Environmental Defenders Office

Annexure B - Case studies in support of EDO's submission to the Special Rapporteur for Toxics and Human Rights

This annexure highlights some of our experiences of the failures of subnational laws to address air and water pollution and the impact this has on our clients and overburdened communities. In summary, this annexure provides insights into the following examples:

Air pollution

Queensland:

- Regulatory failures to protect communities from air pollution: New Acland coal mine - Western Wakka Wakka Country
- Queensland human rights laws do not adequately protect against health impacts of pollutants

Western Australia:

- Failure to regulate toxins emitted from Alcoa Alumina Refineries: Noongar Country - Binjareb/Pindjarup & Whadjuk land
- Failure to protect the community from air pollution: BHP Newman mine – Nyiyarparti Country

New South Wales:

- Air quality regularly exceeds World Health Organization's exposure limits: Upper Hunter Region - Wonnarua Country

Victoria:

- The regulation of transport pollution in Victoria is inconsistent with international standards
- Harmful levels of transport pollution: Inner West Melbourne-Wurundjeri and Wathaurung Country

Water pollution

Northern Territory:

- Failure to protect First Nations communities from water contamination from mining: McArthur River Mine - Gudanji, Garawa, Mara and Yanyuwa Country
- Failure to regulate drinking water where uranium levels three times the Australian Drinking Water Guidelines: Laramba Country

New South Wales:

- Failure to ensure safe drinking water for First Nations: Walgett - Gamilaraay Country

Tasmania:

- Failure to regulate water pollution from salmon farming: Macquarie Harbour - Palawa/Pakana Country

The issues highlighted are not an exhaustive list of the challenges facing our clients living and working in toxic environments. To contextualise the issues, we start by providing a brief overview of the key issues with applicable subnational laws in the following jurisdictions.

Overall, as Australia's National Environmental Protection Measures (**NEPM**) and the Australian Water Drinking Guidelines are not binding on subnational jurisdictions, this has resulted in an uneven implementation of the standards across Australia. Each subnational jurisdiction has developed their own approach to regulating toxics through their subnational laws. As such, the protections afforded to overburdened communities and their right to recourse is largely dependent on where they reside.

However, a cross jurisdictional review illustrates that there are similar issues arising in each jurisdiction from the failure to adequately regulate toxics in a manner that is consistent with protecting basic human rights. In summary, the key failures to regulate toxics and protect human rights across all subnational jurisdictions are a failure to:

- incorporate the established NEPM standards and the Australian Water Drinking guidelines into subnational laws;
- First Nations are particularly at risk from failures to regulate pollution in Australia, as demonstrated by the case study examples highlighted below;
- address diffuse pollution - subnational laws focus on licencing regimes that regulate individual operations rather than regulating airshed or watershed values in pollution hotspots. Further, in areas with cumulative monitoring programs, there is no effective enforcement mechanism available to address cumulative impacts;
- impose adequate monitoring requirements on individual licence holders to know in real time when breaches to established limits occur;
- bring legacy polluting activities in line with current health standards, and the best available technology and science. Some projects are not subject to the latest legislative amendments or current best practice because they were approved before the changes took effect;
- adjust environmental practices in response to breaches of pollution standards that are detected; and
- recognise a right to a healthy environment in a subnational human rights framework with effective enforcement mechanisms.

These overarching key issues can be seen in the following detailed case studies.

If more information is requested to assist in understanding these issues, or connecting with those impacted, EDO would gladly assist in supporting the work of the Special Rapporteur as required.

Air Quality – Failure to adequately regulate or enforce air pollution laws

Queensland

In Queensland, as with most states and territories, the air-quality NEPM is a guideline but not legally binding.[1] In our experience, rather than the laws providing a statutory maximum level of pollutants and requiring best practice pollution reduction or avoidance, air-quality conditions imposed on environmental authorities are often amended to increase the levels of air pollutants where the proponent is unable to meet the standards. Unlike in all other jurisdictions around Australia, in Queensland there is no independent environmental regulator separate from the Government. The regulator has intentionally worked to develop a close relationship with industry as their so called 'customers'. The same department works on policy and outreach with industry as well as regulation of the industry.

Key issues with the environmental authorities issued to industrial activities that impact on air quality, such as coal mining and power stations, are:

- conditions are often outdated and do not cover all pollutants created by an industry - while the regulator has the power to update existing conditions on EAs to meet the air quality objectives specified within the EPP Air Policy,[2] in practice, they rarely exercise this power. This means many operators are not required to keep up with best practice standards for reducing air pollutants;[3]
- many EAs do not require regular monitoring and the community often does not have access to any data that is collected; and
- conditions are largely unenforceable due to the poor drafting of conditions and the lax monitoring and public reporting obligations, or not enforced due to limited resourcing of pollution laws and lack of political will. [4]

---

[1] See *Environmental Protection (Air) Policy 2019* (Qld) ('EPP Air Policy'). The environmental impacts of air emissions associated with environmental authorities are regulated under the *Environmental Protection Act 1994* (Qld) (***EP Act***) and subordinate legislation, including the *Environmental Protection (Air) Policy 2019* (Qld) (*EPP Air Policy*). The EPP Air Policy identifies environmental values to be enhanced or protected and specifies air quality objectives for indicators to protect these values: EPP Air Policy ss 6, 7, Sch 1. These air quality objectives are derived from national and international standards, including the *National Environment Protection (Ambient Air Quality) Measure:* 'Application requirements for activities with impacts to air', *Department of Environmental Science* (Guideline, 21 September 2021) 3. When deciding to approve an environmental authority, the regulator is required to assess the application against requirements stipulated in the EP Act, including considerations stated in any relevant environmental protection policy, such as the EPP Air Policy: EP Act sch 4 s 176. The regulator is not required to implement the EPP Air Policy standards, and so authority conditions can provide for emissions limits that exceed the Policy standards.

[2] EP Act ss 215(1)(a), (2)(g).

[3] For example, Queensland power stations are still operating on outdated limits that are not consistent with the EPP Air Policy objectives. See: 'Toxic and terminal: How the regulation of coal-fired power stations fails Australian communities' (Environmental Justice Australia, August 2017)('EJA Article').

[4] EJA Article above n 3, 5.

Effective regulation is critical to reducing toxic air pollution and the impact it has on the health of the community. Communities have little control over the air they breathe and rely on regulators to protect their health.[5] However, the regulator has allowed coal-fired power station operators, for example, to continue to emit unacceptable levels of emissions, exposing communities to unnecessary levels of toxic pollution.

Regulatory failures to protect communities from air pollution:

New Acland coal mine - Western Wakka Wakka Country

The impact of the New Acland coal mine on air quality and the health of the surrounding community exemplifies the failure of Queensland's environmental laws to adequately regulate pollution.[6] During the original mining objection hearing in the Land Court related to the mine's 'Stage 3' expansion, it was noted that despite hundreds of complaints about air-quality,[7] there was limited and inadequate air quality and dust monitoring undertaken by the proponent to provide any indication of the potential impacts associated with the mining operations.[8] The Court found that:

- the proponent only monitored air quality for 27 days over an 11-year period[9] because the environmental authority issued to it by the regulator did not require ongoing air quality and dust monitoring,[10] despite the authority imposing air quality limits;[11]
- air quality testing was only required at the direction of the regulator after receiving a dust complaint,[12] which is arguably too late to address any breach of air quality limits;[13]
- as the environmental authority did not require ongoing real-time monitoring it was impossible to confirm whether air quality conditions were breached despite residents' lived experiences;[14]
- furthermore, in 15 years of operation, the proponent had never measured $PM_{2.5}$ levels at the mine;[15] and
- while the new draft environmental authority contained conditions directed at ensuring the proponent would not exceed dust and particulate matter emissions, the drafting allowed for flexibility if the proponent argued that it was not reasonable or commercially viable to implement measures to prevent exceedances.[16]

[5] Ibid 23.
[6] *New Acland Coal Pty Ltd v Ashman (No 4)* [2017] QLC 24 ('*NAC v Ashman (No 4)*').
[7] Ibid[580].
[8] Ibid [583].
[9] Ibid [581].
[10] Ibid [585], [590].
[11] Ibid [585].
[12] Ibid [585], [611].
[13] Ibid [588].
[14] Ibid [589].
[15] Ibid [619].
[16] Ibid [658]-[659], [666], [672]-[673].

As set out above, currently there are significant issues in the Queensland jurisdiction regarding the enforcement of laws to protect communities from pollution. While there are now laws to protect human rights in Queensland, as discussed below these laws do not provide a specific right to be protected against the impacts of pollution.

Queensland human rights laws do not adequately protect against health impacts of pollutants

In Queensland, there is a subnational human rights framework that was recently enacted, the *Human Rights Act 2019* (Qld). However, there are limited enforcement mechanisms or specific rights recognised which enable individuals and communities to seek recourse when their human rights are potentially impacted by air quality or other pollutants. There is also no standalone cause of action for human rights in a Queensland court, rather human rights must be 'piggy-backed' onto other claims of unlawfulness.[17] While laws enable complaints to the Queensland Human Rights Commissioner, these must be about alleged contraventions by a public entity that relate to:

a acting or making a decision that is not compatible with human rights; or
b when making a decision, failing to give proper consideration to the human rights relevant to the decision.

Where environmental authorities were granted prior to the human rights legislation, those laws will not apply unless the regulator makes another decision about that authority, such as amending the conditions on the authority in a way that is not compatible with human rights or in amending the authority, failing to consider the persons whose human rights were impacted by their decision. Consequently, communities have limited recourse to addressing pollution from existing industries, such as coal fired power stations, where their environmental authorities are decades old and reflect outdated and highly inadequate regulatory standards.

Although there is no standalone right to a healthy environment, the Queensland Land Court has accepted the intrinsic connection between enjoyment of other rights and the health of the environment.[18] When considering its human rights obligations under Queensland's human rights laws,[19] the Queensland Land Court in *Waratah Coal v Youth Verdict & Ors* (**Waratah Coal decision**)[20] found that a coal mine would limit several human rights including the right to life, rights of First Nations Peoples, rights of children and the right to property and privacy due to both climate change and localised[21] impacts. Although this decision is not binding on the regulator of environment authorities, it is an acknowledgement that in future they should consider human rights when making decisions that have air quality impacts on surrounding communities.

[17] *Human Rights Act 2019* (Qld) ss 59-60 ('HRA').
[18] *Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors (No 6)* [2022] QLC 21 ('*Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors (No 6*)').
[19] HRA above n 1717.
[20] *Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors (No 6)* above n 18.
[21] Ibid [44], [1655], [1703].

Human rights were also considered by the Land Court in relation to the New Acland coal mine, mentioned above, in a decision that was handed down prior to the Waratah Coal decision. [22] However, due to procedural limitations, impacted community members were precluded from raising issues concerning human rights.[23] Only the regulator and the mining proponent were able to ventilate issues about human rights to the Court.[24] While the Court considered the rights to property, privacy and rights of First Nations peoples, Member Stilgoe found the limits on human rights were demonstrably justified because the environmental authority placed appropriate limits on noise, dust and vibrations.[25]

Western Australia

The Western Australian context usefully illustrates how the absence of a mandatory requirement to translate the NEPM standards into subnational legislation has contributed to an absence of harmonised and enforceable environmental regulation in relation to air quality at the subnational level.

Under Part 4 *Environment Protection Act 1986* (WA), the WA Environmental Protection Authority (**WA EPA**) may undertake an environmental impact assessment of a proposed activity and make a recommendation to the Minister as to whether to approve the proposal, and if so, on what conditions.[26] The WA EPA has produced two guidelines which provide policy guidance to the WA EPA as to the consideration of air quality when undertaking such an assessment.[27] Notably, while the WA EPA may take into account the environmental factor guidelines when conducting its assessment, the guidelines are not mandatory relevant considerations.[28] Further, the final decision as to whether or not to approve the proposal, and if so on which conditions, remains with the Minister.

In addition, under Part 5 *Environment Protection Act 1986* (WA), prescribed polluting activities require approval from the Department of Water and Environmental Regulation (**DWER**). DWER has produced its own guidelines which provide guidance on how DWER interprets and applies legislation and its policies.[29] However, there is no statutory requirement to consider the Department's guidelines when making licensing decisions.

---

[22] *New Acland Coal Pty Ltd v Oakey Coal Action Alliance Inc. (No 2)*[2021] QLC 44 (***'NAC v OCAA No 2***)').
[23] Ibid [284].
[24] Ibid [268].
[25] Ibid [279].
[26] *Environmental Protection Act 1986* (WA) pt 4 ('*EPA (WA)'*).
[27] 'Environmental Factor Guideline – Air Quality', *Environmental Protection Authority* (Web Page, 3 April 2020) <https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/EFG%20-%20Air%20Quality%20-%2003.04.2020.pdf>; 'Environmental Factor Guideline – Human Health', *Environmental Protection Authority* (Web Page, December 2016) <https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/Guideline-Human-Health-131216_2.pdf>.
[28] *Jacob v Save Beeliar Wetlands (Inc)* [2016] WASCA 126.
[29] Guideline: Odour emissions, *Department of Water and Environmental Regulation*, (Web Page, June 2019) <https://www.der.wa.gov.au/images/documents/our-work/licences-and-works-

The WA EPA may also develop environmental protection policies. While the policies can be accompanied by associated regulations that mandate the imposition of certain conditions limiting gaseous emissions for a proposal, the policies apply in a patchwork style only in relation to specified areas.[30]

WA is unique because many of the most polluting projects, including the Alcoa alumina refineries in south-western Western Australia and iron ore mines owned by subsidiaries of BHP, were approved prior to the enactment of environmental legislation and regulations. Further, there are presently 64 state agreements in place between the state of WA and mining or resources companies,[31] ratified in statute, that may provide such companies with exemptions from compliance with aspects of subnational environmental laws.

The case studies below discuss some of the issues that local community has historically faced when raising concerns particularly about air quality.

Failure to regulate toxins emitted from Alcoa Alumina Refineries:

Noongar Country - Binjareb/Pindjarup & Whadjuk land

The Alcoa alumina refineries at Wagerup, Pinjarra, and Kwinana in south-western Western Australia highlight the consequences of regulatory failure in the absence of mandated NEPM thresholds and exposure-reduction frameworks. These refineries have experienced ongoing issues, including:

- The emission of dust clouds, potentially containing radioactive thorium and heavy metals, to neighbouring towns.[32] As at 19 December 2022, the WA Department of Environment and Regulation was investigating ongoing complaints of dust emissions from the Pinjarra alumina

approvals/licensing%20guidelines/Guideline%20-%20Odour%20emissions%20v1.0%20FINAL%20(June%202019).pdf>; Guidance Statement – Setting conditions, *Department of Environmental Regulation*, (Web Page, October 2015) <https://www.der.wa.gov.au/images/documents/our-work/licences-and-works-approvals/gs-setting-conditions.pdf>.

[30] *EPA*(WA) above n 26 pt 3; 'Framework for Environmental protection policies (EPPs) and associated regulations', *Environmental Protection Authority* (Web Page) <https://www.epa.wa.gov.au/environmental-protection-policies>.

[31] See 'List of State Agreements in Western Australia' (Web Page) <https://www.wa.gov.au/system/files/2020-10/List%20of%20State%20Agreements.pdf>; *Alumina Refinery (Wagerup) Agreement and Acts Amendment Act 1978* (WA); *Iron Ore (Mount Newman) Agreement Act 1964* (WA).

[32] 'Alcoa fined over pollution from refinery', *ABC News* (Web Page, 15 September 2010) <https://www.abc.net.au/news/2010-09-15/alcoa-fined-over-pollution-from-refinery/2261654>; 'Alcoa to fight pollution charge', *The Sydney Morning Herald* (Web Page, 23 July 2009) <https://www.smh.com.au/business/alcoa-to-fight-pollution-charge-20090723-duhn.html>; Gareth McKnight, 'Worsley Alumina Refinery under investigation after Pinjarra dust cloud', *Mandurah Mail* (Web Page, 11 June 2018) <https://www.mandurahmail.com.au/story/5457550/pinjarra-dust-cloud-results-in-alumina-refinery-investigation/>.

refinery, with investigations expected to continue to March 2023.[33] The results of those investigations have yet to be published.

- Exposure of employees to asbestos, with reports of development of asbestos-related diseases such as mesothelioma.[34]
- Emission of gases from liquor burning used during the alumina refining process, including SO2, leading to respiratory issues such as asthma, sinusitis and cancer diagnoses in the neighbouring towns.[35]
- These issues have led to conduct of the Wagerup Inquiry in 2004,[36] the conduct of studies into health issues in the Kwinana air buffer zone, including a report by the Department of Health in 2004, and a survey of 588 children conducted in 2011 by the Telethon Institute, University of WA, and WHO Collaborating Centre for Research in Children's Environmental Health.[37]

  While some regulatory conditions applied to Alcoa refineries have changed in response to inquiries and community concern, and levels of some specified pollutants have been reduced, key aspects of the recommended solutions to these issues (such as the implementation of buffer zones) have not been carried out, and unacceptable impacts on neighbouring communities continue to occur.

  Regulatory decisions in relation to the refineries are protracted and long delays occur before regulatory improvements are made. By way of example, one appeal against the conditions of the Alcoa Wagerup licence, which was commenced in November 2015, was not resolved until February 2018. In the relevant appeal decision, the Minister for Environment noted that a DWER review of the licence conditions was underway, and expressed the strong expectation that the review would be carried out expeditiously. At the time of writing, that review is still not complete after more than 5 years. Despite the review being underway, DWER authorised a licence amendment to allow a production increase in 2020.

---

[33] Government of WA, 'Pinjarra Air Quality', *WA.gov.au* (Web page, 19 December 2022) <https://www.wa.gov.au/service/environment/environment-information-services/pinjarra-air-quality>.

[34] 'Alcoa chief medic to visit Kwinana over asbestos scare', *WAtoday* (Web page, 5 June 2015) < https://www.watoday.com.au/national/western-australia/alcoa-chief-medic-to-visit-kwinana-over-asbestos-scare-20150605-ghhch4.html>.

[35] Hannah Barry, '"Dozens of cancer cases": Perth community renews push for answers over pollution', *WAtoday* (Web Page, 31 October 2018) <https://www.watoday.com.au/national/western-australia/dozens-of-cancer-cases-perth-community-renews-push-for-answers-over-pollution-20181023-p50bhp.html>; Tim Treadgold, 'Out of town and out of touch', *Australian Financial Review* (Web Page, 27 June 2002) <https://www.afr.com/companies/out-of-town-and-out-of-touch-20020627-ka3gn>.

[36] Parliament of Western Australia, *Report of the Standing Committee on Environment and Public Affairs in Relation to the Alcoa Refinery at Wagerup Inquiry* (Report 11, October 2004).

[37] Hannah Barry, '"Dozens of cancer cases": Perth community renews push for answers over pollution', *WAtoday* (Web Page, 31 October 2018) <https://www.watoday.com.au/national/western-australia/dozens-of-cancer-cases-perth-community-renews-push-for-answers-over-pollution-20181023-p50bhp.html>; 'Healthwise', *Monash University* (Web Page) <https://www.monash.edu/medicine/sphpm/coeh/research/healthwise>.

The fact that expansions of these refineries were approved and allowed to be implemented for many years while producing significant air pollutants, and the extraordinary delays in regulatory responses, is testament to the failure to regulate air toxins by national and subnational governments.

Failure to protect the community from air pollution:

BHP Newman mine – Nyiyarparti Country

The Newman Operations comprise two iron ore mining sites (Newman East and Newman West) located in the Pilbara region of Western Australia.[38] A review by DWER shows that since 2013, air pollution targets in Newman have been breached 171 times as a result of mining.[39] DWER undertook a review of the operating licences for BHP's Newman East and Newman West mines in 2021, imposing conditions 'for the management and monitoring of dust from ore processing and related activities at each premises'.[40]

Although residents have reported conditions like asthma, bronchitis, sinus infections and breathing difficulties that they believe relate to the levels of dust in the Newman area, the WA Department of Health and DWER say there is no evidence that the current dust levels cause any health problems.[41] A study to determine whether there is a link 'between the air quality in Newman and the perceived high rates of illness has not been undertaken' because of the small population size (impacting the accuracy of results) and the existing research on the impacts of PM_{10} dust on human health.[42]

New South Wales

In NSW, air pollution is regulated under the *Protection of the Environment Operations Act 1997* (NSW) (**POEO Act**) and subordinate legislation such as the *Protection of the Environment Operations (General) Regulation 2021*(NSW) (**General regulation**) and the *Protection of the Environmental Operations (Clean Air) Regulation 2022* (NSW). Despite the commitment of NSW to implement the NEPM standards for activities that are subject to state law,[43] the standards have not been directly implemented into subnational legislation.[44] Rather, under the POEO Act, certain activities such as coal mining and coal-

[38]'Newman Operations', *BHP* (Web Page) <https://www.bhp.com/what-we-do/global-locations/australia/western-australia/newman>.
[39] See Tom Robinson, 'BHP Mines Identified as "Dominant Source"of Dust in Newman, says Government Review', *ABC News* (Web Page, 17 March 2023) <https://www.abc.net.au/news/2023-03-17/bhp-mines-source-dust-newman-government-review/102068466> ('BHP Mines Identified as "Dominant Source"of Dust in Newman, says Government Review').
[40] See 'Newman Air Quality', *WA Government* (Web Page, 16 January 2023) <https://www.wa.gov.au/service/environment/environment-information-services/newman-air-quality>.
[41] 'BHP Mines Identified as "Dominant Source" of Dust in Newman, says Government Review' above n 39.
[42] Ibid.
[43] *National Environment Protection Council (New South Wales) Act 1995* (NSW) s 7.
[44] There are certain requirements to assess air quality against the NEPM standards, for example where an air quality monitoring network has been established. See: *Protection of the Environment Operations (General) Regulation 2021*(NSW) r 85 ('*PEO General Regulation*').

fired power stations are required to hold an environmental protection licence, with conditions specific to air quality generally included in that licence, or the development consent granted to the proponent. However, individual licencing regimes are not effective at regulating pollution hotspots.

If an air quality impact assessment of a proposed project is required, such an assessment is undertaken against the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (2022), a policy document which sets out the impact assessment criteria for sulfur dioxide (SO_2), nitrogen dioxide (NO_2), ozone (O_3), lead (Pb), $PM_{2.5}$, PM_{10}, total suspended particulates (TSP), deposited dust, carbon monoxide (CO) and hydrogen fluoride (HF). These standards generally mirror the NEPM standards where they exist. However, air quality impact assessments submitted prior to 9 September 2022 were assessed against an older assessment framework containing outdated concentration limits for some pollutants. The impact assessment undertaken by the proponent generally informs the conditions imposed on the project if it is approved.

To illustrate the current limitations of NSW law at addressing air quality issues the following case study looks at the Upper Hunter, which has some of the worst air-quality in Australia due to the density of coal mining and number of coal-fired power stations in the region.

Air quality regularly exceeds World Health Organization's exposure limits:

Upper Hunter Region - Wonnarua Country

Coal mining critically affects surrounding communities, particularly in relation to air quality. A study conducted across Australia determined that particulate matter in the air was significantly elevated in coal mining regions of New South Wales compared to other parts of the state.[45] This local air pollution has proven genotoxic effects and increased risks for cancer, cardiovascular disease, and respiratory disease among community populations.[46] According to a recent NSW government report, the air pollution in NSW is estimated to cause 603 premature deaths and increase health costs by $4.8bn each year.[47]

In the Upper Hunter region, which is close to significant population centers, annual $PM_{2.5}$ concentrations have regularly exceeded the maximum concentration standards set out in the air quality NEPM since 2011[48] and in some areas are over double the recommended exposure limits set in the WHO guidelines.[49]

[45] Michael Hendryx, Nicholas Higginbotham, Benjamin Ewald and Linda Connor, 'Air Quality in Association with Rural Coal Mining and Combustion in New South Wales Australia' (2019) 35(4) *The Journal of Rural Health* 518.
[46] Michael Hendryx, Mohammad Islam, Guang-Hui Dong and Gunther Paul, 'Air Pollution Emissions 2008–2018 from Australian Coal Mining: Implications for Public and Occupational Health' (2020) 17(5) *International journal of environmental research and public health* 1570.
[47] Department of Planning and Environment, *Sydney air quality study program report: Stage 2 – Health impact assessment* (Health Impact Assessment Report, 2 March 2023).
[48] Ibid 15-7, also see fig 5a.
[49] Adam Morton, "Air pollution in NSW causes 603 premature deaths and costs $4.8bn a year, study finds", *The Guardian* (Web Page, 15 March 2023) <https://www.theguardian.com/australia-news/2023/mar/15/air-pollution-in-nsw-causes-603-premature-deaths-and-costs-48bn-a-year-study-finds>.

In response to community concerns about the effect of coal mining on air quality, the Upper Hunter Air Quality Network was established to monitor air quality in the region.[50] However, as part of the program, the NSW Environmental Protection Authority is only required to publish the monitoring results on their website, produce annual reports and review the monitoring program every 5 years.[51] While all monitoring stations report on PM_{10} particles, only four stations are required to report on $PM_{2.5}$ and of those, only three are required to report on SO_2, and NO_2.[52]

Where exceedances to the NEPM concentration limits occur, there are limited avenues for community members to seek recourse due to the cumulative nature of the issue. Coal mining and power stations in the area are significant contributors to poor air quality. However, individual environmental licences and development consents do not adequately mitigate the cumulative nature of the issue.[53] Only some property owners identified in the development consent have rights to request that the mining proponent acquire their land if they are impacted by noise and dust[54] or that mitigation measures are implemented at their property such as air filters or double-glazing. Such measures also do not protect the community when they are outside the areas identified.[55] In NSW there is no subnational human rights framework. As such, residents impacted by dust and noise do not have any right to a healthy environment.

Individual licencing regimes are not effective at addressing pollution in hotspots where pollution is not easily attributed to a single point source. While the Upper Hunter has an Air-Quality Network, the regulator is only required to monitor and publish the results online. There is no mechanism for the local community or the regulator to enforce breaches of the NEPM standards when reported as part of the Upper Hunter Air Quality Network such as mandating collective penalties for operators. Our clients complained of inaccurate reporting where particular monitoring stations have failed to capture data for months at a time. Furthermore, in recent years, individual licences for coal mining projects in the Upper Hunter that will contribute to poor air quality continue to be approved for even though the current thresholds for air quality are already being exceeded on a regular basis. This is despite the requirement for an applicant to assess the cumulative impacts of a development including air quality.

---

[50] PEO General Regulation above n 44 r 85.
[51] Ibid rr 94-95.
[52] 'Air quality monitoring in the Upper Hunter', *NSW Government* (Web Page, 15 February 2023) <https://www.environment.nsw.gov.au/topics/air/monitoring-air-quality/upper-hunter>.
[53] For example, schedule 3, condition 16 of the Bengalla Mine development consent sets the NEPM maximum concentration standards as the limit and only requires that the Application has implemented all reasonable and feasible measures so that emissions generated by the development do not exceed these levels. Furthermore, the Bengalla's Environmental Protection Licence only requires the proponent to monitor PM_{10} particles: Notice of Variation of Licence No. 6538 from NSW EPA to Craig White, 28 February 2023 accessed at <https://newhopegroup.com.au/wp-content/uploads/2023/03/230228-EPL-6538_Combined.pdf>
[54] For example, the Bengalla Mining Company Pty Limited Development consent accessible at < https://newhopegroup.com.au/wp-content/uploads/2023/03/Bengalla-MOD-5-Consolidated-Consent-P.pdf>, sch 3 condition 1.

Victoria

In Victoria, air pollution is regulated primarily under the *Environmental Protection Act 2017 (*VIC) (**VEP Act**) and subordinate regulations such as the *Environment Protection Regulations 2021* (Vic) (**VEP Reg**). Like other states Victoria implements the NEPM standards for ambient air quality via enabling state legislation.[56] Similar to other Australian jurisdictions, the NEPM standards have not been directly implemented into Victorian legislation. Rather, the VEP Act empowers the Governor in Council, on recommendation from the Minister, to set environmental reference standards that can specify targets for emissions of pollutants.[57]

In addition to environmental legislation like the VEP Act, Victoria has enacted the *Climate Change Act 2017* (VIC) (**CCA VIC**), which sets interim GHG reduction targets in 5-year periods up to 2050, culminating in net zero GHG emissions by 2050. GHGs are defined to include air pollutants such as carbon dioxide, methane, nitrous oxide or sulphur hexafluoride.[58] The CCA VIC also aims to improve the consideration of climate change in government decision-making and includes guiding principles ensure that the Victorian State Government appropriately considers climate change when making certain decisions.[59]

In developing reduction strategies, the CCA Vic (relevant to the case study below) must include considerations of the impacts of Victoria's transport systems on GHG emissions.[60] Despite the above legislative framework, Victorians in certain locations continue to be exposed to dangerous levels of air pollutants, particularly from transport pollution sources. The following case study looks at the impacts of transport pollution, predominantly created by trucking, on local roads in communities located in the inner western suburbs of Melbourne.

The regulation of transport pollution in Victoria is inconsistent with international standards

In addition to the pollution legislation detailed above, Victoria has enacted legislation that is specifically targeted towards the regulation of transport pollution and vehicle emissions. Under the *Transport Integration Act 2010* (Vic) (**Transport Integration Act**),[61] a framework should be enacted that creates an integrated and sustainable transport in Victoria, consistent with Victoria's aspirations for an inclusive, prosperous, and environmentally responsible Victoria.[62] The *Transport Integration Act* states that the transport system should actively contribute to environmental sustainability by protecting, conserving and improving the natural environment, avoiding harm to local and global environments and promoting the use of sustainable transportation technologies.[63] Further, the Act states that

[56] *National Environment Protection Council (Victoria) Act 1995* (VIC).
[57] *Environmental Protection Act 2017 (VIC)* s 93 ('*VEP Act*').
[58] *Climate Change Act 2017 (VIC)* ('*CCA Vic*'), s 3, 10, 12, 13, 51(1), 51(2), 52.
[59] *Climate Change Act 2017 (VIC)*, s 1, ss 23-28 ('*CCA Vic*').
[60] Ibid ss 29, 30(b), 34(4)(f).
[61] *Transport Integration Act 2010* (Vic) ('*Transport Integration Act*').
[62] *Transport Integration Act* above n 61 ss 1, 6.
[63] Ibid s 10.

transport systems should be safe and support the health and wellbeing of Victorians, minimising the risk of harm to persons arising from the transport system.[64]

In addition to the *Transport Integration Act*, the *Environmental Protection (Vehicle Emissions) Regulation 2013* (VIC) (**Vehicle Emissions Regulation VIC**) prescribes the air emission standards for emissions from all vehicles other than new vehicles[65] and heavy vehicles to minimise the negative environmental effect of motor vehicles.[66] The *Vehicle Emissions Regulations VIC* states that emissions from motor vehicles, covered by the Act, must not be visible for more than 10 seconds.[67] The *Vehicle Emissions Regulation VIC* also regulates the quality of petrol suppliers may distribute. For diesel vehicles manufactured before 1996, levels of nitrogen oxide (**NO_x**) must not exceed 1.5g per km per tonne for vehicles weighing between 3.5 and 4.5 tonnes.[68] However, no vehicles are permitted to exceed a particle emissions rate above 0.23g per tonne.[69] For all vehicles produced after 1996, the rate of particle emissions for vehicles weighing more than 3.5 tonnes but less than 4.5 tonnes is reduced to 0.15g per tonne.[70] In Europe, NO_x standards are limited to 0.08g per tonne for diesel vehicles and 0.06g for petrol vehicles.[71] The European standards will be lowered again under the Euro 7/VII plan.

Overall, vehicle emissions standards in Victoria and the rest of Australia are inconsistent with international expectations, and critics have characterised Australian fuel standards as disappointing.[72] Despite the patchwork of legislation targeting transport pollution and emissions, communities in Victoria are experiencing significant and observable impacts to their health, caused by exposure to dangerous levels of air pollution, emitted by road vehicles, in particular, heavy vehicles such as diesel trucks. A notable example are communities located in the 'Inner Western' suburbs of Melbourne. The legislation detailed above continues to fail to protect these communities from this harmful exposure to transport pollution. As well as deficiencies in this legislation, this pollution issue is being exacerbated by poor infrastructure that has led to the overuse of residential roads by trucks,[73] and poor regulation

[64] Ibid s 13.
[65] Any vehicle manufactured after 1989 and governed by the National Road Vehicle Standards: *Environmental Protection (Vehicle Emissions) Regulation 2013* (Vic) rr 1(a), 6 ('*Vehicle Emissions Regulation Vic*').
[66] *Environmental Protection (Vehicle Emissions) Regulation 2013* (Vic) rr 1(a), 6 ('*Vehicle Emissions Regulation Vic*').
[67] *Vehicle Emissions Regulation VIC* above n **Error! Bookmark not defined.** r 7.
[68] Ibid r 9.
[69] Ibid.
[70] Ibid.
[71] Martin Williams and Ray Minjares, 'A Technical Summary of Euro 6/VI Vehicle Emission Standards' *The International Council on Clean Transportation* (Briefing, June 2016) <A technical summary of Euro 6/VI vehicle emission standards (theicct.org)>, 1, 4.
[72] 'Australia: New Fuel Standards Keep Disappointing, Stay Well Below International Standards', *ACFA* (Web Page, August 2019) <https://www.acfa.org.sg/newsletters/australia-new-fuel-standards-disappointing-below-international-standards>.
[73] According to a Victorian Government Truck Movement Survey, it was demonstrated that more than 55% of the truck traffic in the inner West is through traffic with no reason to be in the local area' cited by 'The Current Situation', *Maribyrnong Truck Action Group* (Web Page) <https://mtag.org.au/the-current-situation/> .

of the trucking industry has allowed older and far worse polluting trucks to stay on Australian roads for longer compounding the dangers for these residential areas.[74]

Harmful levels of transport pollution:

Inner West Melbourne - Wurundjeri and Wathaurung Country

Demonstrating the impact of these truck movements, a 2020 report commissioned by the Victorian Government found that on an average day 11,000 trucks pass through the largely residential areas in inner western Melbourne suburbs located near the Port of Melbourne.[75] The adolescent asthma rate in this area is 50% higher than the state average[76] and the hospital admission rate for people aged 3 to 19 is 70% higher than the Australian average.[77] The health effects on these communities fit within a wider Australian context where truck exhaust pipe pollutants are the cause of significant negative health effects and even deaths. Nationally, a report conducted in 2022 by the Grattan institute stated that over 400 Australians die every year from trucks' exhaust-pipe pollutants.[78] Heavy vehicles such as trucks are particularly dangerous as they consume diesel fuel from which 80-95% of particulates are ultrafine particulate.[79] There is no safe level of exposure to this particulate, and it is not regulated under national or subnational legislation in Victoria or any other state.[80] The Grattan report also attributes this issue in part to the aging truck population as it found that 14% of Australia's trucking fleet was manufactured before 1996.[81] Further, they stated that trucks manufactured in that period, 'emit 60 times the particulate matter of a new truck, and eight times the poisonous nitrogen oxides'.[82]

The 2020 Report commissioned by the Victorian Government also found that the 'average age of Australia's heavy vehicle fleet is 14.8 years.' Presently, there is no legislation targeting the size of this fleet nor to date have any affected communities, including in the inner west of Melbourne, been able to seek relief against this truck fleet, which is the predominant source of this dangerous pollution.

---

[74] Marion Terrill, Ingrid Burford and Lachlan Fox, *The Grattan Truck Plan: Practical Policies for Cleaner Freight*, Grattan Institute (Report, August 2022) 4 ('*The Grattan Truck Plan: Practical Policies for Cleaner Freight'*).
[75] Inner West Air Quality Community Reference Group, *Air Pollution in Melbourne's Inner West: Taking Direct Action to Reduce Our Community's Exposure* (Report, March 2020) xiv.
[76] *The Grattan Truck Plan: Practical Policies for Cleaner Freight* above n 74, 14.
[77] Ibid.
[78] *The Grattan Truck Plan: Practical Policies for Cleaner Freight* above n 74, 3.
[79] Ultrafine particulate refers to PM_1: Inner West Air Quality Community Reference Group, *Air Pollution in Melbourne's Inner West: Taking Direct Action to Reduce Our Community's Exposure* (Report, March 2020) xiv.
[80] Graeme Zosky et al, 'Principles for Setting Air Quality Guidelines to Protect Human Health in Australia' (2021) 214(6) *Medical Journal of Australia* 245, 255.
[81] *The Grattan Truck Plan: Practical Policies for Cleaner Freight* above n 74, 3.
[82] Ibid 3.

Water pollution –

Failure to adequately regulate safe drinking water and release of toxics into water

Northern Territory

In the Northern Territory, water resources are regulated by the *Water Act 1992* (NT) (**Water Act**) and the *Water Regulations 1992* (NT). Allocations for drinking water can only be reserved in Water Allocation Plans within areas declared as Water Control Districts under the Water Act.[83] This means that a reliable drinking water supply is not guaranteed for the many remote communities that are outside of Water Control Districts and not covered by Water Allocation Plans.[84]

Water quality management in the Northern Territory is guided by the National Water Quality Management Strategy[85] and the Australian Drinking Water Guidelines,[86] but these standards are not legally binding. As such, there are no legislated minimum standards for water quality applicable in the Northern Territory. There was previously a non-legally binding memorandum of understanding between the NT Department of Health and the Power and Water Corporation stating that the Australian Drinking Water Guidelines were to be used, however, this expired in 2015.[87]

We recommend that the standards in the Australian Drinking Water Guidelines be implemented through a new, mandatory NEPM relating to water quality or legislative reform. Existing statutory pathways to achieve this under the Water Act, the *Public and Environmental Health Act 2011* (NT), and the *Water Supply and Sewerage Services Act 2000* (NT) (**WSSS Act**) are not fit for purpose and have not been utilised to date.[88]

The regulation of water quality and water resources requires clear, enforceable standards to ensure transparency and accountability.

[83] *Water Act 1992* (NT) ('Water Act'), ss 22A, 22B.
[84] Kirsty Howey and Liam Grealy, 'Drinking water security: The neglected dimension of Australian water reform' (2021) 25(2) *Australasian Journal of Water Resources* 111, 112 (' neglected dimension of Australian water reform').
[85] See, for example, 'About', *Water Quality Australia* (Web Page, 18 May 2017) <https://www.waterquality.gov.au/about>.
[86] See National Health and Medical Research Council and Natural Resource Management Ministerial Council, *National Water Quality Management Strategy: Australian Drinking Water Guidelines* (Guideline 6, September 2022) ('*Australian Drinking Water Guidelines*').
[87] Neglected dimension of Australian water reform above, n 84, 113.
[88] Section 45 of the *Water Supply and Sewerage Services Act 2000* (NT) ('WSSS Act') may have a limited usefulness because the WSSS Act only applies to 'water supply licence areas', meaning that much of the Northern Territory is not covered: Neglected dimension of Australian water reform above, n 84, 111, 113.

While external actors, such as councils and academics, also monitor water quality, these assessments are often limited to metropolitan areas and results do not necessarily lead to legislative change or enforcement.[89]

The case studies below demonstrate the Northern Territory's lack of adequate protections for safe drinking water, especially in remote Aboriginal communities. As discussed above, a key contributing factor to this inadequacy is the absence of minimum legislative standards and an absence of external accountability and enforcement.

Failure to protect First Nations communities from water contamination from mining:

McArthur River Mine - Gudanji, Garawa, Mara and Yanyuwa Country

The McArthur River Mine is located approximately 60km upstream from the predominantly Aboriginal town of Borroloola in the NT.[90] As early as 2008, it was identified that waste rock left over from mining operations was potentially mischaracterised as benign when it had potential to generate acidic discharge upon contact with water and air.[91] Mine dam tailings potentially carrying metals have also been seeping into the nearby Surprise Creek, a tributary of the McArthur River.[92] However, no government action was taken until 2013, when parts of the waste rock dump on the mine erupted in flames, emitting toxic smoke containing a high concentration of sulphur dioxide into the atmosphere over a prolonged period.[93] Upon undertaking investigations that were prompted by the fire, it was determined that the mine and its surrounds would need to be monitored for the next 1000 years due to risk of groundwater contamination, including from metallic and sulphuric acid contamination.[94] The local First Nations communities rely on the groundwater and river systems for drinking water and

[89] See, for example, 'Darwin Harbour Water Quality Protection Plan', *Department of Land Resource Management* (Web Page, February 2014) <https://depws.nt.gov.au/water/water-management/darwin-harbour/darwin-harbour-water-quality-protection-plan>. The Darwin Harbour Water Quality Protection Plan 'identifies management actions being undertaken by government, industry and community stakeholders that are focused on monitoring, assessing and/or managing nutrient and sediment inputs to Darwin Harbour waterways': at iv.
[90] 'Supreme Court Action Over Glencore's McArthur River Mine', *Environmental Defenders Office* (Web page, 12 February 2021) < https://www.edo.org.au/2021/02/12/supreme-court-action-over-glencores-mcarthur-river-mine/>.
[91] UNSW Global Water Institute and the Environment Centre of the NT, 'Monitoring the monitor: a temporal synthesis of the McArthur River Mine Independent monitor reports' (February 2021) 3.
[92] UNSW Global Water Institute and the Environment Centre of the NT, 'Monitoring the monitor: a temporal synthesis of the McArthur River Mine Independent monitor reports' (February 2021) 4.

[93] Northern Territory Environment Protection Authority, *Assessment Report 86: McArthur River Mine Overburden Management Project McArthur River Mining Pty Ltd* (Report, July 2018) 109 ('*NT Environment Protection Authority Assessment Report 86*').
[94] Helen Davidson, 'Glencore document suggests mine site could revert to NT before rehabilitation complete', *The Guardian* (Australia, 25 Aug 2017); UNSW Global Water Institute and the Environment Centre of the NT, 'Monitoring the monitor: a temporal synthesis of the McArthur River Mine Independent monitor reports' (February 2021) 4-5.

frequently consume the food sources grown in and alongside the river.[95] Thus, this case study represents disregard for the rights of First Nations Peoples, with Australian governments focused on providing for the short-term economic interests and benefits of the mine rather than respecting First Nations Peoples' cultural heritage and other human rights, including health and access to water.

Failure to regulate drinking water where uranium levels three times the Australian Drinking Water Guidelines:

Laramba Country

Access to safe drinking water remains a challenge for many communities in the Northern Territory. For example, NT Health provided Laramba residents with bottled water because their tap water contained naturally-occurring uranium levels that were nearly three times what was recommended by Australian drinking water guidelines.[96] The Northern Territory has committed $28 million in funding to address water quality issues in remote communities, including for a new water treatment facility in Laramba that was opened earlier this year.[97]

While uranium levels in the water at Laramba 'are now almost undetectable', 28 of the 72 remote communities in the Northern Territory continue to have levels of contaminants above the Australian Drinking Water Guidelines and the committed funding will only address issues in 10 of these communities.[98] Such water quality issues have long been known to the Northern Territory government. An 18-month review conducted by the Water Services Association of Australia identified several key issues in relation to the delivery of safe drinking water to remote communities in the Northern Territory including that there are no minimum water quality standards applicable across the Northern Territory and that the provision of drinking water in remote communities is not currently regulated.[99] Note that at this time the NT Government has released a draft Territory Water Plan which will include the introduction of safe drinking water legislation.[100]

---

[95] Helen Davidson, "Traditional owners enter mine over fears Glencore could avoid cleanup cost', *The Guardian* (Web Page, 1 October 2015) <https://www.theguardian.com/australia-news/2015/oct/01/traditional-owners-enter-mine-over-fears-glencore-could-avoid-cleanup-cost>; NT Environment Protection Authority Assessment Report 86 above n 93, 95-96.

[96] Charmayne Allison, 'Aboriginal community of Laramba feels safe to drink tap water now uranium levels are within guidelines', *ABC News* (30 April 2023) <https://www.abc.net.au/news/2023-04-30/water-treatment-plant-opens-in-remote-laramba/102278924>.

[97] Chelsea Heaney, 'New funding to improve water quality in remote NT communities as data shows high contamination levels', *ABC News* (22 April 2021).

[98] Ibid.

[99] See Water Services Association of Australia, *Closing the Water for People and Communities Gap: A review on the management of drinking water supplies in Indigenous remote communities around Australia* (7 November 2022).
126 Ibid.

[100] See, for example, 'Territory Water Plan' *Water Security NT Government* (Web Page, n.d.) <https://watersecurity.nt.gov.au/territory-water-plan>.

New South Wales

Similar to the Northern Territory, the NSW Government has endorsed but not incorporated the Australian Drinking Water Guidelines,[101] into its subnational laws. The Australian Drinking Water Guidelines are a non-binding framework for the assessment of the quality of drinking water in Australia published by the National Health and Medical Research Council (**NHMRC**) under the *National Health and Medical Research Council Act 1992* (Cth) (**NHMC Act**).

The Australian Drinking Water Guidelines are intended to use scientific evidence to 'address the health and aesthetic quality of supplying good quality drinking water' and 'provide an authoritative framework on what defines safe, good quality.[102] However, without being enacted in New South Wales legislation, the Australian Drinking Water Guidelines are not an 'authoritative' framework for the provision of safe drinking water, as there is no legally binding responsibility to follow or adopt any of the standards.[103] The nature of the factors required to be established to succeed in a claim under such alternate grounds makes it difficult for a claim to succeed in court.

While the *Public Health Act 2010* (NSW) (**Public Health Act**) prohibits the supply of drinking water that is unfit for human consumption, or which constitutes a public health risk, third parties are unable to commence legal proceedings due to the absence of open standing provisions. Rather the process for remedying unsafe drinking water is dependent upon the Minister exercising broad discretionary powers to direct the Council to rectify the situation.[104] As the standards set out in the Australian Drinking Water Guidelines as drafted are inadequate, the Minister may determine that drinking water is safe, where it is realistically unfit for human consumption.

For example, the Australian Drinking Water Guidelines provides conflicting information about the safety of consuming drinking water with high sodium levels and fails to provide a health-based guideline for sodium content. Rather than indicating what is an acceptable level of sodium in drinking water, the guidelines note that distillation processes are costly to operate.[105] The scope of the sodium guidelines makes it difficult for communities to establish that high levels of sodium in drinking water pose a health risk. The case study below about drinking water in Walgett highlights the urgent need for the Australian Drinking Water Guidelines to be reformed and incorporated into subnational laws.

Another critical issue in New South Wales is the impacts of mining and coal-fired power stations on Sydney's drinking water. For example, the government has authorised underground mining to occur under critical water resources such as the Metropolitan and Dendrobium coal mines. While our clients

[101] 'Drinking Water', *NSW Government* (Web Page, 12 April 2022) <
https://www.health.nsw.gov.au/environment/water/Pages/drinking-water.aspx>.
[102] Australian Drinking Water Guidelines, above n 86.
[103] Such as *Australian Consumer Law,* common law negligence or the *Disability Discrimination Act 1992* (Cth).
[104] *Public Health Act 2010* (NSW) s16.
[105]Australian Drinking Water Guidelines, above n 86 924-5.

were successful in preventing the expansion of the Dendrobium mine,[106] the Metropolitan mine continues to operate despite concerns over iron, manganese and other contaminants entering the drinking water supply.[107] While there is significant community concern, the regulator is failing to enforce the conditions on the Proponent's development consent and environmental protection licences to prevent and remedy the release of contaminants.

Failure to ensure safe drinking water for First Nations:

Walgett - Gamilaraay Country

Dharriwaa Elders Group (**DEG**) is a group of Aboriginal Elders who live in Walgett, on Gamilaraay Country, in north-western New South Wales. The town is part of the northern Murray-Darling Basin. The northern Murray-Darling Basin is characterized by highly variable river systems that are vulnerable to the impacts of drought, climate change and over-extraction of water for the use of irrigated agriculture.[108] Aboriginal people make up 21.2% of the population of Walgett, compared to approximately 3.2% of the overall Australian population.[109]

Walgett is situated at the junction of the Barwon River and the Namoi River. Historically, the Namoi and Barwon Rivers have been the primary source of drinking water for the Walgett Local Government Area. When there is insufficient water in the Barwon and Namoi Rivers, Walgett uses bore water as alternative sources of drinking water.

Between 2017 and late 2020, the Namoi Valley experienced its worst drought resulting in the lowest inflows on record since 1918.[110] The Namoi and Barwon Rivers stopped flowing in January 2018 and Walgett was switched to bore water. The DEG became greatly concerned about the reliability and quality of drinking water for the community and sought expert advice. In November 2018, Professor Jacqui Webster, the Director of the World Health Organisation Collaborating Centre on Salt Reduction, advised the DEG that the sodium levels in the Walgett "are concerning" and that the sodium content is

[106] 'Dendrobium Coal Mine Extension Refused by NSW IPC', *Environmental Defenders Office* (Web Page, 5 February 2021) < https://www.edo.org.au/2021/02/05/dendrobium-coal-mine-extension-refused-by-nsw-ipc/>.
[107] 'Peabody Mine Threatening Sydney's Drinking Water: Report', *Nature Conservation Council* (Web Page, 22 March 2023) < https://www.nature.org.au/peabody_mine_threatening_sydney_s_drinking_water_report>.
[108] Quentin Grafton, 'While towns run dry, cotton extracts 5 Sydney Harbours' worth of Murray Darling water a year. It's time to reset the balance', *The Conversation* (Web Page 14 April 2020) < https://theconversation.com/while-towns-run-dry-cotton-extracts-5-sydney-harbours-worth-of-murray-darling-water-a-year-its-time-to-reset-the-balance-133342>.

[109] 'Walgett 2021 Census All persons QuickStats', *Australian Bureau of Statistics* (Web Page) https://www.abs.gov.au/census/find-census-data/quickstats/2021/LGA17900.
[110] 'Upper and Lower Namoi River', *New South Wales Department of Planning, Industry and Environment, Allocations and Availability* (Fact Sheet, September 2021) <https://www.industry.nsw.gov.au/__data/assets/pdf_file/0008/469250/Namoi-Valley-snapshot-drought-2017-20-20210914.pdf>.

15 times higher than is recommended for medical practitioners treating people with sever hypertension.

Despite this, there is no health-based guideline for sodium in the Australian Drinking Water Guidelines meaning there is no effective limit for sodium in drinking water. However, the guideline does state that: "Medical practitioners treating people with severe hypertension or congestive heart failure should be aware if the sodium concentration in the patient's drinking water exceeds 20mg/L". Results from bore water tests, obtained by the DEG, show that in May 2018 sodium levels in the bore water in were approximately 300mg of sodium per litre. This is particularly concerning in this context as the adverse health impacts that may result from high sodium intake are those that Aboriginal communities suffer disproportionately high rates of including heart disease, stroke, diabetes and kidney disease.[111]

In May 2020, a reverse osmosis system was installed, after ongoing advocacy from the DEG and the Walgett Aboriginal Medical Service. The installation of this system reduced sodium levels by half. However, it was discontinued in September 2020 due to a lack of resourcing of its ongoing operations.

Since the 2022 and the eastern Australia floods, the Namoi and the Barwon Rivers are flowing again and in May 2023 the town's water supply was switched back to river water.[112] However, the DEG do not expect to be able to rely on river water in Walgett in the long-term unless changes are made to water resources management in the MDB to reduce the volume of water that is being extracted from rivers in the region.

The failure to provide safe drinking water to the Walgett community is an example of Aboriginal water dispossession in the Murray-Darling Basin, as well as an infringement of numerous established human rights, of which the right to water is derivative.[113] Further, the failure of the Australian Drinking Water Guidelines to include a health threshold means that drinking water with high sodium levels is not prioritised as a health issue by water authorities. To ensure that the unacceptable situation faced by the DEG is not repeated, the Australian Drinking Water Guidelines, must be reformed and implemented into NSW subnational law.

---

[111] Statement, *Dharriwaa Elders Group* (30 November 2018) <http://www.dharriwaaeldersgroup.org.au/images/downloads/FinalDEGSaltWaterStatement30November2018.pdf>.

[112] Zaarkacha Marlan and Jean Kennedy, 'Walgett to have safe drinking water access after more than five years of bore reliance' *ABC News* (Web Page, 4 May 2023) <https://www.abc.net.au/news/2023-05-04/walgett-drinking-water-now-being-sourced-from-namoi-river/102301424>.

[113] *International Covenant on Economic, Social and Cultural Rights*, opened for signature 16 December 1966, art 11 (the right to an adequate standard of living), art 12 (the right to the highest attainable standard of health); *International Covenant on Civil and Political Rights*, opened for signature 16 December 1966, art 6 (the right to life).

Tasmania - Lutruwita

In Tasmania, major polluting industries are primarily regulated under the *Environmental Management and Pollution Control Act 1994* (Tas) (**EMPC Act**) and the *Land Use Planning and Approvals Act 1993* (**LUPA Act**). The EMPC Act is supposed to promote sustainable development and regulate activities that may impact environmental quality. Under the EMPC Act, the Environment Protection Authority (**EPA**) is responsible for the environmental assessments of activities leading to the granting of planning permits or, for salmon farms, environmental licences. The EPA is also responsible for monitoring and enforcing compliance against conditions of environmental licences and permits.

Currently, there are no clear and specific criteria for a decision by either the EPA Board or EPA Director to grant a planning permit or environmental licence. Rather, assessments must be undertaken in accordance with the Environmental Impact Assessment Principles set out in s 74 of the EMPC Act. These principles are procedural in nature and do not identify the objectives of the assessment.

The Director or Board can "grant to a person a permit or environmental licence in relation to an activity if…satisfied that it is appropriate to do so". There are no legislative criteria about when it will be "appropriate" to issue a licence. Furthermore, the EPA Director has the power to change the conditions of a permit if satisfied it is "desirable" to do so.

The overarching principles and objectives for water quality management in Tasmania are provided in the *State Policy on Water Quality Management 1997* (Tas). This Policy is binding on all statutory authorities, including the EPA. But in the 26 years since this Policy was introduced, no Water Quality Objectives for waterways have been published by the EPA Board, and only "default" Water Quality Guideline values have been set. Furthermore, the Protected Environmental Values have not been identified for coastal and marine waters or for groundwaters.

Currently, Water Quality Objectives are only set by the EPA on a "case by case" basis when it is assessing a particular proposal, and even then, the EPA does not publish or provide notice in its decisions about what particular Water Quality Objectives it has applied to its assessments. This makes it difficult, if not impossible, for the community to understand whether the EPA's conditions on a proposal will adequately protect the waterway from harm and protect its identified environmental values, and to exercise their legal rights to appeal EPA decisions (where those rights exist). It also makes it difficult for other resource and land managers, such as local councils, to manage catchments and waterways holistically through effective land and water management regulations.

While the EPA (and other regulators) are bound by the *State Policy on Water Quality Management 1997* to manage and regulate marine farms 'as required to ensure that they do not prevent the achievement of recognised water quality objectives outside of marine farming leases', salmon farming has had (and continues to have) a significant impact on water quality, as illustrated in the case study below about Macquarie Harbour. This situation highlights the need for reform.

To ensure that the water quality impacts from polluting industries, including salmon farming, are adequately regulated there must be:

- full implementation of the S*tate Policy on Water Quality Management 1997* by the Tasmanian Government, including the setting of Protected Environmental Values for all waters, the finalisation of Water Quality Guidelines, and publication of clear Water Quality Objectives for waterways;
- clear legislative criteria for decision-making including in the EMPC Act;
- evidence-based decision-making, including avoiding an over-reliance on adaptive management and implementation of the precautionary principle where there is a risk of serious or irreversible environmental harm;
- public participation and merits review for decisions including for salmon farming;
- greater access to information (including the publication of scientific studies, baseline and monitoring data) to facilitate independent scrutiny of this data; and
- rigorous, consistent and transparent monitoring and enforcement of industries.

The EMPC Act does not include provisions requiring consideration of the impacts of developments on Tasmanian Aboriginal heritage. As a result, there is no requirement to appropriately consult with the Tasmanian Aboriginal community in planning for projects and developments, resulting in proposals that do not have due respect for or regard to the United Nations Declaration of the Rights of Indigenous Peoples principles of FPIC and self-determination.

Failure to regulate water pollution from salmon farming:

Macquarie Harbour - Palawa/Pakana Country

Tasmania's salmon farming industry has been rapidly expanding since it was first established in the mid 1990's. The industry chiefly supplies to the domestic market, and now has an estimated gross annual value of over $620 million dollars.[114] However, this economic success has not been achieved without considerable environmental impacts. Several concerns have been raised in regard to habitat modification (including for listed threatened species), marine floor degradation, reduced water quality, pests and disease, and algal blooms.

Specifically, salmon farming operations in Macquarie Harbour have been a cause for environmental concern, particularly in relation to the declining Maugean Skate (Zearaja maugeana) population. In 2012, Tassal and Huon Aquaculture began an expansion of salmon farming in Macquarie Harbour. By September 2016 environmental monitoring data had revealed very low dissolved oxygen levels on the harbour floor (reaching a record low in some locations) and a large increase in the presence of bacterial mats at some lease sites.[115] In November 2016, the EPA and salmon farm operators were advised that the floor of Tassal's Franklin lease and surrounding seafloor was virtually devoid of life due to extremely

[114] Exports accounted for around 2 per cent of the value of Tasmanian salmon production in 2013-14 (DoSG Tas 2015).

[115] EPA Compliance Summary, Macquarie Harbour, (Web Page, September 2016) <http://epa.tas.gov.au/regulation/salmon-aquaculture/macquarie-harbour-management>.

low dissolved oxygen levels, and it was unknown what impact this would have on the endangered Maugean Skate.

After receiving this report, the EPA Director reduced the biomass cap limit on the amount of salmon farmed in the harbour from 21,500 tonnes to 14,000 tonnes and directed Tassal to destock its Franklin lease by 28 February 2017. When Tassal responded by citing the 'logistical, staffing and safety' impacts of direction to destock the Franklin lease and its inability to comply with the 14,000 tonne biomass limit, the EPA Director gave Tassal until 15 April 2017 to destock the Franklin lease and announced that he would delay his decision on the next biomass cap.[116]

On 31 May 2017, when a year-long biomass limit for Macquarie Harbour was set at 12,000 tonnes, the EPA gave Tassal permission to farm an extra 4,000 tonnes of salmon until January 2018 provided that it implemented an experimental 'waste capture system' designed to capture solid fish farm waste underneath its pens, pump it to a boat from where it would be transported to land and ultimately treated by TasWater's wastewater treatment plant at Pardoe.[117] Each of these steps was approved by the EPA Director through the issue of environment protection notices. There was no opportunity for public comment concerning these activities, or independent review of the science presented by Tassal in support of them by the EPA Board.

In November 2017, the EPA confirmed that significant fish mortalities had been reported by all three companies operating in the harbour. Therefore, in March 2018 the EPA Director cut the biomass limit to 9,000 tonnes. In discussing his decision, the EPA Director admitted that science and modelling used as the basis for the expansion of salmon farming in Macquarie Harbour in 2012 was wrong.[118] By 2017, there had been a failure by regulators to set biomass caps in Macquarie Harbour in an effective or timely manner in response to declining environmental conditions. The EPA Director's 2017 decisions to reduce the cap and issue the associated management directions that allowed for waste capture technology, placed excessive weight on short-term economic considerations in the absence of scientific certainty on the precise impacts and likely recovery of the environment.[119] The delay in the setting of biomass cap also resulted in the excessive stocking of leases by at least one operator, which in turn made future decisions on sustainable stocking density and biomass caps more challenging.

---

[116] Letter from EPA Director Wes Ford to Tassal CEO Mark Ryan dated 20 February 2017, accessed at <http://epa.tas.gov.au/Documents/EPA%2020%20Feb%202017%20Letter%20to%20Tassal%20CEO%20-%20Macquarie%20Harbour%20Lease%20266.pdf>.

[117] All the EPA's determinations and correspondence with salmon farm operators about the Macquarie Harbour biomass caps can be viewed here: https://epa.tas.gov.au/regulation/salmon-aquaculture/macquarieharbour/management-determinations#tassal.

[118] 'Macquarie Harbour salmon expansion science 'wrong'', *ABC News* (Web Page, 23 March 2018) < https://www.abc.net.au/news/2018-03-23/macquarie-harbour-salmon-expansion-science-wrong-admitsepa/9579140>.

[119] To read a copy of the EPA Director's reasons, click here: https://epa.tas.gov.au/regulation/salmonaquaculture/macquarie-harbour/management-determinations#biomass-limit-set.

In May 2018, the EPA Director confirmed that at least 1.35 million salmon had died in Macquarie Harbour since October 2017.[120] The fish deaths resulted from an outbreak of Pilchard Orthomyxovirus (**POMV**). Following that revelation, in July 2018, the EPA Director set the biomass cap in Macquarie Harbour to 9,500 tonnes until 2020. While, this time, no additional biomass was allocated based on the use of waste capture systems, Huon Aquaculture still argued that the limit simply reflected the current stocking levels in the harbour, rather than the conservative stocking levels necessary to respond to the poor environmental conditions recorded in the IMAS February 2018 report.[121] Huon Aquaculture linked the numerous large mass fish kills in the harbour from POMV to the high stocking rates facilitated by the waste capture systems and declining environmental health of the harbour. It called for a biomass cap in the vicinity of 6,000 tonnes to be imposed. That call was ignored by the EPA.

Without clear mandatory, science-based maximum caps for biomass and dissolved nitrogen output and criteria for biomass determinations for salmon farms informed by transparent Water Quality Objectives set under the *State Policy on Water Quality Management 1997* (and a legal pathway for those decisions to be reviewed by an independent expert tribunal), it is possible that the situation in Macquarie Harbour could be repeated in waterways around Tasmania. This could have implications for access to clean and safe drinking water and water for recreational uses and affect the inherent and cultural value the community places on these waterways as habitat for other species. Having procedural rights in relation to matters that impact the environment is a human rights issue particularly where there is no subnational human rights framework.

The situation in Tasmania highlights the need for national water quality standards that are binding on subnational governments. As Tasmania does not have a human rights framework, implementing water quality standards into law is an important step towards ensuring that the aquatic and marine environments are healthy and safe for the benefit of all Tasmanians, provided there is opportunity for public participation and third-party enforcement rights.

Furthermore, the Macquarie Harbour case study highlights the inadequacy of individual licencing regimes to address diffuse pollution and the urgent need for legislatively enshrined maximum pollution thresholds for specified watershed and airshed areas to adequately regulate environmental damage caused by cumulative pollution. Appropriate regulatory mechanisms must be implemented to ensure compliance with the standards and where breaches occur there must be an avenue of recourse for local communities.

---

[120] 'Macquarie Harbour salmon: 1.35 million fish deaths prompt call to 'empty' waterway of farms', *ABC News*, (Web Page, 19 May 2019) <https://www.abc.net.au/news/2018-05-29/salmon-deaths-in-macquarie-harbour-topone-million-epa-says/9810720.>

[121] To read a copy of the Huon Aquaculture's 6 April 2018 submission reasons, click here: <https://epa.tas.gov.au/regulation/salmon-aquaculture/macquarie-harbour/management-determinations#biomasslimit-set