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Visit to Australia

Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, Marcos Orellana*

Summary

The Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, Marcos Orellana, visited Australia from 28 August to 8 September 2023. The report contains the Special Rapporteur's findings and recommendations to the Government.

The Special Rapporteur welcomes the leadership by Australia in various international arrangements on chemicals and wastes, including on plastic pollution. The Special Rapporteur also welcomes steps toward a chemically safe circular economy, including bans on the export of certain waste streams, and legislation for the environmentally sound management of chemicals.

The Special Rapporteur takes note of acute toxic challenges facing the country. The toxic impacts of coal mines and coal-fired power plants, uranium mines, hazardous pesticides, radioactive wastes, perfluoroalkyl and polyfluoroalkyl substances, and waste incineration projects pose serious threats to the environment and to the health of affected communities. If allowed to go forward, proposed petrochemical and oil and gas projects would aggravate the global climate emergency.

The Special Rapporteur offers several recommendations for the recognition and implementation of the right to a clean, healthy and sustainable environment in Australia.

* The summary of the report is being circulated in all official languages. The report itself, which is annexed to the summary, is being circulated in the language of submission only.



Annex

Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes on his visit to Australia

I. Introduction

1. Pursuant to Human Rights Council resolution 45/17, the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, Marcos Orellana, visited Australia from 28 August to 8 September 2023, at the invitation of the Government.

2. The aim of the visit was to identify good practices and assess the Government's efforts to prevent and address the adverse impacts of toxics on human rights, with a view to offering recommendations. The visit focused on: (a) coal mining and coal-fired power plants; (b) uranium mining and nuclear weapons testing; (c) waste management; (d) highly hazardous pesticides; (e) perfluoroalkyl and polyfluoroalkyl substances (PFAS); and (f) oil, gas and petrochemicals.

3. The Special Rapporteur expresses his sincere gratitude to the Federal, State and Territory Governments for the excellent cooperation prior and during the visit. The Special Rapporteur held discussions with the Federal Departments of Foreign Affairs and Trade; of Climate Change, Energy, the Environment and Water; of the Prime Minister and Cabinet; of the Attorney-General; of Defence; of Industry, Science and Resources; of Health and Aged Care; of Infrastructure, Transport, Regional Development, Communications and the Arts; of Employment and Workplace Relations; and of Agriculture, Fisheries and Forestry; as well as with the Australian Radioactive Waste Agency, the Australian Radiation Protection and Nuclear Safety Agency, the Asbestos and Silica Safety and Eradication Agency, the Australian Pesticides and Veterinary Medicines Authority, and Safe Work Australia. He also met with high-level representatives of the Federal, State and Territory Governments, with Members of Parliament, with members of the judiciary and with the Australian Human Rights Commission.

4. The Special Rapporteur also held meetings in and received information from Indigenous Peoples, civil society organizations, workers' unions, academics, and industry representatives from the Australian Capital Territory, New South Wales, Tasmania, Victoria, South Australia, Western Australia and the Northern Territory. The Special Rapporteur visited a number of sites in the above-mentioned locations, which are adversely affected by toxic pollution and hazardous wastes. He thanks those he met with for their time and their openness.

5. The Special Rapporteur is very grateful for the fruitful exchanges with representatives of the country's active civil society and with academics, who generously gave of their time to contribute to the success of the visit. He also thanks the United Nations Information Centre in Canberra for its valuable support before and during the visit.

II. General context

6. The discourse around toxics in Australia is characterized by a deep disconnect between the narratives of authorities and those of communities. Whereas the authorities prioritize efforts towards stronger regulations to address the risks of chemicals and pollution, communities and civil society denounce State actions for the benefit of mining, oil, gas, agrochemical and other corporate interests.

7. This disconnect appears particularly acute between Indigenous Peoples and the Government. Representatives of Indigenous Peoples often referred to the ongoing

colonization of their territories and expressed frustration at their exclusion from decision-making processes.

8. Indigenous Peoples have lived on the continent and have passed down their culture and heritage for at least 65,000 years. For decades after British colonization began in the 1780s, campaigns of land dispossession, forced displacement, massacres, violence and a wave of diseases introduced by the European settlers ravaged the Indigenous population and generated deep-rooted distrust.

9. In 1901, the colonies federated and formed the Commonwealth of Australia. Today, the Federation consists of six states and two self-governing territories. It was not until the 1960s that all Indigenous Peoples were given the right to vote in all states and territories. States and territories enjoy a large degree of autonomy, and the national Government does not have power over many of their decisions in relation to environmental and toxics issues.

10. Australia is one of only 17 countries considered mega-biodiverse and has more than 1.75 million species of plants, animals and microorganisms, many of which are unique to the continent.¹ Human activities with toxic impacts represent a serious threat to biodiversity and vegetation in Australia.

11. Speaking of vision and awareness of the fundamental role that the environment plays in sustaining humankind, Australia has some of the oldest environmental protection agencies in the world. However, more needs to be done to bridge the gap between authorities, and communities, Indigenous Peoples and workers.

III. International and domestic legal framework

A. International legal framework

12. Australia has ratified most of the core international human rights instruments.² Australia has also ratified all major international agreements on chemicals and wastes. Australia supported General Assembly resolution 76/300 of 28 July 2022 recognizing the human right to a clean, healthy and sustainable environment, which encompasses the right to live in a non-toxic environment. However, Australia has yet to enshrine provisions for the protection of this right in its Constitution and legislative framework.

13. The Special Rapporteur welcomes the leadership by Australia in the global governance of various international arrangements on chemicals and wastes.

14. For example, Australia led a proposal to overcome the breakdown of the science-policy interface mechanism in the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, which the eleventh Conference of the Parties to the Rotterdam Convention failed to adopt in May 2023.³

15. Australia has joined the High Ambition Coalition of countries that wish to conclude a robust international legally binding instrument on plastic pollution, including in the marine environment, that addresses the whole cycle of plastics. Australia has also advocated for elements of a human rights-based approach to be incorporated in the instrument.

16. Australia has made significant efforts to promote international cooperation in the Pacific region. It has supported Pacific Islands States in the implementation of the Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region, which bans the import of hazardous

¹ World Wildlife Fund Australia, "What is biodiversity and why is it important?", 19 May 2022.

² Australia has ratified the nine core international human rights treaties; see https://tbinternet.ohchr.org/_layouts/15/TreatyBodyExternal/Treaty.aspx?CountryID=9.

³ See <http://www.pic.int/TheConvention/ConferenceoftheParties/Meetings/COP11/tabid/9312/language/en-US/Default.aspx>; see also Laurie Kazan-Allen, "Light at the end of the tunnel?", International Ban Asbestos Secretariat, 21 February 2023.

wastes into the territories of each Pacific Island Developing Party and provides measures of control in the transboundary movements of such wastes.⁴ The Australian Human Rights Commission has also provided technical support to national human rights institutions in the Pacific Islands Forum countries for promoting the right to a healthy environment.⁵

17. Australia has also developed a national plan of action for the Global Framework on Chemicals, and submitted it to the secretariat on 2 July 2024.

18. The Special Rapporteur notes, however, several shortcomings in the implementation of multilateral environmental agreements. Australia is a party to the Stockholm Convention on Persistent Organic Pollutants but has not ratified the amendments that have listed new pollutants, beyond the initial 12 persistent organic pollutants recognized under the Convention, sometimes called the “dirty dozen”.⁶ While the Stockholm Convention requires measures to reduce, and where feasible eliminate, releases of unintentionally produced persistent organic pollutants, such as from waste incinerators,⁷ there are plans to install waste incinerators in various parts of the country. The Australian national implementation plan for the Stockholm Convention is more than 15 years old. According to information received, Australia is currently developing an updated plan, and expects to transmit it to the secretariat in July 2024.

19. Australia is a party to the Minamata Convention on Mercury, but its control system on mercury emissions from coal-fired power plants has been limited or at times non-existent. Australia is currently developing a national implementation plan for the Minamata Convention, which is expected to be transmitted to the secretariat in 2024.

20. Australia is also a party to the Montreal Protocol on Substances that Deplete the Ozone Layer, but has obtained exemptions on a yearly basis for methyl bromide, a hazardous pesticide, without having a substitution plan in place.⁸

21. While Australia is a party to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, it has not yet ratified the Amendment to the Basel Convention, which entered into force in 2019. The Amendment bans exports of hazardous wastes, including waste for recycling, from States members of the Organisation for Economic Co-operation and Development (OECD), States members of the European Union and Liechtenstein to other countries.⁹

B. Domestic legal framework

22. Despite its steady cooperation with international human rights mechanisms and a wealth of advice and recommendations from them, Australia does not have a bill or charter of rights at the national level. The Constitution of Australia contains only five explicit individual rights, namely the right to vote, protection against acquisition of property on unjust terms, the right to trial by jury, freedom of religion, and prohibition of discrimination on the basis of state of residency.¹⁰

23. Although the Special Rapporteur was informed that an amendment to the Constitution to incorporate fundamental rights would be difficult to achieve, he is encouraged by the ongoing parliamentary inquiry into the country’s human rights framework, and the growing

⁴ Art. 4 (1).

⁵ Australian Human Rights Commission, “Forum aims to strengthen human rights in the Pacific”, 8 March 2023.

⁶ See <https://www.dcceew.gov.au/environment/protection/chemicals-management/international-agreements/stockholm-convention>.

⁷ Secretariat of the Stockholm Convention, *Guidelines on Best Available Techniques and Provisional Guidance on Best Environmental Practices Relevant to Article 5 and Annex C of the Stockholm Convention on Persistent Organic Pollutants* (2008).

⁸ See <https://www.dcceew.gov.au/environment/protection/ozone/methyl-bromide/non-qps-fumigations>.
⁹ A/76/207, para. 57.

¹⁰ Australian Human Rights Commission, “How are human rights protected in Australian law?”, available at <https://humanrights.gov.au/our-work/rights-and-freedoms/how-are-human-rights-protected-australian-law>; and see the Constitution of Australia.

momentum towards a federal Human Rights Act.¹¹ The Australian Capital Territory, Queensland and Victoria have already enacted their own Human Rights Acts. In October 2023, the Australian Capital Territory Government introduced a proposed amendment to the territory's Human Rights Act to enshrine the right to a clean, healthy and sustainable environment.¹²

24. The Environment Protection and Biodiversity Conservation Act 1999 is the main national environmental law aimed at protecting and managing unique plants, animals, and habitats, including heritage sites, marine areas and some wetlands.¹³ An independent review of the Act in 2020 found that the Act did not facilitate restoration of the environment and that addressing the challenge of adapting to climate change was an implied, rather than a central, consideration. It also concluded that the 1999 Act was not fulfilling its objectives with respect to the roles of Indigenous Peoples in providing advice to decision makers.¹⁴ The federal Government announced plans to reform the Act in 2022, and following consultation processes, legislation was introduced to Parliament in May 2024.

25. Lately, Australia has taken several steps to strengthen its chemicals and wastes legislation. Australia adopted the Industrial Chemicals Environmental Management Standard in 2021.¹⁵ In December 2023, Australia adopted the Industrial Chemicals Environmental Management (Register) Amendment (2023 Measures No. 1) Instrument,¹⁶ which adds certain persistent organic pollutants to schedules 6 and 7 of the Instrument by July 2024. The persistent organic pollutants added to schedules 6 and 7 are in addition to the original 12 persistent organic pollutants listed under the Stockholm Convention (despite Australia not having ratified amendments to the Stockholm Convention that list new pollutants).

26. Australia has also taken steps to mitigate climate change. Australia enacted the Climate Change Act of 2022, which sets the country's greenhouse gas emission reduction targets under the Paris Agreement (to achieve net zero emissions by 2050 and a 43 per cent reduction below 2005 levels by 2030).¹⁷ However, several proposed offshore oil and gas projects would export fossil fuels and carbon emissions, and thus aggravate the global climate emergency.

27. The Special Rapporteur welcomes the recent efforts by Australia to strengthen its environmental and toxics-related policies and laws. At the same time, he notes insufficient coordination between competent government institutions related to exposure to toxic substances and their outreach to the affected populations. He also expresses concern that pollution is mainly regulated by state and territory governments under subnational laws, resulting in an uneven implementation across the country's state jurisdictions. While four streams of chemicals are regulated at the national level (industrial chemicals, agricultural chemicals, food additives and therapeutic goods), there is no legal requirement to translate these regulations into state laws. However, intergovernmental agreements have been adopted between the Commonwealth of Australia and the states and territories to support cooperation to address the threats of chemical contaminants.

28. In addition to inconsistencies in implementation, national standards are sometimes less protective than international ones. Where environmental standards are not robust, the

¹¹ See

https://www.aph.gov.au/Parliamentary_Business/Committees/Joint/Human_Rights/HumanRightsFramework.

¹² Legislative Assembly for the Australian Capital Territory, *Debates: Weekly Hansard – Tenth Assembly*, 26 October 2023, p. 3429, available at <https://www.hansard.act.gov.au/hansard/10th-assembly/2023/PDF/20231026.pdf>.

¹³ Department of Climate Change, Energy, the Environment and Water, "What's protected under the EPBC Act", available at <https://www.dcceew.gov.au/environment/epbc/our-role/what-is-protected>.

¹⁴ Graeme Samuel, *Independent Review of the EPBC Act: Final Report* (Canberra, Department of Agriculture, Water and the Environment, 2020).

¹⁵ TÜV SÜD, "Australia: published amendments to regulate certain POPS chemicals", available at <https://www.tuvsud.com/en/e-essentials-newsletter/consumer-products-and-retail-essentials/e-essentials-1-2024/australia-published-amendments-to-regulate-certain-pops-chemicals>.

¹⁶ See <https://www.legislation.gov.au/F2023L01689/latest/text>.

¹⁷ See <https://www.legislation.gov.au/C2022A00037/latest/text>.

outcome expected is legalized contamination and human rights abuses. For example, the World Health Organization (WHO) Air Quality Guideline for average annual concentrations of PM_{2.5} is 5 µg/m³, while national standards are set at 8 µg/m³.¹⁸ Australian standards for PM_{2.5} are nevertheless more stringent than those of several OECD members. Moreover, some of the national Australian ambient air quality standards surpass the WHO guidelines, as in the case for nitrogen dioxide. According to information received, the Government of Australia intends to begin a further review of the national standards in 2025 under the National Clean Air Agreement.

29. Moreover, there are some gaps in the requirements for monitoring compliance with environmental standards. For example, the Ambient Air Quality National Environment Protection Measure requires monitoring stations to be installed in areas with populations greater than 25,000. This population threshold is set at a level that is too high to require monitoring at many significant point sources of air pollution, such as smelters and mining facilities.

30. Enforcement remains a challenge, and there is a need for a stronger stance against environmental violations and abuses by powerful corporate actors. Moreover, the penalties for breaching environmental licences available under statute can be up to \$A10 million. However, the actual fines are much lower. For instance, recorded prosecutions in relation to air pollution in New South Wales have varied from \$A30,000 to \$A116,000. Similarly inadequate fines have been reported in respect of Alcoa's dust generation in Perth, Western Australia. Where the level of penalties is insufficient in severity to motivate compliance and secure deterrence, they are simply absorbed as a cost of doing business, while the toxic harm is imposed upon neighbouring communities.

IV. Environmental governance

A. Access to information

31. Access to information and data is key to informing the public and to keeping public authorities and corporate entities accountable for pollution and environmental degradation. The Federal Freedom of Information Act 1982 provides the public the right to access records from any federal agency. Nonetheless, the Special Rapporteur is concerned about reports on the large number of environmental requests that have not yielded timely or adequate results. Monetary charges imposed in respect of requests to access a document¹⁹ also stifle access to information.

32. Pollutant release and transfer registers function as centralized databases of information regarding releases of hazardous substances and are a key tool for advancing the right to know and for informed decision-making.²⁰ The Australian National Pollutant Inventory requires reporting on 93 pollutants. PFAS, for example, are not among the pollutants monitored.²¹

33. During his visit, the Special Rapporteur was also informed of various promising examples of citizen science initiatives which played an important role in information-sharing and awareness-raising.²² Collaboration between university researchers, non-governmental

¹⁸ See https://www.c40knowledgehub.org/s/article/WHO-Air-Quality-Guidelines?language=en_US; see also Department of Climate Change, Energy, the Environment and Water, "Particulate matter (PM10 and PM2.5)", available at <https://www.dcceew.gov.au/environment/protection/npi/substances/fact-sheets/particulate-matter-pm10-and-pm25>.

¹⁹ Freedom of Information Act 1982, sect. 29.

²⁰ See [A/HRC/57/52](#).

²¹ See the submission from Health and Environment Justice Support, Swedish Society for Nature Conservation and groundWork South Africa, available at <https://www.ohchr.org/sites/default/files/documents/issues/toxicwastes/cfis/pollution-information-portals/submissions/subm-pollution-information-portals-cso-health-an-hejsupport-ssnc-groundworks-rksa.pdf>.

²² See <https://citizenscience.org.au/ala-project-finder/>.

organizations, community groups and others not only enhances the ability of scientists to carry out their work, but also enhances community agency on toxics issues.

B. Public participation

34. Parliamentary inquiries in Australia are a mechanism that provides the public with an opportunity to offer inputs on issues being considered by Parliament. These inquiries serve as an important tool for public debate and informed decision-making. They also contribute to shedding light on issues of concern to the population and create a record for future generations. Examples of toxics-related inquiries include those on the Australian Naval Nuclear Power Safety Bill 2023,²³ waste reduction and recycling policies,²⁴ Darwin's Middle Arm industrial project²⁵ and the Climate Change Amendment Bill 2023.²⁶ The Special Rapporteur also welcomes the November 2023 Senate inquiry into the United Nations Declaration on the Rights of Indigenous Peoples and its implementation²⁷ and the ongoing parliamentary inquiry on the possibility of enacting a federal Human Rights Bill, which are key areas of focus for a human rights-guided approach to the environmentally sound management of hazardous substances and wastes.²⁸

35. The Special Rapporteur expresses deep regret that a referendum on a constitutional amendment to secure a voice for Indigenous Peoples, through the creation of an advisory body to Parliament, failed.

36. The Special Rapporteur underlines that when public participation is reduced to a checklist, instead of being conducive to genuine dialogue, then dialogue is replaced by anger and distrust.

37. The exercise of the right to freedom of peaceful assembly is essential for public participation. In this regard, the Special Rapporteur notes with concern the strict restrictions on peaceful protest, including the passage of laws imposing harsh penalties on protesters in New South Wales, Queensland, Tasmania and Victoria. The Special Rapporteur also notes the decision of the New South Wales Supreme Court which held that parts of the anti-protest legislation were unconstitutional, following a legal challenge brought by protestors in 2023.²⁹

C. Access to justice

38. Regulations in some states impede individuals' and affected communities' access to justice in cases of breaches of occupational health and safety standards, since only the regulator can prosecute them. For example, Safe Work Australia is a government statutory body, governed by the Safe Work Australia Act 2008, that leads the development of national policy relating to work, health, safety and workers' compensation. However, Safe Work

²³ See https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Foreign_Affairs_Defence_and_Trade/ANNPSBills23.

²⁴ See https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Wastereduction.

²⁵ See https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/MiddleArm.

²⁶ See https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/DutyofCareBill.

²⁷ See https://www.aph.gov.au/Parliamentary_Business/Committees/Joint/Aboriginal_and_Torres_Strait_Islander_Affairs/UNDRIP.

²⁸ See https://www.aph.gov.au/Parliamentary_Business/Committees/Joint/Human_Rights/HumanRightsFramework.

²⁹ *Kvelde v. State of New South Wales*, [2023] NSWSC 1560, Judgment, 13 December 2023.

Australia does not have regulatory or compliance functions, as these remain the responsibility of national, state and territory (work health and safety) regulators.³⁰

39. The legality of government decisions can be assessed through judicial review processes. However, the Special Rapporteur was informed that these reviews are strictly procedural and do not necessarily consider technical expert advisory recommendations. This may lead to negative environmental outcomes if political decisions and regulatory measures do not align with the best available scientific evidence, undermining the right to science.³¹

40. The New South Wales Land and Environment Court was the first specialist superior environmental court in the world, established in 1980, and continues to serve as a model for other jurisdictions. Environmental courts present distinct advantages, including specialist competence and expertise, being attuned to problems, sensitivity, and greater ability to understand and deal with complex environmental issues.

V. Confronting toxic challenges

A. Coal mining and coal-fired power plants

41. Australia has more than 350 operating mine sites across the country and approximately 2.5 million hectares of land under active mining leases.³² The pollution generated from the extraction and processing of minerals poses serious human rights threats to communities.

42. With respect to coal mining, most of the country's black coal, which has higher potential energy than other forms of coal, is mined in New South Wales and Queensland. Approximately 80 to 90 per cent of it is exported, making Australia the world's second-largest exporter of black coal.³³ Coal mining causes habitat destruction, soil erosion and water pollution. "We are connected to the River through our songlines; it's like a rainbow coming from the East", said one Indigenous representative describing the impacts of the McArthur River zinc mine. Pervasive dust and particulate matter from coal mines, such as in Acland in Queensland, also have serious adverse health effects on local communities.³⁴

43. Coal-fired power plants have powered the country's energy sector for decades. However, the environmental health costs have often been externalized to communities, who have paid the price with premature deaths, terminal illnesses, asthma and other health problems.³⁵

44. The Special Rapporteur visited communities in the Upper Hunter Valley of New South Wales and the Latrobe Valley of Victoria that continue to be exposed to unsafe levels of air pollutants and toxics from coal mining and coal-fired power stations. Unfortunately, insufficient action has been taken to assess the health and other impacts of coal mining projects in these regions.

45. The Special Rapporteur expresses concerns that, instead of progressively phasing out coal mining in areas such as the Upper Hunter Valley, the regulatory authorities have granted extensions to existing coal mining projects. This prolongs the operation of such projects for

³⁰ National package provided by the Government in advance of the visit, p. 26.

³¹ Australian Conservation Foundation, "Access denied: how Australia's freedom of information regime is failing our environment" (2021).

³² 2021 State of the Environment Report, available at <https://soe.dceew.gov.au/biodiversity/pressures/industry#mining-and-energy-production>.

³³ See <https://www.energymining.sa.gov.au/industry/minerals-and-mining/mineral-commodities/coal#:~:text=The%20main%20producers%20are%20the,largest%20exporter%20of%20black%20coal>.

³⁴ Mercury deposition in lake sediments increased in the 1970s with the commissioning of coal-fired power plants, by a factor of 2.9 times in sediments of Lake Glenbawn (Hunter Valley) and 14 times in Traralgon Reservoir (Latrobe Valley) (Larissa Schneider and others, "Mercury atmospheric emission, deposition and isotopic fingerprinting from major coal-fired power plants in Australia: insights from palaeo-environmental analysis from sediment cores", *Environmental Pollution*, vol. 287 (2021)).

³⁵ Schneider and others, "Mercury atmospheric emission".

decades into the future, in circumstances where concentrations of air pollutants are already considered unsafe.³⁶

46. Authorities in some states have also extended coal-fired power plants' exemptions. For example, the New South Wales environmental regulator granted Vales Point Power Station a two-year qualified exemption for nitrogen oxides that requires compliance with limits less stringent than the applicable emission standard. Similarly, the Special Rapporteur became aware that for many years, coal-fired power plants in the Latrobe Valley in Victoria had lacked adequate pollution controls, and that in 2021 environmental licences were revised to strengthen such controls.

47. A 2021 parliamentary inquiry into the cost for remediation of sites containing coal ash repositories in New South Wales expressed concern at the "complete disregard by the government" for the health of its citizens".³⁷ Ash dams from coal combustion pose threats to the groundwater and drinking water of local communities. Arsenic and selenium in groundwater have been reported.³⁸

48. The Special Rapporteur emphasizes that rehabilitation of coal mines is a cause for great concern, as the financial bonds for rehabilitation are reportedly insufficient to cover the actual costs. The possible diversion of the Morwell River to flood the mine voids as part of rehabilitation in the Latrobe Valley and its potential impacts on Gippsland Lakes in Victoria, which are wetlands protected by the Ramsar Convention,³⁹ is also cause for concern.

49. The Special Rapporteur expresses similar concerns regarding the Hazelwood mine owner's proposals to divert waters from the Latrobe River system to flood the Hazelwood mine.⁴⁰ Environmental groups fear that flooding the coal mine could risk creating a toxic lake that may contaminate other water sources.⁴¹ At the same time, if left unfilled and unmanaged, the Hazelwood mine void could lead to unsafe ground movement and fire from exposed coal.⁴²

50. The Special Rapporteur regrets the Federal Court's decision of October 2023 to dismiss two judicial review proceedings that challenged the federal environment minister's decision to approve the expansion of two coal mines in New South Wales. The applicants had argued that the law required the federal environment minister to consider the potential impacts of climate change in her decision.

51. The Special Rapporteur was informed that, following a review of emissions standards in 2021, the Environment Protection Authority Victoria had imposed maximum discharge limits and monitoring requirements for mercury, PM2.5 and PM10 on each of the three brown coal-fired power stations' environmental licences. The Authority had also introduced a condition that required a risk management monitoring programme, which necessitated regular analysis of the practicability of introducing continuous technological and process improvements to reduce emissions. Despite these measures, the latest National Pollutant Inventory data from 2021/22 showed that the combined total emissions for the three Victorian

³⁶ Richard Denniss, Rod Campbell and Eliza Littleton, "One step forward, two steps back: new coal mines in the Hunter Valley", Australia Institute, March 2021.

³⁷ Legislative Council Public Works Committee, *Costs for Remediation of Sites Containing Coal Ash Repositories: Report 4* (2021).

³⁸ Hunter Community Environment Centre, submission for the inquiry into the costs for remediation of sites containing coal ash repositories, available at <https://www.parliament.nsw.gov.au/lcdocs/submissions/67192/0039%20Hunter%20Community%20Environment%20Centre.pdf>.

³⁹ *The List of Wetland of International Importance* (5 June 2024).

⁴⁰ Environmental Justice Australia, "Federal government pulls 'water trigger' over controversial plan to flood Victorian open-cut coal mine", 22 February 2023, available at <https://envirojustice.org.au/press-release/federal-government-pulls-water-trigger-over-controversial-plan-to-flood-victorian-open-cut-coal-mine/>.

⁴¹ Jarrod Whittaker, "Fears Hazelwood coal mine will become a toxic lake if flooded before clean-up", ABC News, 19 September 2022.

⁴² See Hazelwood Rehabilitation Project, "Landform safety and stability", available at <https://www.hazelwoodrehabilitation.com.au/engie/hazelwood/landform-safety-and-stability>.

power stations had increased for mercury, PM2.5 and PM10 in the year following the implementation of the above-mentioned environmental licences.⁴³

B. Uranium mining

52. Australia has a significant uranium mining industry, with many mines located on or near Indigenous lands. This has raised concerns about the health and environmental impacts of uranium mining on Indigenous communities, including the risk of radiation exposure.⁴⁴

53. While some mines, such as Ranger, had been forced onto traditional owners against their will, the Special Rapporteur received information that not all Indigenous landowners were opposed to uranium mining, including some who currently had operational mines on their land.⁴⁵ Even at mines such as the Olympic Dam, where the local Indigenous people, the Kokatha, had not expressed open opposition to the mine, there was deep concern at the reckless degradation of sacred sites and insensitivity to their culture.⁴⁶ Past mining in places such as Rum Jungle had left areas so degraded that traditional owners were unable to use them.⁴⁷

54. The Special Rapporteur notes that despite the complex applicable regulatory framework, there has been a persistent pattern of failure to rehabilitate uranium mines. Nevertheless, there appear to be promising developments at Ranger Mine in the Northern Territory. This territory has a long history of uranium mining and has some of the country's most significant and highest-grade uranium deposits.⁴⁸

55. The environmental impacts of tailings have been well documented for both historical and current uranium mines in Australia, including the Roxby Downs and Ranger uranium mines, Radium Hill and Rum Jungle.⁴⁹

56. Uranium mining has also had significant impacts on water resources, including depletion of groundwater tables and degradation of the Mound Springs system. The Great Artesian Basin and the Mound Springs systems are of significant cultural and environmental importance to the Arabunna people, who are the traditional owners. Evidence suggests that the demise of at least two spring complexes may have already occurred, and 10 other spring complexes have been affected by reduced flows.

57. Furthermore, allowing uranium mining to occur around environmentally significant areas that are protected by international agreements, such as in the region of Kakadu National Park, could compromise the international obligations of Australia. Kakadu National Park is listed on the World Heritage List, and its wetlands, birdlife and area are protected by the Ramsar Convention, the Convention on the Conservation of Migratory Species of Wild Animals and the Convention on Conservation of Nature in the South Pacific, among others.⁵⁰

58. The Special Rapporteur was informed about naturally occurring uranium and other contaminants in drinking water (groundwater) in Western Australia that contained toxic, hazardous and radioactive minerals, causing, among other things, kidney damage, cancer and

⁴³ See <http://www.npi.gov.au/npidata/action/load/individual-facility-detail/criteria/jurisdiction-facility/00004339/year/2022/state/null> and <http://www.npi.gov.au/npidata/action/load/individual-facility-detail/criteria/state/null/year/2022/jurisdiction-facility/00004339>.

⁴⁴ See https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Former_Committees/uranium/report/d07.

⁴⁵ Ibid.

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ See <https://resourcingtheterritory.nt.gov.au/minerals/mineral-commodities/uranium>.

⁴⁹ See https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Former_Committees/uranium/report/d03.

⁵⁰ Department of Climate Change, Energy, the Environment and Water, "World Heritage listing and other international commitments", available at <https://www.dcceew.gov.au/parks-heritage/national-parks/kakadu-national-park/world-heritage-listing>.

diabetes. Some types of drinking water supplies are exempt from the approved drinking water standards, such as rainwater collected in domestic tanks, groundwater from a private bore, and discretionary water supplies in parks and reserves.⁵¹ The Special Rapporteur considers it of the utmost importance to address these concerns and to ensure the supply of safe and clean drinking water to prevent adverse impacts on the health of affected communities.

59. The Special Rapporteur is encouraged to hear that in March 2024, the Federal and Northern Territory Governments announced a water security project, worth tens of millions of dollars, designed to deliver clean and reliable water to communities across the Northern Territory. The investment is expected to provide water infrastructure upgrades in various areas.⁵²

60. The Special Rapporteur notes the proposal in South Australia called the Northern Water Project – a desalination plant on the Eyre Peninsula that would supply water to multiple users, predominately the mining sector in the northern regions of South Australia. This project is expected to provide enough water capacity to substitute the reliance on Great Artesian Basin water for mining operations. While the project would help alleviate the pressure on the highly vulnerable, ecologically unique and culturally significant Mounds Springs, authorities should address concerns over energy consumption, toxic byproducts and impacts on Indigenous communities.

61. Australia has extensive reserves of minerals that are needed in the renewable energy transition and in advanced manufacturing. There are environmental and economic benefits from this sector – if it is developed in a measured and sustainable way. Detoxification and decarbonization strategies should be integrated and be guided by human rights principles.

C. Nuclear testing legacies

62. After testing its first nuclear weapons off the west coast of Australia in 1952, the United Kingdom of Great Britain and Northern Ireland, in 1953, detonated two “Totem” nuclear bombs at Emu Field. Between 1952 and 1957, the United Kingdom also conducted seven major and hundreds of minor nuclear tests at the Maralinga test site in South Australia. Nuclear fallout from the explosions contaminated large parts of the region and exposed many people to high levels of radioactivity. Indigenous Peoples bore the brunt of the negative impacts from radiation exposure.

63. In Maralinga, the testing of nuclear weapons contaminated great tracts of Tjarutja people’s lands, causing detrimental medical, psychological and social effects. The region of Maralinga was inhabited by Pitjantjatjara and Yankunytjatjara, with other Indigenous Peoples often passing through the area. During the tests, many of them came into contact with fallout in the form of “black mist”. The warning signs in English were usually incomprehensible to the Indigenous Peoples. Without adequate warning, many lost their eyesight and were left with a legacy of health issues from the radiation exposure. Studies on the health effects of radiation on the Indigenous Peoples were inconclusive, due to inadequate identification and follow-up of the affected population.⁵³

64. Similarly, the detonations at Emu Field still vividly reverberate in the Indigenous community’s memory and lived experience. The loss of family members who passed away in the aftermath of the testing calls for an apology by the Government that can open a path towards healing for this community.

65. In 1985, the Government of Australia established a royal commission to investigate the effects of British nuclear testing in Australia. Its final report stated that Totem 1 had been fired under wind conditions that would knowingly produce unacceptable levels of fallout and did not consider the existence of people downwind of the test site. The report also deemed

⁵¹ Government of South Australia, “Exemptions from the Safe Drinking Water Act”, available at <https://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/public+health/water+quality/providing+safe+drinking+water/exemptions+from+the+safe+drinking+water+act>.

⁵² Callan Morse, “Millions pledged for remote Northern Territory water projects”, National Indigenous Times, 14 March 2024.

⁵³ See <https://www.nuclear-risks.org/en/hibakusha-worldwide/maralinga.html>.

measures taken by Australian authorities to ensure that people were informed about the tests and left the affected areas, inadequate.⁵⁴ The Special Rapporteur notes with concern that to this day, the casualties of these tests are denied.

66. The Special Rapporteur stresses the need to redouble efforts to address the continued public health impact, provide adequate compensation to all affected, and remediate land impacted by former nuclear weapons tests and trials, and that this work needs to happen in collaboration with the affected communities.

D. Waste management

1. Nuclear waste

67. While Australia does not currently have any operating nuclear power plants, it does generate low- and intermediate-level radioactive waste from the use of radioactive materials in scientific research and for industrial, agricultural and medical applications.

68. In Australia, there are two reactors that have been used for research purposes, such as producing radioisotopes for medical applications and neutron beams for fundamental materials research. The first is the High Flux Australian Reactor, which is located at the Australian Nuclear Science and Technology Organization in New South Wales. It operated from 1958 until 2007, when it was permanently shut down and replaced by the second reactor, the Open Pool Australian Lightwater Reactor, which was commissioned in 2006 and is located on the same site.⁵⁵ The safety and security of these reactors are monitored by the Australian Radiation Protection and Nuclear Safety Agency.

69. The Special Rapporteur notes that Australia is still working to build purpose-built facilities to responsibly manage and safely store and dispose of radioactive wastes.⁵⁶ It was brought to the Special Rapporteur's attention that 95 per cent of radioactive wastes in Australia were of low and intermediate levels and were managed in the Lucas Heights facility in Sydney. However, under the AUKUS security partnership deal between Australia, the United Kingdom and the United States of America, Australia will be responsible for the storage of high-level nuclear waste from naval reactors that will power Australian submarines. The introduction of high-level radioactive waste into Australian territory may pose significant additional management challenges.

70. In 2021, the federal Government declared a location near Kimba as the site of a new low-level nuclear waste storage facility.⁵⁷ According to a ballot conducted by the Australian Electoral Commission, about 60 per cent of residents supported the proposed storage facility.⁵⁸ Nonetheless, Indigenous Peoples staunchly opposed the proposed storage facility, along with environmentalists and many farmers. The Barngarla people mounted legal resistance to the proposed siting of the facility and sought a judicial review, citing insufficient consultation with traditional owners, among other concerns. The Federal Court's judgment set aside the declaration of the site and found apprehension of bias in the site selection decision-making process by the former federal resources minister. The Special Rapporteur applauds the decision of the federal Government not to appeal the Federal Court's judgment.

71. While the National Radioactive Waste Management Act 2012 does not override federal laws to protect cultural heritage, it contains elements that override cultural heritage protections established by the states. This raises the need to align all regulations with the United Nations Declaration on the Rights of Indigenous Peoples.

⁵⁴ See <https://www.nuclear-risks.org/en/hibakusha-worldwide/emu-field.html>.

⁵⁵ World Nuclear Association, "Australian research reactors and synchrotron", available at: <https://www.world-nuclear.org/information-library/country-profiles/countries-a-f/appendices/australian-research-reactors.aspx>.

⁵⁶ See <https://www.industry.gov.au/australian-radioactive-waste-agency>; and Eugene Boisvert, "Federal Government chooses Kimba farm Napandee on the Eyre Peninsula for nuclear dump", ABC News, 1 February 2020.

⁵⁷ See <https://www.abc.net.au/news/2023-07-19/kimba-nuclear-facility-what-we-know/102615878>.

⁵⁸ Ibid.

2. Asbestos

72. Australia enacted a total ban on asbestos in December 2003.⁵⁹ However, the legacy of asbestos persists. It is evident in the continuous contamination and loss of life due to mesothelioma from asbestos exposure, particularly in Wittenoom, in Western Australia.

73. The Special Rapporteur notes the states' plans and existing programmes to prioritize removal of asbestos in the construction industry and overall environment.⁶⁰ The prioritization of asbestos removal in schools in Victoria stands out as a good practice, particularly given the vulnerability of children to exposure to toxics.

3. Solid waste

74. To transition towards a circular economy, the Special Rapporteur notes the National Waste Policy Action Plan 2019, aimed at implementing the 2018 National Waste Policy. The targets and actions of this Plan include a ban on the export of four waste streams: glass, tyres, mixed paper, and plastic; reduction of total waste generated per person by 10 per cent; and realizing an 80 per cent average recovery rate from all waste streams by 2030; among other targets.⁶¹ Nonetheless, in 2023, due to stockpiling and capacity issues, the Government of Australia allowed a 12-month exemption temporarily reversing the ban on exports of polyethylene terephthalate plastic waste. The Special Rapporteur also notes the Recycling and Waste Reduction Act (2020).⁶² In November 2023, all of the country's environment ministers endorsed a framework to accelerate product stewardship by better coordinating work across governments. Product stewardship encourages businesses to take responsibility of the whole life cycle of a product, including development, production, use, recovery, recycling and disposal.⁶³

75. Each year, the federal Minister for Climate Change and Energy publishes a priority list of products and materials that the Minister considers most in need of product stewardship action. The list indicates the reason why the Minister proposed giving the product consideration, recommended actions for industry and time frames for implementation. If the industry does not take voluntary action, the Minister may consider regulatory intervention. For example, problematic and unnecessary single-use plastics were listed in 2021/22. As industry has not made sufficient progress, state and territory governments are implementing ongoing phase-outs of problematic single-use plastics bans, and the national Government will introduce a new national packaging regulation to mandate obligations for industry to design packaging in line with circular economy principles, resulting in their removal from the list in 2023/24.

76. In 2021, Australia adopted the National Plastics Plan.⁶⁴ The aim of this Plan is to reduce plastic waste, find alternatives to plastics, and reduce the amount of plastics impacting the environment.⁶⁵ Australia is also confronting the impact of plastic litter in its outer

⁵⁹ Asbestos and Silica Safety and Eradication Agency, "Priority three: safe prioritised removal and effective waste management, available at <https://www.asbestossafety.gov.au/research-publications/national-strategic-plan-asbestos-management-and-awareness/strategies/strategy-three-identification>.

⁶⁰ See <https://www.asbestossafety.gov.au/find-out-about-asbestos/asbestos-safety-information>.

⁶¹ See <https://www.dcceew.gov.au/environment/protection/waste/publications/national-waste-policy-action-plan>.

⁶² Janet Bering, Rachel Karasik and John Virdin, "Plastic pollution in Australia", United Nations Environment Programme, available at <https://leap.unep.org/en/countries/au/case-studies/australia>.

⁶³ Ibid.; and see <https://www.dcceew.gov.au/environment/protection/waste/publications/national-waste-policy-action-plan> and <https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/warr-strategy/product-stewardship-schemes>.

⁶⁴ See <https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/warr-strategy/product-stewardship-schemes>.

⁶⁵ Department of Water, Agriculture and the Environment, "National Plastics Plan summary", available at <https://www.dcceew.gov.au/sites/default/files/documents/national-plastics-plan-summary-fs.pdf>.

islands,⁶⁶ as well as the leakage of microplastics and plastic feedstock from industrial facilities.

4. Incineration

77. Management of municipal and industrial waste is a growing concern in Australia. Despite alternative solutions, such as waste prevention strategies, waste reuse and recycling, there is an emerging trend towards new incinerators as a quick solution to the waste crisis. While waste incineration could reduce the volume of waste going to landfill sites, even the most modern incinerators impose heavy environmental and health costs.⁶⁷

78. Waste incinerators are a significant source of greenhouse gases, and emit numerous toxic chemicals into the atmosphere, toxic ashes and other residues. The chemicals present in stack gases, in ashes and in other residues include dioxins, polychlorinated biphenyls, polychlorinated naphthalenes, chlorinated benzenes, polyaromatic hydrocarbons, numerous volatile organic compounds, and heavy metals including lead, cadmium and mercury. Many of these are persistent (do not easily degrade in the environment), bioaccumulative (build up in the tissues of living organisms) and toxic.⁶⁸ Studies show that the adverse health outcomes in occupational workers and populations near waste incinerators include lung, liver, gastric and childhood cancers, as well as reproductive dysfunction.⁶⁹ The Special Rapporteur also notes that waste incineration is the end of the line for fossil fuels. It reflects a linear process that is incompatible with a chemically safe circular economy.

79. The Special Rapporteur was informed about the case of Tarago, in New South Wales, where a waste incinerator has been proposed. Tarago produces significant amounts of food for the state. Reportedly, the government has decided not to site incinerators in Sydney and to site them in four other regions instead, including Tarago. However, residents have reported a lack of meaningful engagement, not receiving an adequate explanation for the decision, and an absence of consultation. They said they felt like they were treated as second-class citizens, condemned to suffer the environmental injustice of disproportionate toxic impacts.

5. Pesticides

80. More than 10,000 pesticide products are formally registered for use in Australia, according to the Australian Pesticides and Veterinary Medicines Authority.⁷⁰ The Special Rapporteur was especially concerned over information that certain hazardous pesticides that are banned in their country of origin are still imported into Australia.⁷¹ More than 20 are classified as either extremely or highly hazardous by WHO.⁷² According to information received, Imidacloprid and other neonicotinoid insecticides used in Australia were removed from all outdoor use in the European Union in 2018 due to an assessment of adverse toxicity to terrestrial invertebrates.⁷³

⁶⁶ See

https://www.aph.gov.au/parliamentary_business/committees/senate/environment_and_communications/marine_plastics/Report/c04.

⁶⁷ Michelle Allsopp, Pat Costner and Paul Johnston, *Incineration and Human Health: Status of Knowledge on the Impacts of Waste Incinerators on Human Health*, Independent Planning Commission, 2018.

⁶⁸ Ibid.

⁶⁹ Peter W. Tait and others, “The health impacts of waste incineration: a systematic review”, *Australian and New Zealand Journal of Public Health*, vol. 44, No. 1 (2020).

⁷⁰ Safe and Effective Pesticide Applications, “Pesticide use in Australia – a look at past, current and future trends”, available at <https://www.ncrsepa.org/pesticide-use-in-australia/>.

⁷¹ Jo Immig, “A list of Australia’s most dangerous pesticides”, World Wildlife Fund Australia and National Toxics Network, July 2010, available at <http://ntn.org.au/wp-content/uploads/2012/05/FINAL-A-list-of-Australias-most-dangerous-pesticides-v27-1.pdf>.

⁷² See <https://www.pan-europe.info/old/Archive/About%20pesticides/Banned%20and%20authorised.htm>. See also www.apvma.gov.au.

⁷³ Jon Brodie and Matt Landos, “Pesticides in Queensland and Great Barrier Reef waterways - potential impacts on aquatic ecosystems and the failure of national management”, *Estuarine, Coastal and Shelf*

81. The federal Agricultural and Veterinary Chemicals Code Act 1994 provides the regulatory framework for the registration and supply of pesticides and veterinary medicines. In addition to the federal regulations, each state and territory has its own specific legislation and regulations relating to the control of the use of pesticides after the point of supply, addressing issues such as licensing and certification requirements for pesticide applicators, buffer zones, and restrictions on pesticide use in sensitive areas.⁷⁴ The Agricultural and Veterinary Chemicals (Administration) Act 1992 outlines the roles and responsibilities of the Australian Pesticides and Veterinary Medicines Authority, the national regulatory authority responsible for the assessment, registration and regulation of agricultural and veterinary chemicals, including pesticides up to the point of supply.

82. In response to heavy criticism concerning this Authority, the Board of the Australian Pesticides and Veterinary Medicines Authority, at the request of the Minister for Agriculture, Fisheries and Forestry commissioned an independent review report. The July 2023 Strategic Review Report stated that “alignment with industry interests also appears to be embedded into the [Authority’s] regulatory priorities and culture”.⁷⁵ It also observed that the Authority’s “emphasis on timely registrations, assessments and approvals over monitoring, compliance and enforcement is a prioritization that, on one view, best serves industry interests.”⁷⁶ In addition, it found that the Authority favours “an educational approach to enforcement and a reticence to pursue alternative, and more significant, enforcement measures”.⁷⁷

83. The Special Rapporteur is concerned about the import and use of hazardous pesticides when information on their risks and hazards is lacking, leading to the exposure of local farming communities and children. The Special Rapporteur is also seriously concerned by information received on the increase in the volume of pesticides and agrochemicals used in Queensland, South Australia, Tasmania and Victoria, and particularly by the presence of hazardous pesticides in children’s playgrounds near agricultural areas. Reportedly, glyphosate, which is classified as “probably carcinogenic” by the International Agency for Research on Cancer,⁷⁸ is commonly used next to medical clinics, playgrounds, hospitals and nursing homes with no public warnings to bystanders.

84. A 2022 report, commissioned by the Department of Agriculture, Fisheries and Forestry,⁷⁹ found that work health and safety regulators and public health authorities do not effectively monitor the environmental and health effects of agricultural and veterinary chemicals. The only long-term monitoring of pesticides in the environment was as part of the protection of the Great Barrier Reef and was limited to 22 pesticides. There is a need for more capacity and tools, including testing and monitoring, and the establishment of laboratories and staff exchange programmes.

85. The Special Rapporteur stressed that access to an effective remedy is a critical step in healing past environmental injustices. For example, the loss of life resulting from exposure to Agent Orange, a combination of two potent herbicides, 2,4,5-T (containing dioxins/TCDD) and 2,4-D, distributed by the state government of Western Australia in the late 1970s and early 1980s in the Kimberley region in the north of Western Australia, is still an open wound in Indigenous Peoples’ memory.

Science, vol. 230, 15 December 2019. See also Immig, “A list of Australia’s most dangerous pesticides”.

⁷⁴ Fertilisers are regulated by the state governments – see, for example, the Fertilisers Regulation 1997 under the Fertilisers Act 1985, available at <https://legislation.nsw.gov.au/view/html/inforce/current/sl-1997-0429>.

⁷⁵ See p. 4. The full review is available at <http://www.agriculture.gov.au/agriculture-land/farm-food-drought/ag-vet-chemicals/apvma-strategic-review>.

⁷⁶ *Ibid.*, p. 4.

⁷⁷ *Ibid.*, p. 3.

⁷⁸ See <https://www.iarc.who.int/featured-news/media-centre-iarc-news-glyphosate/#:~:text=In%20March%202015%2C%20IARC%20classified%20glyphosate%20as%20probably,in%20experimental%20animals%20%28from%20studies%20of%20%22pure%22%20glyphosate%29>.

⁷⁹ Chris Lee-Steere and Rohan Rainbow, *Sources of AgVet Data (Monitoring) in Australia* (Canberra, 2022).

6. Perfluoroalkyl and polyfluoroalkyl substances (PFAS)

86. PFAS are a group of highly persistent, toxic chemicals used to make products that resist heat, oil, stains, grease and water, including certain plastics. They are used in clothing, furniture, adhesives and food packaging, among other things. PFAS have adverse effects on human health and the environment. Even low concentrations can increase the risk of certain cancers, reduce immune response, impact the reproductive system, and have negative developmental effects, among other health concerns. PFAS are also called “forever chemicals”, as they do not break down in the environment. PFAS can also move through soils, contaminate drinking water sources and build up (bioaccumulate) in fish and wildlife.⁸⁰

87. PFAS contamination in Australia has been detected at various locations, particularly in areas near defence bases, airports, and firefighting training sites where PFAS-containing firefighting foams were historically used.⁸¹ Water sources used by communities for drinking, bathing and growing food have been contaminated with PFAS, leading to concerns about potential health risks.⁸²

88. The Department of Defence has a comprehensive PFAS Investigation and Management Programme under way, which has identified around 28 defence sites that are now either undergoing investigations or have reached the stage of determining management options.

89. Royal Australian Air Force (RAAF) Base Pearce, close to Bullsbrook, north of Perth in Western Australia, is one of the 28 sites. PFAS contamination from the air base has affected the neighbouring community, which relies on bore water for drinking, washing, cooking, and feeding their pets and animals. The government conducted an investigation into the contamination in 2016 and 2017 and provided bottled water to the community during this time, and continued to do for residents whose properties had been contaminated by PFAS according to the findings of the investigations. The government has committed itself to installing a water scheme (pipelines) in the community by 2025. The Special Rapporteur expresses concern that there has not been medical monitoring of the affected population.

90. The federal Government has also settled various class action cases around the country. In 2020, the federal Government reached a \$A212 million settlement for class actions brought by three communities in New South Wales, Queensland and the Northern Territory over loss of property value and livelihoods.⁸³ In May 2023, the federal Government settled a \$132.7 million class action lawsuit over losses due to PFAS contamination from firefighting foam at seven different locations across Australia.⁸⁴ This amount will be split between 30,000 claimants. Later in May 2023, the federal Government also reached a \$22 million settlement with the Wreck Bay Aboriginal community.⁸⁵ These settlements do not cover personal injury claims.

91. The Special Rapporteur notes that Australia has developed regulatory, policy and voluntary approaches for responding to PFAS contamination and has published a position

⁸⁰ Centers for Disease Control and Prevention, National Biomonitoring Program, “Per- and polyfluorinated substances (PFAS) factsheet”, available at https://www.wareham.ma.us/sites/g/files/vyhlif12101/f/pages/pfas_factsheet.pdf.

⁸¹ In February 2023, the European Chemicals Agency published a [proposal that could lead to a severe restriction on chemicals production](#). The plan, put forward by environmental agencies in five countries – Denmark, Germany, the Kingdom of the Netherlands, Norway and Sweden – would heavily restrict the manufacture of more than 12,000 substances, collectively known as forever chemicals. See the map on PFAS concentrations in Australia, available at <https://pfas.australianmap.net/>.

⁸² Cathy Banwell and others, *The PFAS Health Study Component One: Oakey, Williamtown and Katherine Focus Groups Study*, report prepared for the Government of Australia Department of Health, February 2019.

⁸³ Jon Daly, “\$212m PFAS payout for property value loss and distress, but residents’ contamination fears linger”, ABC News, 9 March 2021.

⁸⁴ Isobel Roe, Maryanne Taouk and Xanthe Gregory, “Commonwealth settles \$132.7 million class action over PFAS contamination across Australia”, ABC News, 15 May 2023.

⁸⁵ Federal Court of Australia, “Notice as to the Wreck Bay PFAS land contamination class action”, available at https://www.fedcourt.gov.au/__data/assets/pdf_file/0003/109983/NSD70of2021-Settlement-Notice-20230623.pdf.

statement that sets out agreed objectives for phasing out the use of PFAS. These approaches mostly focus on PFAS import, use, contamination and waste disposal.⁸⁶ The main legal obligations arising from the importation and manufacture of PFAS are contained in the Industrial Chemicals Act 2019, which came into force in July 2020.⁸⁷

92. Queensland and South Australia have restricted the use of certain PFAS in firefighting foams. South Australia was the first state to ban all fluorinated (PFAS-containing) fire-fighting foams, which have been a source of PFAS contamination around the world.⁸⁸ The ban on fluorinated fire-fighting foams in South Australia came into effect on 30 January 2018.⁸⁹ New South Wales has also recently implemented a progressive ban on the use of firefighting foam containing PFAS, which came into effect on 1 April 2021.

93. The PFAS National Environmental Management Plan is a cross-jurisdictional and cross-government agency effort across all Australian jurisdictions and New Zealand to respond to PFAS contamination and seeks to improve communication, information-sharing and collaboration.⁹⁰ An intergovernmental agreement between the Commonwealth of Australia and the states and territories⁹¹ has also been developed.⁹²

7. Oil, gas and petrochemicals

94. Scientific reports suggest that temperatures in the Northern Territory could make the region uninhabitable for humans.⁹³ Yet, according to the information received, the petrochemical and oil and gas industries are lining up massive projects in the region, threatening to make Darwin and the region a climate change sacrifice zone.⁹⁴

95. One such project is the Santos Barossa offshore gas extraction project. The Special Rapporteur expresses concern that consultations were not carried out with all the relevant persons who may potentially be impacted by the company's drilling plan. He also expressed concern that applicable regulations placed consultation requirements on the titleholder instead of the National Offshore Petroleum Safety and Environmental Management Authority.⁹⁵ The Tiwi people also challenged the construction of the pipeline in federal court on the basis that impacts on their cultural rights had not been adequately assessed. In November 2023, the federal court ordered Santos to pause pipeline works until a further trial had been held.⁹⁶ However, in January 2024, Santos won the case and was allowed to resume operations. The Special Rapporteur considers that the court's decision does not provide for free, prior and informed consent, as contemplated in the United Nations Declaration on the Rights of Indigenous Peoples, or for the recognition of their sea country cultural rights.

96. The Special Rapporteur notes significant concern about hydraulic fracking for gas in the Beetaloo Basin, in the Northern Territory. While a 2018 inquiry concluded that risks posed by the onshore gas industry could be managed,⁹⁷ civil society organizations have raised

⁸⁶ See <https://www.oecd.org/content/dam/oecd/en/topics/policy-sub-issues/risk-management-risk-reduction-and-sustainable-chemistry2/pfas-country-information/Australia.pdf>.

⁸⁷ Ibid.

⁸⁸ See https://www.epa.sa.gov.au/environmental_info/perfluorinated-compounds.

⁸⁹ It came into effect following an amendment to the [Environment Protection \(Water Quality\) Policy 2015](#) under the [Environment Protection Act 1993](#).

⁹⁰ See <https://www.oecd.org/content/dam/oecd/en/topics/policy-sub-issues/risk-management-risk-reduction-and-sustainable-chemistry2/pfas-country-information/Australia.pdf>.

⁹¹ See <https://federation.gov.au/about/agreements/intergovernmental-agreement-national-framework-responding-pfas-contamination>.

⁹² See <https://www.pfas.gov.au/about-pfas/faq>.

⁹³ Karen McGhee, "Could climate change make Darwin unliveable in 50 years?", *Australian Geographic*, 26 May 2023.

⁹⁴ Kirsty Galloway McLean, ed. "Climate change experiences in Northern Australia – health, adaptation, fire management and global relevance" (Darwin, Australia, United Nations University and Traditional Knowledge Initiative, 2009).

⁹⁵ Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009, available at <https://www.legislation.gov.au/F1999B00221/lastest/text>.

⁹⁶ See also Convention on the Protection of the Underwater Cultural Heritage.

⁹⁷ Northern Territory Government, *Scientific Inquiry into Hydraulic Fracturing: Final Implementation Report* (2023).

concerns about adverse effects on communities and ecosystems from fossil fuel extraction projects, risks of toxic ponds of contaminated water littering the landscape, and lack of independent assessment of projects.⁹⁸ Petroleum and petroleum products, including crude oil, can also pollute water through production, transportation, refining and other activities. These pollutants can cause physiological disorders, diseases, and biological changes in the environment.⁹⁹

97. The Special Rapporteur notes concerns related to the Middle Arm project in Darwin, and the toxic substances it would release, which include potential health impacts in neighbouring communities, such as asthma, heart disease and various forms of cancer. This project involves an industrial facility, in addition to a terminal for the export of liquified natural gas. It is to receive \$A1.5 billion in federal funding. The Special Rapporteur notes with concern that the project has been sited close to residential areas. He notes that the greenhouse gas emissions of natural gas for export, so-called scope 3 emissions, have not been quantified.¹⁰⁰

VI. Conclusions and recommendations

98. **The Special Rapporteur congratulates Australia for its leading role in important initiatives related to toxics and waste, both at the national and the international levels. He welcomes the increasing momentum towards a federal Human Rights Act. This illustrates that Australia is living an important moment in its journey towards strengthening its human rights protection system, including in respect of the right to a clean, healthy and sustainable environment.**

99. **The Special Rapporteur welcomes recent environmental legislation and policies, including on chemicals and waste, such as the Industrial Chemicals Environmental Management Standard adopted in 2021 and the Climate Change Act of 2022. He also welcomes processes such as parliamentary inquiries that serve as an important tool for public debate and informed decision-making. The New South Wales Land and Environment Court illustrates the benefits that specialized environmental courts can bring, particularly in terms of greater expertise and the ability to align decisions with the best available science.**

100. **The Special Rapporteur notes, however, that there is a disconnect in narratives between authorities' efforts and the lived experiences of local communities, Indigenous Peoples, and workers in relation to toxics issues. Indigenous Peoples have suffered grave maltreatment from radiation exposure due to nuclear testing, spraying of highly hazardous pesticides, uranium and other mining, and industrial activities with toxic impacts. The proposed siting of radioactive wastes on the lands of Indigenous Peoples illustrates the lack of respect for rights contemplated in the United Nations Declaration on the Rights of Indigenous Peoples.**

101. **Australia also faces challenges in managing contaminated sites, industrial chemicals and extractive industries, including closure and rehabilitation of mines, among other sources of toxic releases. And like other federal countries, it confronts the challenge of divergent environmental standards among subnational states.**

102. **Government decisions regarding toxic pollution have profoundly affected the health of communities. This includes the coal-fired power plants that have created intolerable levels of pollution, and discharged hundreds of tons of heavy metals into the environment, and whose carbon emissions have aggravated the global climate emergency. Australia has already warmed by 1.47°C (±0.24°C) on average since 1910.**

⁹⁸ Roxanne Fitzgerald, "NT government approves US gas company Tamboran's plans to expand fracking in Beetaloo Basin", ABC News, 8 June 2024.

⁹⁹ L. Yu. Novoselova and others, "Aluminosilicate microspheres in fly ashes from thermal power plants and their use for the removal of petroleum and phenol from water", *Solid Fuel Chemistry*, vol. 42, No. 3 (2008).

¹⁰⁰ Suzanne Harter, "Explained: Middle Arm Industrial Precinct - a climate disaster in the making", Australian Conservation Foundation, 19 October 2023.

This has led to more frequent and intense extreme heat events, prolonged droughts in the southern parts of the country, and led to extreme floods in the wetter northern parts.

103. Regarding agrochemicals, the Special Rapporteur is concerned that the federal regulatory body for pesticides has been ineffective, seemingly favouring businesses' interests. He notes the need to improve laws and policies to prevent toxic exposures. For that, key human rights principles regarding information, participation, and access to justice and remedies must inspire, and be reflected in, the regulatory texts and their implementation.

104. In many instances, there is no legal obligation for states and territories to translate environmental standards and regulations agreed upon nationally into their laws, resulting in gaps and uneven implementation across the country's jurisdictions. In this regard, the Special Rapporteur stresses the need for a national environmental regulator that can enforce harmonized national standards, although this would require agreement by all states and territories.

105. Australia has the potential to be a champion in freeing the country from toxics. One priority area is the phasing out of fossil fuels, alongside a just transition for workers and communities. Enhancing efforts to decarbonize the energy matrix is expected to increase the demand for transition minerals. The toxic impacts from the extraction and exploitation of these minerals remain an existential question for many communities. In this regard, detoxification and decarbonization strategies must be integrated in the country's environmental and development plans, and environmental safeguards must be respected.

106. Perhaps the most immediate and momentous opportunity for Australia is to incorporate the right to a clean, healthy and sustainable environment in its domestic legal order. Doing so will require not only constitutional or statutory recognition of the right. The effective implementation of this right will also require a review of environmental protection norms that are largely reactive and not aligned with international good practices.

107. This is where human rights can guide the transformation of law and policy concerning toxics: to avoid legalizing hazardous levels of toxic pollution, to secure respect for the rights of Indigenous Peoples, to enable informed public-participation in environmental decision-making, to ensure the internalization of environmental costs, to transition to zero waste and a chemically safe circular economy, and to make the right to live in a toxic-free environment a reality for all.

108. The Special Rapporteur looks forward to continued engagement with the Government of Australia and civil society stakeholders in the years to come. In this regard, he offers his technical assistance and suggests the recommendations below.

A. Legal framework and environmental governance

109. The Special Rapporteur recommends that the Government of Australia:

- (a) Guarantee the right to a clean, healthy and sustainable environment in the Constitution of Australia and the national and subnational legislative framework, allowing for its justiciability in domestic courts;
- (b) Accelerate steps towards a federal Human Rights Act;
- (c) Fully incorporate economic, social and cultural rights into the domestic legal order and allow for their justiciability in domestic courts;
- (d) Create a national environmental regulator or a federal Environmental Protection Agency that can enforce harmonized national standards;
- (e) Align national and subnational legislation with the United Nations Declaration on the Rights of Indigenous Peoples;

- (f) **Ensure meaningful engagement with Indigenous Peoples in licensing processes for extractive and other industries, including guaranteeing their right to free, prior and informed consent and respect for their cultural rights;**
- (g) **Protect the right to freedom of assembly against excesses in restrictions to the legitimate right to peaceful protest;**
- (h) **Impose fines adequate in severity to deter non-compliance with environmental regulations;**
- (i) **Ratify the amendments to the Stockholm Convention on Persistent Organic Pollutants that list new pollutants, and revise the National Implementation Plan;**
- (j) **Reduce and eliminate the releases of unintended persistent organic pollutants, such as from waste incinerators;**
- (k) **Introduce and implement a comprehensive control system to regulate and reduce mercury emissions from coal-fired power plants, in line with the objectives of the Minamata Convention on Mercury;**
- (l) **Prioritize the development and implementation of a substitution plan for methyl bromide, in accordance with the principles of the Montreal Protocol on Substances that Deplete the Ozone Layer;**
- (m) **Ratify the Basel Ban Amendment to the Basel Convention;**
- (n) **Ratify the Optional Protocol to the International Covenant on Economic, Social and Cultural Rights;**
- (o) **Prepare a National Action Plan on Business and Human Rights through informed consultation with all rights holders and stakeholders, including groups in vulnerable situations and local communities;**
- (p) **Strengthen the National Pollutant Inventory by linking it to pollution prevention mandates and expanding the coverage of pollutants.**

B. Radioactive waste and the legacy of nuclear testing

110. **The Special Rapporteur also recommends that the Government of Australia:**

- (a) **Amend the National Radioactive Waste Management Act to explicitly reflect the United Nations Declaration of the Rights of Indigenous Peoples and the right of free, prior and informed Consent of Indigenous Peoples;**
- (b) **Provide adequate compensation and assistance to those affected by radiation exposure from nuclear testing, particularly Indigenous Peoples;**
- (c) **Provide further assistance to affected communities and further environmental remediation in relation to the atomic tests conducted by the British Government on Australian territory.**

C. Air pollution and just transition

111. **The Special Rapporteur further recommends that the Government of Australia:**

- (a) **Align national and subnational air quality standards with the World Health Organization's air quality standards, and ensure their adequate enforcement;**
- (b) **Require businesses to implement comprehensive pollution control systems to reduce carbon dioxide and mercury emissions, among others, from coal-fired power plants;**
- (c) **Ensure communities are protected from cumulative impacts of pollution;**

- (d) **Ensure that environmental information, including air pollution monitoring data, is available and accessible to the public;**
- (e) **Require real-time monitoring of air pollution and decrease the population threshold for the requirement to install monitoring stations under the Ambient Air Quality National Environment Measure;**
- (f) **Phase out fossil fuels and implement a just transition in support of workers and communities;**
- (g) **Implement a national and subnational moratorium on all new fossil fuel developments to reduce emissions of greenhouse gases.**

D. Mining

112. **The Special Rapporteur recommends that the Government of Australia:**

- (a) **Strengthen regulations to ensure that, upon closure, mines restore the environment and do not pose a threat to human health;**
- (b) **Ensure that the financial bonds for rehabilitations are sufficient;**
- (c) **Ensure access to an effective remedy for harm caused by hazardous substances and wastes released by mining operations;**
- (d) **Implement legal requirements for robust mandatory human rights due diligence of business enterprises, including in respect of overseas operations;**
- (e) **Ensure meaningful and informed participation, including of the most vulnerable, in environmental impact assessments of mining projects;**
- (f) **Ensure the highest standards of uranium assessment and approval processes;**
- (g) **Ensure that the national environmental laws focus on compliance with radiation standards;**
- (h) **Conduct epidemiological studies to assess the impacts of mining projects on affected communities;**
- (i) **Ban mining in environmentally and culturally significant areas, such as Kakadu National Park;**
- (j) **Protect water sources from overconsumption and pollution from mining.**

E. Waste

113. **The Special Rapporteur also recommends that the Government of Australia:**

- (a) **Ensure the internalization of environmental costs, to transition to zero waste and a chemically safe circular economy;**
- (b) **Promote greater coordination, with effective national and subnational cooperation, in the implementation of waste management laws and programmes;**
- (c) **Strengthen the tools available for access to environmental information, particularly on hazardous substances and wastes;**
- (d) **Expand the list of pollutants that require reporting and monitoring under the Australian National Pollutant Inventory;**
- (e) **Develop measures to further reduce plastic production and demand;**
- (f) **Ban single-use plastics in all states and territories and focus on the use of alternatives to plastics;**
- (g) **Accelerate the removal of asbestos from buildings and undertake remediation of contaminated environments;**

(h) **Strengthen emergency response preparedness for accidental releases of hazardous substances, including dust control measures.**

F. Agrochemicals

114. **The Special Rapporteur further recommends that the Government of Australia:**

(a) **Enact a national law to control the use of pesticides and veterinary medicines, and eliminate use of highly hazardous pesticides;**

(b) **Establish a new independent regulatory body free of actual or perceived conflict of interest and undue corporate influence;**

(c) **Ensure that regulations governing pesticides are harmonized across jurisdictions and all levels of government;**

(d) **Exercise leadership at the international level for a wide ban on the import and export of pesticides banned in their countries of origin;**

(e) **Stop spraying agrochemicals over schools, day-care areas, hospitals, aged-care facilities, medical clinics and residential areas;**

(f) **Take measures to address the risks and harms of pesticide spray drift;**

(g) **Carry out studies on the impacts of pesticide use on workers, communities and the environment and the impacts of pesticide residue on consumer health;**

(h) **Conduct awareness-raising campaigns on the risks and harms of pesticides;**

(i) **Invest in research and innovative solutions to substitute conventional hazardous chemicals for non-toxic alternatives.**

G. Perfluoroalkyl and polyfluoroalkyl substances (PFAS)

115. **The Special Rapporteur recommends that the Government of Australia:**

(a) **Enact enforceable and legally binding standards for PFAS, including for drinking water, industrial use, and point source emissions, at the state and territory levels;**

(b) **Identify potential sources of PFAS contamination and implement measures to prevent contamination;**

(c) **Invest in advanced treatment technologies to remove PFAS from drinking water sources and wastewater;**

(d) **Collaborate with health agencies to monitor and assess health risks;**

(e) **Secure meaningful participation of the local community in decision-making processes regarding contamination remediation strategies.**
