



# WATER POLLUTION

## TREATED SERIOUSLY, OR SERIOUSLY IN NEED OF TREATMENT?

By Meg Good

Despite the legal and policy frameworks in place to address water pollution, levels of pollutants such as nitrogen and phosphorus exceed national and state water quality guideline limits 'in parts of all drainage divisions' in Australia.<sup>1</sup> >>



**A**lthough water pollution law has evolved significantly over the past few decades to meet this challenge, as noted by Neil Gunningham and Darren Sinclair, ‘...while “first generation” water pollution problems caused by major point sources are now largely under control, far more complex challenges are posed by “second generation” problems including, in particular, diffuse pollution (also called non-point source pollution)’.<sup>2</sup>

This article evaluates the adequacy of the Australian regulatory response to two key water pollution challenges – diffuse source water pollution from agriculture, and water pollution impacts from the coal seam gas (CSG) industry. In examining these issues, the article considers the possible utility of increased Commonwealth involvement in water pollution regulation.

### ROLE OF THE COMMONWEALTH IN WATER POLLUTION REGULATION

Although the Commonwealth has become increasingly involved in water management (as evidenced by the *Water Act 2007* (Cth)), planning and management addressing water pollution issues still remains predominantly within the domain of state and territory jurisdiction.<sup>3</sup> In the context of water pollution policy, the Commonwealth’s role has primarily involved the development of national guidelines, standards, strategies and the provision of funding rather than directly managing specific water pollution problems.

Under the Australian Constitution, the Commonwealth does not have any direct legislative power to legislate with respect to water resources.<sup>4</sup> Accordingly, in order to pass federal legislation addressing or impacting on water management, the Commonwealth must rely on other heads of legislative power, such as the external affairs power.

However, the Commonwealth is not completely impotent in terms of addressing water pollution. For instance, it has scope to address pollution impacts on water resources through Australia’s principal environmental legislation, the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act). The EPBC Act provides for the protection of ‘matters of national environmental significance’ (MNES) through the establishment of a federal assessment and approval process. The Act defines a number of specific MNES, also known as ‘triggers’. Water impacts can be considered where for instance, a proposed action may have a significant impact on Ramsar wetlands.<sup>5</sup> At present, however, there is no specific ‘water trigger’ which would enable the Commonwealth to engage in the assessment and approval of developments purely because they had a ‘significant impact’ on water resources.

This is partly due to the fact that the Act is limited to the regulation of those matters that can be supported under the external affairs power by reference to Australia’s international environmental obligations,<sup>6</sup> and partly because the states and territories are primarily responsible for environmental impact assessment, management of water resources and pollution control.

The position of the Australian federal government with

respect to water pollution regulation can be contrasted with the role of the federal government in the US. Unlike Australia, in the American system the federal government has established a legislative regime to regulate water pollution, enforced by a federal Environmental Protection Agency (EPA).<sup>7</sup> Australia does not have an equivalent national environmental regulatory authority, or an equivalent piece of federal water pollution legislation. Increasingly, there have been calls for more Commonwealth involvement in environmental matters generally, and water management specifically.<sup>8</sup> Achieving this, however, will involve overcoming significant constitutional, political and practical hurdles.

### DIFFUSE POLLUTION FROM AGRICULTURE

The comparative regulatory success of point source pollution, vis-à-vis diffuse pollution, has led one commentator to characterise non-point source pollution (NPS) as ‘the unfinished business of water quality regulation in Australia’.<sup>9</sup> Diffuse source water pollution refers to pollution which enters waterways from various ‘points’ (such as agricultural run-off).<sup>10</sup> Jurisdictions around the world have grappled with the problem of regulating NPS pollution, which presents unique challenges that cannot simply be managed using regulatory mechanisms designed for point source pollution.<sup>11</sup> In relation to NPS pollution from agriculture, various regulatory options have been discussed and trialled overseas, as well as in Australia.

Experience has revealed that requiring agricultural industries to develop and abide by nutrient management plans (NMPs), or similar compulsory land use management plans, can be politically difficult to realise, and practically difficult to enforce. Although policy recognition of the crucial link between land use and water quality has been achieved in Australia, it has arguably failed to fully translate into meaningful policy action to effectively address NPS pollution. This failure can be attributed to a number of issues, including the current reliance on ‘voluntarism’ in NPS pollution regulation.<sup>12</sup> In order to address the problem adequately, and with the seriousness it deserves, it is important that the Commonwealth takes a greater role in terms of both standard-setting and implementation.

At present, the Commonwealth has not taken an active role in regulating diffuse source water pollution – preferring to leave the issue to state and territory regulation. Rebecca Nelson argues that this ‘federal reluctance to regulate non-point sources aggressively’ can be attributed to ‘the link between non-point pollution and land use’.<sup>13</sup> Land use regulation, like water regulation and pollution regulation, has traditionally fallen within the ambit of state and territory regulation. Commonwealth hesitation to interfere in these arrangements is understandable, but no longer acceptable. The Commonwealth has international and national obligations to protect the Australian environment. NPS pollution poses a significant threat to the health of Australia’s water resources, and the current approach to regulation by the states and territories has not proven to be adequately effective.



**A GREATER ROLE FOR THE COMMONWEALTH?**

There are various means available to the Commonwealth to increase its role in NPS regulation. One potential avenue would be to adopt the American model, which would involve the establishment of a federal authority (similar to the US EPA),<sup>14</sup> with the power to set national water quality standards and pollution regulations.<sup>15</sup> Ideally, any Australian model would ensure that the EPA had sufficient power to 'compel' states to comply with federal diffuse source water pollution reduction targets. However, due to constitutional limitations, the EPA would probably have to follow the American approach, which relies upon the threat of 'losing federal grant money' to enforce federal regulations.<sup>16</sup> This could operate in Australia through the use of s96 of the Australian Constitution, which permits the Commonwealth to make grants of conditional financial assistance to the states.

Adopting any approach that substantially increases the role of the Commonwealth would involve a significant departure from the current model of co-operative federalism for natural resources management in general, and water pollution in particular. Accordingly, it may be politically problematic.

**WATER POLLUTION BY THE COAL SEAM GAS INDUSTRY**

Recently, significant national debate has focused on the issue of coal seam gas (CSG) and its related impacts on water, such as the pollution of groundwater.<sup>17</sup> There is a high

level of uncertainty surrounding the scientific knowledge about the impacts of CSG on water resources.<sup>18</sup> Numerous commentators have criticised the current approach to CSG regulation on the grounds that it does not adequately make provision for this uncertainty.<sup>19</sup> As noted by the National Water Commission, at present the water-related impacts of the CSG industry are primarily regulated at the state and territory level.<sup>20</sup> However, there is scope for the Commonwealth's approval processes to apply under the EPBC Act 'in certain circumstances'.<sup>21</sup>

Some critics of the current regulatory regime have advocated for an increased role for the Commonwealth in CSG regulation. In 2011, two Bills were proposed in the Commonwealth Parliament which aimed to introduce a form of 'water trigger' into the EPBC Act.<sup>22</sup> The 'Protecting Australia's Water Resources' Bill introduced by Senator Larissa Waters would have required 'Commonwealth assessment and approval of mining operations likely to have a significant impact on water resources'.<sup>23</sup> In the Second Reading Speech for the Bill, Senator Waters explained the rationale for the proposal, arguing that 'federal protection is needed as the states are clearly failing to adequately protect our water resources'.<sup>24</sup>

It is beyond the scope of this article to provide a comprehensive evaluation of the adequacy of the current state-based regulatory processes. However, some convincing criticisms of existing arrangements have been made by a >>

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## Under the Australian Constitution, the Commonwealth does not have any direct legislative power to legislate with respect to water resources.

variety of commentators, including lawyer Tim Poisel.<sup>25</sup> Poisel argues that until more information is known about the impacts of CSG, 'an adaptive and precautionary management approach [should] be taken towards CSG operations'.<sup>26</sup> Although Poisel supports greater Commonwealth regulation of the industry, he notes that introducing a 'water trigger' into the EPBC Act may 'merely require another level of assessment without any material benefit or outcome'.<sup>27</sup> This was the sentiment adopted by a Senate Committee, which recently concluded that introducing a water trigger into the Act which specifically focused on the CSG industry would be 'duplicative and unnecessary'.<sup>28</sup> In rejecting the Bill, the Committee noted that it was unusual for a proposed trigger to focus on one specific industry, rather than on a specific 'impact'.<sup>29</sup>

Arguing in general support of the Bill, the Australian Network of Environmental Defender's Offices (ANEDO) submitted that 'a preferred approach' to focusing on the mining industry specifically would be for a more generally applicable water trigger. ANEDO's proposed trigger would involve:

'the criteria for assessing impact [to] be based on any action that interferes with rivers, aquifers and recharge zones caused by any major works (such as dams over a certain size and including mining and gas exploration and production activities); and/or the extraction or diversion of volumes of surface or groundwater'.<sup>30</sup>

Although ANEDO's proposed trigger has significant merit, incorporating a general 'water trigger' into the EPBC Act would constitute a substantial development in the division of responsibilities between the Commonwealth and the states and territories. As explained in the *Interim Report of the Independent Review of the EPBC Act*, a number of matters that were included as matters of national environmental significance in the 1997 *Heads of Agreement* were deliberately excluded from incorporation into the Act.<sup>31</sup> The prevention of land and water degradation was among these.<sup>32</sup> The *Interim Report* explained that this matter was originally excluded from the Act for a variety of reasons, including the belief that such problems were 'better addressed through co-operation with the states and territories and through program funding'.<sup>33</sup>

Given the strong opposition to the Bill proposed by Senator Waters (by both the mining and agricultural industries), it is unlikely that an even broader proposal would garner sufficient political support to pass into legislation. For this reason, a more specific 'trigger' should perhaps be adopted. In particular, the approach recommended by the Senate Standing Committee examining the impact of mining CSG on the management of the Murray-Darling Basin has

some merit. In 2011, the Committee recommended that the EPBC Act should be amended to 'include the sustainable use of the Great Artesian Basin as a "matter of national environmental significance (MNES)"'.<sup>34</sup> This recommendation was supported by the Australian Greens and is arguably a more politically realistic proposal.

Incorporating the sustainable use of the Great Artesian Basin as an MNES would be complemented by the work of the Interim Independent Expert Scientific Committee on Coal Seam Gas and Coal Mining, which was established in January 2012 by the Commonwealth to improve community, government and industry knowledge about CSG impacts.<sup>35</sup> In order to control any form of water pollution, it is crucial to understand how the pollutant enters the environment, and the specific impacts it has on water resources. Given the high level of uncertainty associated with these impacts, numerous commentators (including the National Water Commission) have recommended that a precautionary approach should be adopted in relation to the regulation of the CSG industry.<sup>36</sup> It is difficult, however, to determine exactly what a precautionary approach requires. Calls have been made for the imposition of moratoriums on CSG mining at the state level, until the full environmental effects of the industry are adequately understood.<sup>37</sup> As noted by Senator Waters, while the industry may operate only for a few decades, the impacts on groundwater systems could be much longer lasting.<sup>38</sup> Although the imposition of a nationwide moratorium is arguably the most consistent with a precautionary approach (and has significant public support in key states), it is unlikely that such a moratorium would receive approval from all of the relevant state Parliaments.<sup>39</sup> Rather than imposing a blanket moratorium, a compromise could be reached which acknowledges the inevitability of CSG expansion, but imposes greater Commonwealth oversight. The proposed Great Artesian Basin EPBC Act 'trigger' may constitute an acceptable compromise in the current political climate, and would complement the aims of the *Great Artesian Basin Sustainability Initiative*.<sup>40</sup>

Furthermore, this development would support other initiatives designed to create a more nationally consistent approach to CSG regulation, such as the *National Partnership Agreement on Coal Seam Gas and Large Coal Mining Development* and the *National Harmonised Framework for Coal Seam Gas Project*.<sup>41</sup>

### CONCLUSION

Water pollution continues to pose a challenge for Australian law and policy makers. As has been demonstrated by the limitations of some of the current approaches to the regulation of water pollution issues, there is no 'silver bullet' solution. However, key reforms such as introducing a 'water trigger' into the EPBC Act and adopting a national approach to diffuse source water pollution regulation constitute two important steps forward in the journey to meet this challenge. ■



**Notes:** **1** Australian State of the Environment Committee, *State of the Environment 2011: Independent report to the Australian Government Minister for Sustainability, Environment, Water, Population and Communities* (2012) <<http://www.environment.gov.au/soe/2011/report/inland-water/2-2-water-quality.html#s2-2>>. **2** Neil Gunningham and Darren Sinclair, 'Policy Instrument Choice and Diffuse Source Pollution' (2005) 17 (1) *Journal of Environmental Law* 51, 51. **3** As noted by Paul Kildea and George Williams, the *Water Act 2007* (Cth) represented a departure from a general trend whereby 'the Commonwealth has largely been unwilling to use its coercive powers to wrest control of rivers management from the states': Paul Kildea and George Williams, 'The Constitution and the management of water in Australia's rivers', 32 *Sydney Law Review* 595, 613. **4** D E Fisher, *Water Law* (LBC Information Services, 2000), 37. **5** As declared by the Minister to be a declared Ramsar wetland, or under Art 2 of the *Convention on Wetlands of International Importance especially as Waterfowl Habitat* (Ramsar Convention), opened for signature 2 February 1971, 996 UNTS 245 (entered into force 12 December 1975): Australian Government, *Wetlands of international importance (Ramsar wetlands)* (2011) <<http://www.environment.gov.au/epbc/protect/wetlands.html>>. **6** As explained by Gerry Bates (*Environmental Law in Australia* (LexisNexis Butterworths, 6th ed, 2006) 65), the EPBC Act must 'reflect appropriate means of, and be adapted to' the numerous international treaties it relies upon. **7** United States Environmental Protection Agency, *Summary of the Clean Water Act* (2012) <<http://www.epa.gov/lawsregs/laws/cwa.html>>. **8** Although it must be noted that there are numerous entities/individuals opposed to the Commonwealth expanding its role. **9** Rebecca Nelson, 'Regulating Non-point Source Pollution in the US: A Regulatory Theory Approach to Lessons and Research Paths for Australia' (2011) 35 *University of Western Australia Law Review* 340, 384. **10** State of Queensland Department of Environment and Resource Management, *Caring for our water* (2012) <[http://www.derm.qld.gov.au/environmental\\_management/water/caring\\_for\\_our\\_water/index.html#managing\\_water\\_quality](http://www.derm.qld.gov.au/environmental_management/water/caring_for_our_water/index.html#managing_water_quality)>. **11** Michelle Perez, *Regulating Farm Non-Point Source Pollution: The Inevitability of Regulatory Capture and Conflict of Interest?* (2011) 9 Stockholm International Water Institute <[http://www.siwi.org/documents/Resources/Best/2010/2011\\_OTWF\\_Michelle\\_Perez.pdf](http://www.siwi.org/documents/Resources/Best/2010/2011_OTWF_Michelle_Perez.pdf)>. **12** *Ibid.*, 54. **13** Nelson, above note 9, 342. **14** It should be noted that a Commonwealth EPA was created and disbanded in the 1990s. However, in 2009 the Hawke Review recommended the introduction of an Independent National Environment Commission: *Report of the Independent Review of the Environment Protection and Biodiversity Conservation Act 1999: Final Report* (2009) Recommendation 71 <<http://www.environment.gov.au/epbc/review/publications/final-report.html>>. **15** This proposal was put forward by Anna Roberts and Robin Kundis Craig, 'Regulatory reform requirements to address diffuse-source water quality problems in Australia – learning from experiences in the United States' (2012) (forthcoming) [6.1.1]. See generally, Anthony Moeller and Jennifer McKay, 'Is there Power in the Australian Constitution to Make Federal Laws for Water Quality?' (2000) 17 (4) *Environmental and Planning Law Journal* 294. **16** Nelson, above note 9, 356. There have been numerous criticisms made of the American approach to diffuse source water pollution management. For example, see Albert Ettinger, 'Water Pollution, Agriculture, and the Law (or Lack of Law)' (Paper presented at the 2009 Governor's Conference on the Management of the Illinois River System 'Looking Back, Moving Forward', October 20-22, 2009) <<http://ilrdss.sws.uiuc.edu/pubs/govconf2009/Plenary2/Ettinger.pdf>>. **17** Kate Osborne, 'Is Coal Seam Gas Pollution Groundwater?' (2012) 33 (8) *Australasian Science* 22. **18** Tim Poisel, 'Coal seam gas exploration and production in New South Wales: The case for better strategic planning and more stringent regulation' (2012) 29 *Environmental and Planning Law Journal* 129, 139. **19** Senator Larissa Waters, 'Additional Comments from the Australian Greens' (2011) *Management of the Murray Darling Basin Interim report: the impact of mining coal seam gas on the management of the Murray Darling Basin* (2011) <[http://www.aph.gov.au/parliamentary\\_business/committees/senate\\_committees?url=rrat\\_ctte/interim\\_report/d02.pdf](http://www.aph.gov.au/parliamentary_business/committees/senate_committees?url=rrat_ctte/interim_report/d02.pdf)>. **20** National Water Commission, *Coal seam gas* (2012) <<http://www.nwc.gov.au/reform/position/coal-seam-gas>>. **21** *Ibid.* To date, 'three coal seam gas projects have been approved under the EPBC Act': Australian Government, 'Coal seam gas' (2012) <<http://www.environment.gov.au/epbc/coal-seam-gas/index.html>>.

**22** The 'principal difference' between the two Bills is that the first Bill introduced by independent MP Tony Windsor allowed the 'federal minister to delegate assessment and approval authority to states and territories', whereas the Greens' Bill did not: Rural and Regional Affairs and Transport Legislation Committee, *Environment Protection and Biodiversity Conservation Amendment (Protecting Australia's Water Resources) Bill 2011* (2012) <[http://www.aph.gov.au%2FParliamentary\\_Business%2FCommittees%2FSenate\\_Committees%3Furl%3Drrat\\_ctte%2Fepbcwater\\_2011%2FReport%2Freport.pdf&ei=syPCT6yfFY2aiAf675GwCg&usg=AFQjCNGxk1LXomkqWrVVVkk1MaUaTfmVA](http://www.aph.gov.au%2FParliamentary_Business%2FCommittees%2FSenate_Committees%3Furl%3Drrat_ctte%2Fepbcwater_2011%2FReport%2Freport.pdf&ei=syPCT6yfFY2aiAf675GwCg&usg=AFQjCNGxk1LXomkqWrVVVkk1MaUaTfmVA)>. **23** Explanatory Memorandum, *Environment Protection and Biodiversity Conservation Amendment (Protecting Australia's Water Resources) Bill 2011* (Cth). **24** Commonwealth, *Parliamentary Debates, Senate*, 1 November 2011, 7773 (Larissa Waters). **25** Tim Poisel, above note 18. See also Australian Network of Environmental Defender's Offices, *Revised ANEDO submission on the Environment Protection and Biodiversity Conservation Amendment (Protecting Australia's Water Resources) Bill 2011* (2012) <<https://senate.aph.gov.au/submissions/committees/viewdocument.aspx?id=35de2b70-4ba4-424e-a322-780ec2f1448c>>; Laura Letts, 'Coal seam gas production - friend or foe of Queensland's water resources?' (2012) 29 *Environmental and Planning Law Journal* 101. **26** Poisel, see note 18, 140. **27** *Ibid.*, 147. **28** Rural and Regional Affairs and Transport Legislation Committee, above note 22. **29** *Ibid.* **30** Australian Network of Environmental Defender's Offices, above note 25. **31** Commonwealth of Australia, *Independent Review of the Environment Protection and Biodiversity Conservation Act 1999 Interim Report* (2009) [2.15] <<http://www.environment.gov.au/epbc/review/publications/pubs/02-objectives.pdf>>. **32** *Ibid.* **33** *Ibid.* **34** Senate Standing Committee on Rural and Regional Affairs and Transport, 'Recommendations', *Management of the Murray Darling Basin Interim report: the impact of mining coal seam gas on the management of the Murray Darling Basin* (2011) <[http://www.aph.gov.au/parliamentary\\_business/committees/senate\\_committees?url=rrat\\_ctte/interim\\_report/index.htm](http://www.aph.gov.au/parliamentary_business/committees/senate_committees?url=rrat_ctte/interim_report/index.htm)>. **35** Commonwealth of Australia, *Interim Independent Expert Scientific Committee on Coal Seam Gas and Coal Mining* (2012) <<http://www.environment.gov.au/coal-seam-gas-mining/index.html>>. The Interim Committee will become permanent upon the passage of the relevant legislation: *Environment Protection and Biodiversity Conservation Amendment (Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development) Bill 2012*. **36** National Water Commission, *Coal seam gas* (2012) <<http://www.nwc.gov.au/reform/position/coal-seam-gas>>. **37** Poisel, above note 18, 129. **38** Waters, above note 19. **39** Victoria recently introduced a temporary moratorium on coal seam gas production, pending the development of a national approach to the regulation of CSG. NSW had a similar moratorium in place, which has now been lifted. **40** Australian Government Department of Sustainability, Environment, Water, Population and Communities, *Great Artesian Basin Sustainability Initiative (GABSI)* (2011) <<http://www.environment.gov.au/water/policy-programs/gabsi/index.html>>. **41** Council of Australian Governments, *National Partnership Agreement on Coal Seam Gas and Large Coal Mining Development* (2012) <[http://www.federalfinancialrelations.gov.au/content/national\\_partnership\\_agreements/environment/csg\\_and\\_lcmd/NP.pdf](http://www.federalfinancialrelations.gov.au/content/national_partnership_agreements/environment/csg_and_lcmd/NP.pdf)>; Council of Australian Governments Standing Council on Energy and Resources, *Coal Seam Gas Policy Statement* (2011) <<http://www.scer.gov.au/files/2012/07/CSG-Work-Plan-Final.pdf>>.

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