water trigger" to:
 - a. controlled actions that have been approved under the EPBC Act prior to the Bill's commencement and for which work has already commenced; and
 - b. mining projects (that were not controlled actions prior to the Bill's commencement) that fulfil the criteria outlined in Item 22 (3) *and* for which work has not yet commenced.
3. Including "water trigger" specific assessment criteria in Part 9 of the EPBC Act. Specifically, the criteria should include a requirement to "not act inconsistently with" the Convention on Biological Diversity.

⁴ See ANEDO's submission to the Senate Standing Committee on Environment and Communications regarding the Environment Protection and Biodiversity Conservation Amendment (Retaining Federal Approval Powers) Bill 2012. Available at: <http://www.edo.org.au/policy/ANEDO-Submission-EPBC-Retaining-Federal-Approval-Powers-Bill-2012.pdf>

4. Providing for existing bilateral assessment agreements relating to controlled activities that are likely to have (or have already had) a significant impact on water resources to be varied in light of the “water trigger.”

We further recommend:

5. That the “significant impact guidelines” for the “water trigger” take into account the notion of “environment sustainability” outlined in the *Water Act 2007*. Specifically, the guidelines should define “significant impact” as any relevant mining development that individually, or in combination with other developments, would compromise:
 - a. key environmental assets of the water resource; or
 - b. key ecosystem functions of the water resource; or
 - c. the productive base of the water resource; or
 - d. key environmental outcomes for the water resource.

Finally, ANEDO strongly supports recent amendments to the Bill sponsored by MP Tony Windsor. These amendments will preclude activities declared “controlled actions” for the purposes of the “water trigger” being subject to a bilateral approval agreement under the EPBC Act.⁵

1. Broadening the scope of the “water trigger”

ANEDO strongly supports the inclusion of a ninth matter of NES designed to protect Australia’s water resources from the impacts of CSG development and large coal mining development.

We nevertheless submit that the EPBC Bill should be broadened to include other forms of mining that are likely to have a significant impact on water resources.⁶ Specifically, we submit that the Bill should *also* apply to large mines that excavate below the water table⁷ and to all unconventional gas exploration and production activities.

First, there is a large body of scientific evidence documenting the impacts of large mines excavated below the water table on water resources. For example, the National Water Commission (**NWC**) has indicated that these impacts include:

- lowering the water table by pumping groundwater to enable ore extraction;
- affecting connected water sources, for example interconnected aquifers (and the ecosystems that depend on these sources);

⁵ EPBC Bill, Items 3A, 4A, 4B.

⁶ See for example the following two Bills which proposed broad “mining water triggers”: *Environment Protection and Biodiversity Conservation Amendment (Mining, Petroleum and Water Resources) Bill 2011* (Sponsored by MP Tony Windsor); *Environment Protection Biodiversity Conservation Amendment (Protecting Australia’s Water Resources) Bill 2011* (sponsored by Senator Larissa Waters).

⁷ ‘Large open cut mine’ could be defined in the EPBC Act in the same manner as ‘large coal mining development.’

- incidental water take which can be passive and can take the form of groundwater seeping into voids and flow diverted from river beds. Incidental take is not directly measurable and is difficult to control; and
- contamination of water sources caused by disposal of incidental water that exceeds on-site operational and processing needs. This water may be very saline, and/or may contain trace metals and/or be highly acidic.⁸

Furthermore, abandoned open-cut mines (many of which are excavated below the water table) often form 'pit lakes' which have the potential to contaminate surface and groundwater resources with metals, metalloids or overly saline water. While there is currently no national inventory of the number of 'pit lake' mines in Australia, a recent study in Western Australia estimated that there are approximately '1800 mine pits in the State potentially forming pit-lakes.'⁹ In other words, the impacts of mining activities on water resources may extend well beyond the life of the mine itself, and may remain entirely unquantified.

There is also a growing body of evidence regarding the impacts of unconventional gas exploration and production activities on water resources. By way of background, unconventional gas includes CSG and shale gas. According to the CSIRO, Australia has 'substantial shale reserves.'¹⁰ Shale gas exploration activities are already underway in the following basins: Copper (QLD, SA); Georgina (QLD, NT); Galilee (QLD); Bowen (QLD); Sydney Basin (NSW); Canning (WA); Onshore Perth Basin (WA); Beetaloo Sub-Basin (NT); McArthur Basin (NT).¹¹ According to the Western Australian Department of Mines and Petroleum, shale gas is generally located at a significantly greater depth than CSG and is removed using 'hydrologic fracture simulation', commonly known as 'fracking'.¹²

However, 'fracking' only constitutes one of six stages of shale gas development (where development proceeds from exploration to production). According to an independent report commissioned by the European Commission (**EC report**), these are: well pad site identification and preparation; well design, drilling, casing and cementing; technical hydraulic fracturing stage; well completion; well production; and well abandonment.¹³

⁸ Hamstead, Mark and Fermio, Steve, *Integrating the mining sector into water planning and entitlements regimes (Waterlines Report Series No 77)*, National Water Commission, March 2012, pp. 6-7.

⁹ Kumar, McCullough, Lund, Water Resources in Australian Mine Pit Lakes, Water in Mining Conference, Perth, 15-17 September 2009. See: http://members.iinet.net.au/~mcfresh/downloads/Kumar_et_al_2009.pdf Information accessed 03 April 2013.

¹⁰ CSIRO, *Australia's shale gas resources*. See: <http://www.csiro.au/en/Outcomes/Energy/Energy-from-oil-and-gas/Shale-gas-potential.aspx>. Information accessed 02 April 2013.

¹¹ CSIRO, *Australia's shale gas resources*. See: <http://www.csiro.au/en/Outcomes/Energy/Energy-from-oil-and-gas/Shale-gas-potential.aspx>. Information accessed 02 April 2013.

¹² <http://www.dmp.wa.gov.au/12872.aspx>. Information accessed 04 April 2013.

¹³ Broomfield, Mark (Dr.), *Support to the identification of potential risks for the environment and human health arising from hydrocarbons operations involving hydraulic fracturing in Europe* (report for the European Commission DG Environment), p. v. Available at: <http://ec.europa.eu/environment/integration/energy/pdf/fracking%20study.pdf>

According to the EC report, each of these stages is associated with specific environmental risks. When weighting risks across all six phases, the report concluded that:

- Overall, there was a high risk of groundwater contamination for individual sites;
- Overall, there was a high risk of groundwater contamination when assessing cumulative impacts;
- Overall, there was a high risk of surface water contamination for individual sites;
- Overall, there was a high risk of surface water contamination when assessing cumulative impacts.¹⁴

The impacts documented above must also be considered against the backdrop of Australia's status as the driest inhabited continent on Earth. Drought and over-allocation for consumptive use has degraded both rivers and aquifers across country. It is therefore in the national interest to ensure that Australia's water resources are sustainably managed. This necessarily involves national oversight of those categories of mining development likely to have a significant impact on water resources.

Conclusions and recommendations:

ANEDO supports the inclusion of a new matter of NES intended to regulate the impacts of CSG development and large coal mining development on Australia's water resources. However, given the diversity and scale of mining activities in Australia, we recommend broadening the "water trigger" to cover other forms of mining likely to have a significant impact on Australia's water resources, in particular large mines excavated below the water table and exploration and production of all unconventional gas.

2. Limiting exemption provisions

ANEDO supports the recent removal of Item 21 from the text of the Bill which appeared to exempt all controlled actions that had not been determined at the time of the Bill's commencement. We nevertheless remain concerned by the breadth of exemptions that apply to mining likely to have a significant impact on water resources.

Specifically, CSG developments and large coal mining developments approved under the EPBC Act (or for non-controlled actions, under State or Territory law) up to the day before the Bill's commencement are exempt from the water trigger.¹⁵

Furthermore, the Bill does not apply to any project that the Minister for Sustainability, Environment, Water, Population and Communities ("the Minister") had decided was not a controlled action for the purposes of one of the eight pre-

¹⁴ Ibid, Table ES1, p. vi.

¹⁵ EPBC Bill, Item 22 (2) (a), (3).

existing matters of NES (“eight matters of NES”) before the Bill commenced. That is, the water trigger will not apply to projects belonging to this category even if they are likely to have a significant impact on a water resource – and even if work on the project is not yet underway.¹⁶

Similarly, any project that has been declared a controlled action pursuant to one of the eight matters of NES, but has not been approved at the time of the Bill’s commencement, is exempt from the new trigger if two conditions are satisfied. First, the Minister must have informed the proponent of the decision they propose to make in relation to the project,¹⁷ and second they must have obtained advice from the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (“the Committee”).¹⁸

Under the EPBC Act, the advice of the Committee is only sought where the Minister believes a project is likely to have a significant impact on a water resource.¹⁹ Thus the Bill proposes to exempt projects that have been referred to the Committee precisely because of their likely impacts on such resources. Indeed, the exemption will apply to unapproved projects that in the opinion of the Committee *will* have a significant impact on surface or groundwater. While the Committee may nonetheless recommend conditions to mitigate these impacts, the Minister is not bound to follow their advice.

Conclusions and recommendations:

ANEDO submits that the EPBC Bill’s exemption provisions are too broad. In particular, we object to any exemptions that apply first, to unapproved mining projects and second, to approved mining projects for which work has not yet commenced – where these projects are likely to have a significant impact on water resources.

We therefore recommend amending the EPBC Bill to limit exemptions to:

- controlled actions that have been approved under the EPBC Act prior to the Bill’s commencement and for which work has already commenced; and
- mining projects (that were not controlled actions prior to the Bill’s commencement) that fulfil the criteria outlined in Item 22 (3) *AND* for which work has not yet commenced.

¹⁶ EPBC Bill, Item 22 (2) (b),(c). Note that 22 (2) (c) erroneously refers to s. 77 of the EPBC Act, rather than s. 77A. See also item 22 (2A) which relates to projects that were declared not to be controlled actions prior to the Bill’s commencement and about which the Minister of a State or Territory had obtained the advice of the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (“the Committee”).

¹⁷ The requirement to inform proponents of the proposed decision is provided for under ss. 131AA (1) of the EPBC Act.

¹⁸ EPBC Bill, Item 22 (d).

¹⁹ The requirement to obtain the advice of the Committee is provided for in ss. 131AB; 136 (2) (fa) of the EPBC Act. This will be discussed in more detail below.

3. Including “water trigger specific” assessment criteria in Part 9

The Bill does not propose to include specific criteria that the Minister “must not act inconsistently with” when determining a project that has been declared a controlled action for the purposes of the water trigger.

This deviates from the present assessment process, whereby Part 9 of the EPBC Act provides for controlled actions for six of the eight matters of NES to be assessed against the requirements of (inter alia) specific treaties.

For example, when assessing a project that has been declared a controlled action because it is likely to have a significant impact on a threatened species, the Minister must “not act inconsistently with” the Convention on Biological Diversity, the Apia Convention, the Convention on International Trade in Endangered Species of Wild Flora and Fauna, or any relevant recovery plan or threat abatement plan.²⁰

Conclusions and recommendations:

ANEDO notes that the EPBC Bill’s offence provisions are underpinned by s. 51 (xx) of the Australian Constitution (the “corporations” power). However, the EPBC Act and the *Water Act 2007* both derive the majority of their constitutional validity from international environmental treaties to which Australia is signatory.²¹ It is therefore both legally possible and desirable to assess mining projects that are likely to have a significant impact on Australia’s water resources against the requirements of relevant environmental treaties.

ANEDO accordingly recommends amending the Bill to include “water trigger” specific assessment criteria in Part 9 of the EPBC Act. Specifically, the criteria should include a requirement to “not act inconsistently with” the Convention on Biological Diversity and (where relevant) the Ramsar Convention and the Bonn Convention.

4. Varying bilateral agreements

The Bill does not exclude the possibility of bilateral assessment or approval agreements being entered into between a State and the Commonwealth in respect of CSG development that is likely to have a significant impact on a water resource. Nor does it propose to amend existing bilateral assessment agreements relating to controlled activities that are likely to have (or have already had) a significant impact on a water resource.²²

Conclusions and recommendations:

The EPBC Bill should explicitly provide for existing bilateral assessment agreements relating to controlled activities that are likely to have (or have already

²⁰ EPBC Act, s.139.

²¹ Pursuant to s.51 (xxix) of the Australian Constitution (the “external affairs” power).

²² EPBC Bill, item 24 (5), (6) and (7).

had) a significant impact on water resources to be varied in light of the “water trigger” where relevant.

5. Significant impact guidelines

The EPBC Act does not include a definition of “significant impact.” Accordingly, guidelines in respect of each matter of NES have been developed to assist the Minister and Department determine whether an activity will have a significant impact on a matter protected under the EPBC Act. A new matter of NES would require development of new guidelines to provide clear information to proponents to ensure an efficient assessment process.

Conclusions and Recommendations:

ANEDO submits that the “significant impact guidelines” for the “water trigger” should take into account the notion of “environment sustainability” contained in the *Water Act 2007*. Specifically, the guidelines should define “significant impact” as any relevant mining development that individually, or in combination with other developments, would compromise:

- a. key environmental assets of the water resource; or
- b. key ecosystem functions of the water resource; or
- c. the productive base of the water resource; or
- d. key environmental outcomes for the water resource.²³

²³ *Water Act 2007*, s. 4 (definitions). Extracted from the definition for “environmentally sustainable level of take”