



Committee Secretary
Senate Standing Committees on Rural Affairs and Transport
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Parliament House
Canberra ACT 2600
Australia

Date: 31st January 2012

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**Re: Submission to the Environment Protection and Biodiversity
Conservation Amendment (Protecting Australia's Water
Resources) Bill.**

Dear Sir/Madam,

As Queensland's peak environment non government organisation (ENGO) that represents the interests of 60 member groups, the Queensland Conservation Council (QCC) welcomes the opportunity to provide you with our comments on Senator Water's Bill to amend the EPBC Act.

1. Background

Australia is currently experiencing a major and extensive resource sector expansion, which is resulting in a flurry of new mining and supporting infrastructure projects across all states and territories.

Unless managed properly, the expansion of the resource sector threatens a wide array of nationally important economic and environmental values.

In particular, the increased number of proposed mining operations and supporting infrastructure projects across the country poses a direct threat to the nation's surface and underground water resources, which are vital to underpinning the ongoing health of our environment, agricultural viability and the long term future of our nation.

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Due to the significant and potentially irreversible adverse impacts to the nations surface and underground water resources that could occur from the expansion of the resource sector, QCC and our member groups fully and wholeheartedly support the proposed amendments to the EPBC Act to provide the Commonwealth Environment Minister with the powers to refuse or impose conditions on proposed mining projects (including petroleum and gas projects) where they pose a significant threat to the nations water resources.

2. Queensland context

Along with the rest of the nation, Queensland is experiencing a rapid expansion of the resource sector with in excess of 30 new mining, coastal port, railways, LNG, CSG and water infrastructure (dams) projects currently being assessed by the Queensland Coordinator Generals office.

Due to the scale of expansion, these and other proposed projects associated with the expansion of the resource sector could cause a range of short and long term adverse impacts to Queensland's water resources and environmental values – many of which could prove to be irreversible unless managed appropriately. The range of significant adverse impacts that could occur to water resources and environmental values includes:

1. Water resources

Expansion of the resource sector is likely to cause significant impacts to Queensland's surface and underground water resources at a range of temporal and spatial scales. Examples include:

1.1 Underground water

1.1.1 Open cut mining

Open cut mining often results in the disturbance and severing of aquifers, which can cause:

- significant adverse ecological impacts to nearby groundwater dependent ecosystems (GDEs),
- reduce base flows in waterways that are connected to underground water resources, and
- substantially reduce the reliability of groundwater users allocations

1.1.2 Coal Seam Gas (CSG)

CSG extraction results in substantial volumes of underground water being brought to the surface, which is likely to cause:

- Drawdown and depressurisation of under and overlying aquifers that are connected to targeted coal seams
- Adverse ecological impacts to GDEs, springs and waterway base flows, and
- Reduced reliability of water users groundwater allocations

1.2 Overland flows

1.2.1 Open cut mining

Open cut mining is predominantly occurring on floodplains in Queensland, which requires the construction of substantial earthworks to redirect overland flows (floodwaters) around mine sites to ensure that coal pits do not become flooded. Impacts caused can include:

- Substantial impacts to overland flow dependent ecological communities such as floodplain wetlands resulting from the diversion of floodwaters
- Significantly exacerbate the impacts of flooding from concentration of floodwaters
- Impacts to groundwater resources from overland flows being diverted away from aquifer recharge areas

1.3 Surface waters

1.3.1 Open cut mining

Activities associated with open cut mining can cause significant impacts to surface water resources, which will substantially increase in scale and geographic extent due to the proposed expansion of the resource sector across the state. Impacts include:

- Significant alteration of hydrological cycles resulting from the relocation of rivers and creeks to enable open cut mining in areas where waterways naturally occur
- Significant impacts to natural flow sequences, particularly low flows that occurs from the disturbance and take of surface water for mining operational purposes

- Water quality degradation resulting from the planned and unplanned release of contaminated operational and floodwater from mine sites to waterways, which can cause significant adverse impacts to downstream riparian ecosystems, estuaries, marine waters and water users – particularly communities that rely on surface water for their town water supply

1.3.2 Coal Seam Gas

Activities associated with CSG extraction can cause significant adverse impacts to surface waters, which include:

- Depressurisation of groundwater resources resulting in the reduction of base flows in connected waterways
- Water quality degradation resulting from treated and untreated CSG associated water being released to waterways
- Contamination of waterways resulting from overtopping of brine storage ponds during extreme rainfall (flooding) events
- Alteration of seasonal flow variations resulting from the authorised release of treated CSG associated water to waterways

2. Environmental values

As the expansion of the resource sector is likely to cause significant impacts to Queensland's water resources, it is inevitable that many of the states environmental values will also be adversely impacted at a range of temporal and spatial scales as a result of the multiple mining and associated infrastructure projects that are currently being assessed.

Along with those mentioned above, resource sector operations that are likely to cause adverse environmental impacts include:

2.1 Final voids

Although mine operators are required to rehabilitate mine sites to pre-development conditions; current industry practices and regulatory requirements often result in the creation of a final void, which is where a section of the open cut pit is not backfilled - resulting in original surface levels not being reinstated.

Due to their often substantial depth, area and location, final voids can cause a range of adverse impacts to water resources and environmental values such as:

- Filling with floodwater, which becomes contaminated over time from contact with exposed coal seams

- Causing water quality degradation from contaminated water trapped in final voids being released to nearby waterways during floods

As the number of final voids are likely to increase as a result of the new open cut coal mining projects, it is critically important that all adverse impacts potentially caused by final voids and other similar mining practices are identified and assessed as part of the processes utilised to approve resource sector projects.

2.2 Residual overburden stockpiles

While mine operators are required to rehabilitate mine sites, current end – of – project practices often results in residual stockpiles of overburden material remaining at the end of projects.

As these stockpiles can be of significant size and contain high levels of environmentally harmful substances, they can potentially cause significant adverse impacts at a range of temporal and spatial scales that current State and Commonwealth project approval processes fail to identify and assess.

Impacts that are likely to occur include:

- Water quality impacts caused by contaminated runoff from residual stockpiles
- Overland flow modification, which can exacerbate flooding, affect groundwater recharge and degrade overland flow dependent ecosystems (wetlands)
- Affect the reliability of water user's surface and groundwater allocations

As the scale and number of residual overburden stockpiles will increase as result of the expansion of the resource sector, it is critically important that all adverse impacts potentially caused by residual overburden stockpiles and other similar mining practices are identified and fully assessed as part of the processes utilised to approve resource sector projects.

3. Issues associated with current State and Commonwealth assessment processes

Under current arrangements, State and Commonwealth assessment of proposed resource sector projects is largely conducted on a project by project basis.

While this approach may claim to adequately assess impacts associated with the footprint of individual projects, it utterly fails to identify and assess the cumulative or potentially irreversible impacts that may occur at the regional, state or national scale as a result of multiple resource projects being allowed to proceed.

As there is likely to be a broad range of adverse impacts that are caused from the expansion of the resource sector across Queensland, it is very concerning and a significant issue that current processes utilised to approve resource sector projects are unable to identify or assess the cumulative and potentially irreversible impacts that may occur to water resources and environmental values from multiple mining and associated infrastructure projects.

4. Need for increased oversight of resource sector projects

Given the clearly evident inadequacies of current resource sector projects approval processes, we believe it is critical that an additional level of oversight is introduced to ensure that cumulative and potentially irreversible impacts that may occur from multiple mining projects are identified to enable each proposed project to be assessed and conditioned by relevant authorities according to the projects contribution to the cause of cumulative and potentially irreversible impacts.

From our assessment of current State and Commonwealth legislation, we have determined that the additional level of oversight of resource sector projects we believe is necessary to ensure that cumulative and potentially irreversible impacts that may occur from multiple mining projects are assessed would best be undertaken at the Commonwealth level, which could be achieved by giving the federal Environment Minister the powers to refuse or condition mining projects under the *Environment Protection and Biodiversity Conservation Act 2009* where such projects are likely to cause impacts to national water resources.

5. Conclusion

As we firmly believe that current processes associated with approving resource sector projects are inadequate, we welcome and wholeheartedly support Senator Water's Bill to amend the EPBC Act to give the Commonwealth Environment Minister the power to condition or refuse mining projects where such projects are likely to cause adverse impacts to national water resources.

Along with achieving improved outcomes for the environment, introducing Commonwealth legislative responsibility to protect the nation's surface and groundwater resources as proposed under Senator Water's Bill would also achieve improved outcomes and security for the nation's agriculture sector.

Please contact Nigel Parratt in our office, who would be happy to provide you with any clarification regarding this submission or to give evidence at any public hearings associated with your enquiry into Senator Water's Bill.

Regards,
Toby Hutcheon
Executive Director, Queensland Conservation (QCC)