



人权理事会

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议程项目3

促进和保护所有人权——公民权利、政治权利、
经济、社会及文化权利，包括发展权

对巴西的访问

危险物质及废物的无害环境管理和处置对人权的影响问题特别报告员的报告* **

概要

秘书处谨向人权理事会转交危险物质及废物的无害环境管理和处置对人权的影响问题特别报告员巴什库特·通贾克访问巴西的报告。特别报告员在根据人权理事会第36/15号决议提交的本报告中，阐述了他于2019年12月2日至13日开展的此次正式国别访问中得出的结论和提出的建议。

* 本报告概要以所有正式语文分发。报告正文附于概要之后，仅以提交语文分发。

** 本报告逾期提交会议服务部门，以反映最新动态。



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 Brazil

I. Introduction

1. The Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, Baskut Tuncak, conducted an official country visit to Brazil from 2 to 13 December 2019, at the invitation of the Government. In the spirit of collaboration, the Special Rapporteur engaged in dialogue on various issues to examine the Government's approach on human rights implicated by toxic exposure.
2. The Special Rapporteur thanks the Government of Brazil for the invitation to conduct a country visit. He expresses gratitude for the opportunity for frank and constructive discussions with the Government, companies, and civil society, including Brazilians of African descent and indigenous and *quilombola* communities, researchers and academics and human rights defenders.
3. The Special Rapporteur had the opportunity to visit various parts of the country, and to experience the hospitality and generosity of the Brazilian people. He was deeply moved by the enduring struggle of victims, civil society and human rights defenders that met with him. It is those people that the international human rights system aims to protect, and whose resilience must be recognized and commended.

II. Sustainable development in Brazil

4. In 1992, the United Nations Conference on Sustainable Development was held in Rio de Janeiro. The Rio Declaration on Environment and Development emanating from that landmark meeting has for decades helped to orient laws and policies of States around the world, including Brazil, towards a sustainable future.
5. A cornerstone of achieving sustainable development is decoupling economic growth from resource depletion and environmental degradation. Brazil experienced its first real decoupling of carbon dioxide emissions from economic activity in 2009,¹ suggesting that Brazil has the capacity to go in that direction if concerted efforts are applied. Given that human rights are inseparable and indivisible, so too is sustainable development inseparable and indivisible from human rights.
6. However, today Brazil is on a steep path of regression from sustainability and human rights. Images of the rampant burning of the Amazon rainforest have become a frightening visual of that descent and the eroding commitment of Brazil to those international values and principles, yet much of that regression is invisible.
7. Prioritizing development at any cost is poisoning Brazil, forcing the burden of inaction on the poor and other marginalized communities. Reports proliferate of corporate capture, corruption and conflicts of interests between government actors and powerful businesses, advancing a deregulatory agenda. As countries in Europe and elsewhere improve environmental protections, efforts in Brazil are being undermined. Recent videos of ministers plotting to use the coronavirus disease (COVID-19) crisis to weaken protections validate those concerns.
8. Brazil appears to be increasingly exploited by global supply chains capitalizing on weaker standards, oversight and enforcement. For example, the startling commitment of

¹ See www.sciencedirect.com/science/article/abs/pii/S0921800911000838.

Brazil to feeding one third of the world by 2030² stands to dramatically increase agrochemical use in ways that would be unacceptable in many export markets, such as Europe, while also increasing deforestation, climate change and conflict with indigenous and local communities.³

9. In that context, the present report is focused on the current impacts of the development model of Brazil on health, well-being and human rights in the context of the exposure of people and peoples to hazardous substances and wastes (toxics).⁴ The Special Rapporteur emphasizes the duty to prevent exposure and analyses the current approach to protecting human rights, including of the most vulnerable, from toxic exposure in dominant industries, including agriculture and extractive industries.

III. Duties and responsibilities to protect life and prevent exposure

10. Brazil has a duty to protect the human rights to life, dignity, health, bodily integrity, clean water, nutritious food, adequate housing and safe and healthy working conditions. Read together, everyone in Brazil has the right to a healthy environment. From that flows the obligation of Brazil to prevent exposure to hazardous substances, including toxic chemicals, pesticides,⁵ viruses, wastes and other contaminants of people and their environment.⁶ Those human rights obligations correspond to specific responsibilities of businesses in Brazil.

11. Courts in Brazil have recognized those rights and the State's duty to prevent exposure. One welcome example concerns asbestos. Studies have identified hotspots of cancer linked to asbestos, such as Osasco municipality in São Paulo.⁷ Accordingly, the Supreme Court of Brazil banned asbestos mining pursuant to the constitutional rights to life, health and a balanced environment.

12. Another positive example comes from efforts to tackle urban air pollution. In 2017, 60 per cent of people in Brazil were living in areas with levels of particulate matter in the air above that recommended in the World Health Organization (WHO) air quality guidelines for particulate matter, and Brazil was among the top 10 countries with the highest mortality burden from air pollution, accounting for 66,000 deaths.⁸ Brazil has taken measures to reduce urban emissions overall, including implementing more stringent standards for vehicles. In 2012, Brazil was the first developing country to adopt Euro V-equivalent emission standards, further strengthened in 2018 to meet Euro VI emission standards.⁹ The great strides made in reducing indoor air pollution include concerted efforts to reduce firewood consumption in

² See

www.mds.gov.br/webarquivos/arquivo/seguranca_alimentar/caisan/Publicacao/Caisan_Nacional/deca_da_versao_ingles.pdf.

³ See www.arca.fiocruz.br/bitstream/icict/26221/2/Livro%20EPSJV%20013036.pdf, p. 52.

⁴ Consistent with the previous reports of the current mandate holder and those of his predecessors, the Special Rapporteur notes that hazardous substances and wastes are not defined strictly; they include, inter alia, toxic industrial chemicals and pesticides, pollutants, contaminants, explosive and radioactive substances, food additives, biological agents and various forms of waste. For ease of reference, the Special Rapporteur refers to hazardous substances and wastes as “toxics”, and therefore, in the present report, the term “toxics” (or “toxic substances”) should be understood to also include non-toxic but hazardous substances and wastes.

⁵ The term “pesticide” includes herbicides, fungicides, biocides and other chemical agents designed to kill living organisms.

⁶ See A/74/480.

⁷ See www.ncbi.nlm.nih.gov/pmc/articles/PMC6679146/.

⁸ See www.stateofglobalair.org/sites/default/files/soga_2019_report.pdf.

⁹ See https://theicct.org/sites/default/files/publications/Brazil%20P-7%20Briefing%20Paper%20Final_revised.pdf; and https://theicct.org/sites/default/files/publications/P8_emissions_Brazil_update_20190227.pdf.

the residential sector from the 1970s to date, from 85 per cent of energy use in the residential sector to 25 per cent.¹⁰

13. Brazil has made significant improvements in progressively reinforcing the role of the Federal Public Defender's Office for Citizens' Rights and establishing national and state-level committees dealing with various human rights issues.¹¹

14. However, deep concerns remain for how evidence of risk and harm often fails to translate into the implementation of necessary protections, benefiting few people in Brazil. Historical progress is rapidly being undermined by a dangerous combination of additional hazards and risks and the erosion of laws and institutions.

1. Extractive industries

15. In January 2019, 270 people died when the Vale Córrego do Feijão tailings dam in Brumadinho, Minas Gerais, collapsed.¹² Most of those killed were Vale workers having lunch in the cafeteria located directly below the tailings dam. The force of the toxic mud dismembered bodies and shattered what had been a bucolic community. Families and friends have borne the intense trauma of recovering and identifying the bodies of their loved ones, rebuilding and repairing, while suffering from the lingering sense that justice has not been served. The Special Rapporteur was moved by the testimony of the community to the emotional pain that they experienced and the suffering that they continue to endure.

16. It is astounding that such a disaster would occur four years after a catastrophic tailings dam failure involving the very same company, Vale, in the same state of Minas Gerais. In 2015, the Fundão tailings dam at the Germano iron ore mine in Mariana collapsed, killing at least 18 people and countless endangered species, fish and other wildlife. The disaster decimated the livelihoods of over 3 million local community members, including indigenous peoples who depended on the 800 km Rio Doce watershed ecosystem. The so-called "Mariana disaster" involved the companies BHP and Vale through their joint venture Samarco. Instead of tightening controls on extractive industries after the Mariana disaster, the Government of Brazil inexplicably expedited licensing and failed to ensure adequate monitoring and oversight of operations.

17. While the Brumadinho disaster was technically caused by structural instability and liquefaction,¹³ the real cause lies with the remarkable lack of Government oversight and criminally reckless conduct by Vale. Not only was an employee cafeteria still located below an enormous dam after the Mariana disaster, but serious managerial and organizational flaws and corporate neglect also played a tragic role.¹⁴ An investigation conducted by the National Congress of Brazil revealed evidence that Vale's chief executive officer had been informed in an anonymous email weeks before the incident that the dams were at their limits. An independent investigation commissioned by Vale confirms that Vale influenced third-party assessors, Brazil-based Potamos and the Germany-based firm TÜV SÜD, to falsely certify that the dam was safe.¹⁵ Similarly, with the Mariana disaster, engineers warned BHP, Vale and Samarco of the instability just six months before the collapse, yet their warnings were dismissed and the necessary precautions were not taken.

18. Today there are between 40 and 1,000 tailings dams at risk of collapse in Brazil. Forty-five were classified as the most vulnerable in 2017, of which 25 belong to public entities, and nearly 1,800 dams are classified as being at either high or moderate risk of failure.¹⁶ Vale has 124 registered iron ore dams in Brazil, 41 of which are tailings dams, and 82 per cent of

¹⁰ See https://www.scielo.br/scielo.php?script=sci_arttext&pid=S1413-81232019000803079&lng=en&nrm=iso&tlng=en.

¹¹ See www.oas.org/es/cidh/prensa/comunicados/2018/238OPeng.pdf.

¹² See www.vale.com/PT/investors/documents/20.02.20_ciaea_report_i.pdf; www.scielo.br/scielo.php?script=sci_arttext&pid=S0303-76572017000100302; and www.ncbi.nlm.nih.gov/pmc/articles/PMC7138502/.

¹³ See www.vale.com/PT/investors/documents/20.02.20_ciaea_report_i.pdf.

¹⁴ See www.ncbi.nlm.nih.gov/pmc/articles/PMC7138502/.

¹⁵ See www.vale.com/PT/investors/documents/20.02.20_ciaea_report_i.pdf.

¹⁶ See www.ana.gov.br/noticias/45-barragens-preocupam-orgaos-fiscalizadores-aponta-relatorio-de-seguranca-de-barragens-elaborado-pela-ana.

which are located in Minas Gerais.¹⁷ In the “iron quadrangle” in Minas Gerais, Vale alone has 28 open pit mines, and communities in nearby cities cite grave environmental impacts, including on access to water, such as from the Paraopeba River basin.

2. Manufacturing

19. Throughout Brazil, factories and plants are located in unimaginably close proximity to communities, which are subjected to grave infringements of their human rights.¹⁸ While manufacturing contributes to the country’s economic growth, its output comes with significant externalities, including contributing to climate change, cancer and respiratory diseases, among many other impacts on local communities.¹⁹ Studies from Rio de Janeiro have found air pollution levels exceeding WHO standards, as well as elevated levels of toxic heavy metals.²⁰ A study in Sao Paulo found that air pollution contributes to increased susceptibility to various health conditions, including cardiovascular disease and diabetes.²¹

20. The struggle of over 300 families in Piquiá de Baixo is emblematic. In the 1970s, a steel industry invaded a peaceful community without their consent – a glaring example of an industry operating for decades without adequate regard for human rights – and with limited State intervention. Community members live adjacent to steel plants, with only a fence between them. Vale supplies iron ore and transports processed products to ports for export, amid the expansion of the mine-rail-port transportation system along the Carajás export corridor. Alarmingly, the steel factories in Açailândia have been operating without licenses for at least eight years, owing to the fact that they have failed to meet environmental requirements.²²

21. Studies reveal multiple cases of health problems, including cough, shortness of breath and wheezing and headaches.²³ Sixty-five per cent of community members reported respiratory problems, with others suffering from ophthalmological diseases and various skin conditions, aggravated by the pollution.²⁴ Community members have been burned from the slag and residues from pig iron, in areas where the waste area was not properly fenced off and there was no proper signalling of danger and the risks associated with contact with the pig iron.²⁵ Despite unmistakably hazardous pollution, data provided to the Government by the companies does not suggest that it is above levels of concern. The Government has not investigated or sanctioned the companies.

22. The situation of the communities in Piquiá de Baixo is a clear violation of their rights to life, health and information and many others. At the same time, the case reveals an incredible story of a community’s cohesion and resilience in fighting for their rights.

3. Pesticides

23. Pesticide use in Brazil has increased over 338 per cent since 2000.²⁶ Brazil has been among the top three pesticide consumers in the world, and at times the largest consumer, for

¹⁷ See www.vale.com/en/aboutvale/reports/atualizacoes_brumadinho/pages/learn-more-about-valess-dams.aspx; <https://cirdi.ca/wp-content/uploads/2017/07/Deep-into-the-mud-ecological-and-socio-economic-impacts-of-the-dam-breach-in-Mariana-Brazil.pdf>; and www.ncbi.nlm.nih.gov/pmc/articles/PMC7138502/.

¹⁸ See www.cienciaesaudecoletiva.com.br/artigos/vigilancia-popular-ambiental-e-siderurgia-as-experiencias-de-piquia-de-baixo-ma-e-santa-cruz-rj/17475?id=17475.

¹⁹ Ibid.

²⁰ See www.ncbi.nlm.nih.gov/pmc/articles/PMC4448729/.

²¹ See <https://ejatlas.org/conflict/pig-iron-industries-in-piquia-de-baixo-maranhao-brazil>.

²² See www.fidh.org/IMG/pdf/bresil734anglaisweb2019.pdf.

²³ See <http://mapadeconflitos.ensp.fiocruz.br/?conflito=ma-industria-guseira-contaminacao-da-agua-falta-de-seguranca-e-condicoes-improprias-a-vida-e-a-saude-dos-moradores-do-districto-industrial-de-pequia-acailandia>.

²⁴ See www.fidh.org/IMG/pdf/report_brazil_2012_english.pdf.

²⁵ See www.fidh.org/IMG/pdf/bresil734anglaisweb2019.pdf.

²⁶ See <https://agenciadenoticias.ibge.gov.br/agencia-sala-de-imprensa/2013-agencia-de-noticias/releases/21905-censo-agro-2017-resultados-preliminares-mostram-queda-de-2-0-no-numero-de-estabelecimentos-e-alta-de-5-na-area-total>; and

over a decade.²⁷ The overuse of pesticides is resulting in grave impacts on human rights in Brazil. Food production and economic growth are not legitimate excuses for those otherwise preventable violations and abuses.²⁸ Victims rightly allege deaths, health problems, as well as cruel, inhuman and degrading treatment, resulting from pesticide exposure.²⁹ Environmental degradation, such as water contamination and biodiversity loss, including of bees, are some of the grave effects.³⁰

24. There are far too many occurrences of the failure by agribusinesses to respect legally required buffer zones so as to prevent the spraying of schools, houses and community centres with pesticides. Despite national restrictions on pesticide spraying within 500 metres of inhabited places, states have varying levels of implementation, and there is inadequate enforcement overall.³¹

25. Landless rural farmers reported repeated efforts by local businesses to force their evictions by spraying pesticides over their homes 2 to 3 times per month. Indigenous communities, communities of Brazilians of African descent and other communities regularly allege that powerful agribusinesses intentionally spray pesticides on them as “chemical weapons” to drive them from their lands, which farmers and ranchers wish to use.³²

26. In 2018, an airplane sprayed pesticides over 340 families in Marabá, Para, causing health problems for members of all of the families, allegedly with the aim of evicting the community members. In January 2020, a court decision mandated a farmer, pilot and contractor to compensate the indigenous community of Tey’i Jusu for aerial spraying of pesticides in and around their homes, which had caused headaches, sore throats, diarrhoea, and fever, with the long-term health impacts as yet unknown.³³ Efforts have been made to ban aerial spraying, for example in Ceará.³⁴ However, such efforts came at grave costs to those communities’ human rights defenders, as discussed below.³⁵

27. Between 2000 and 2013, pesticide exposure accounted for 10,666 deaths in Brazil.³⁶ The actual number is estimated to be between 34,000 and 51,000 deaths, considering the general underreporting of poisoning cases and the low registration rate of fatalities.³⁷

28. Studies have found an elevated risk of cancer in regions of intensive agriculture in Brazil, which, like with other diseases and disabilities, the rates may not be fully captured by mortality figures.³⁸ Analytical studies demonstrate DNA damage in rural workers occupationally exposed to pesticides, in central and southern Brazil.³⁹ Pesticides are

www.rosalux.de/fileadmin/rls_uploads/pdfs/Studien/Hazardous_20pesticides_ENG_final_20200422.pdf.

²⁷ See

www.researchgate.net/publication/257085273_Modes_of_pesticides_utilization_by_Brazilian_smallholders_and_their_implications_for_human_health_and_the_environment; and www.researchgate.net/publication/308013830_Pesticide_Poisoning_in_Brazil.

²⁸ See A/HRC/34/48.

²⁹ See A/74/480.

³⁰ Human Rights Committee, general comment No. 36 (2018) on the right to life; and see www.facebook.com/events/2264157773650479/.

³¹ See www.scielosp.org/article/csc/2014.v19n12/4669-4678/pt/; and

www.hrw.org/news/2019/11/06/brazilians-poisoned-pesticides-sprayed-near-homes-and-schools.

³² See

https://www.rosalux.de/fileadmin/rls_uploads/pdfs/Studien/Hazardous_20pesticides_ENG_final_20200422.pdf.

³³ Ibid.

³⁴ Submission from the Aliança pela Alimentação Adequada e Saudável (2019).

³⁵ Ibid.; and Brazil, State of Ceará, State Law No. 16.280 of 20 January 2019.

³⁶ See www.researchgate.net/publication/308013830_Pesticide_Poisoning_in_Brazil.

³⁷ See www.sciencedirect.com/science/article/pii/S0379073818301373; and www.ncbi.nlm.nih.gov/pmc/articles/PMC6072638/.

³⁸ See www.sciencedirect.com/science/article/pii/S00455653518311937.

³⁹ See https://lherp.ecoevol.ufg.br/up/199/o/Khayat_et_al_2013.pdf; and www.intechopen.com/books/pesticides-toxic-aspects/genotoxicity-induced-by-occupational-exposure-to-pesticides.

associated with reproductive health problems, including poor sperm quality in men,⁴⁰ and congenital malformations.⁴¹ Respiratory problems are more prevalent during crop season, attributed to pesticide exposure, independent of other factors such as smoking.⁴² A study conducted in a rural area in Rio de Janeiro that is heavily contaminated with organochlorine pesticides revealed associated interference with hormone function, affecting thyroid systems with gender-specific impacts.⁴³ A study conducted in Conceição do Castelo confirmed that health risks to workers and communities are amplified by exposure to several different pesticides, the so-called “cocktail effect”.⁴⁴ The reality of exposure to multiple pesticides, and the magnified health impacts that may result but have not been assessed by regulators, must be kept in mind.⁴⁵

29. Disturbing accounts of aerial spraying of pesticides abound,⁴⁶ endangering farm workers and communities, including children, who are at extreme risk of health impacts.⁴⁷ Aerial spraying above a rural school in Rio Verde, Goiás, a centre of soy production in Brazil, caused the poisoning of an estimated 92 children and some teachers.⁴⁸ There have also been other similar incidents of pesticide spraying near schools, including in 2019 near an indigenous village school in the village of Guyraroká of the Guarani-Kaiowá people, in Mato Grosso do Sul,⁴⁹ and others in Sergipe and Paraná.

30. Pesticides whose use is prohibited by other countries because of environmental or health risks remain in use in Brazil.⁵⁰ Thirty per cent of active ingredients (116 of 393 substances) in Brazil are not approved for use in the European Union. Positive steps were taken in 2017 by the National Health Surveillance Agency to ban the production, import, marketing and use of paraquat as at September 2020,⁵¹ however, the decision has yet to be enforced.

31. The drive of Brazil to further expand agricultural production in recent years has not been met in equal measure with a drive to reduce pesticide use.⁵² To the contrary, in terms of the number of formulations approved and the volume applied, the trend of increased pesticide use in Brazil is of grave concern. In 2019 alone, Brazil permitted the introduction of 474 new pesticide products,⁵³ which several authorities noted would compound pre-existing monitoring deficiencies in the country. While the Government points to improved and more rigorous risk assessments conducted since 2011, as well as to the shared responsibility across ministries, recent reports regarding deregulatory efforts by certain ministers, the apparent unwillingness to apply a precautionary approach and legislative proposals, such as the

⁴⁰ See www.sciencedirect.com/science/article/abs/pii/S0890623817300060.

⁴¹ See <https://bmcpediatr.biomedcentral.com/articles/10.1186/s12887-016-0667-x>.

⁴² See www.ncbi.nlm.nih.gov/pmc/articles/PMC6025513/; and www.ncbi.nlm.nih.gov/pubmed/16341409/.

⁴³ See www.sciencedirect.com/science/article/pii/S0013935113001552?via%3Dihub.

⁴⁴ See <https://pubmed.ncbi.nlm.nih.gov/31340274/>.

⁴⁵ See www.sciencedirect.com/science/article/pii/S0045653518311937.

⁴⁶ Submission from the Aliança pela Alimentação Adequada e Saudável (2019).

⁴⁷ See

https://www.rosalux.de/fileadmin/rls_uploads/pdfs/Studien/Hazardous_20pesticides_ENG_final_20200422.pdf.

⁴⁸ See www.hrw.org/report/2018/07/20/you-dont-want-breathe-poison-anymore/failing-response-pesticide-drift-brazils.

⁴⁹ See <https://cimi.org.br/2019/05/agrotoxicos-despejados-perto-aldeia-levam-criancas-jovens-guarani-kaiowa-hospital/>; https://brasil.elpais.com/brasil/2019/08/02/politica/1564773673_055738.html; and https://www.rosalux.de/fileadmin/rls_uploads/pdfs/Studien/Hazardous_20pesticides_ENG_final_20200422.pdf.

⁵⁰ See www.livrosabertos.sibi.usp.br/portaldelivrosUSP/catalog/view/352/309/1388-1; and https://www.rosalux.de/fileadmin/rls_uploads/pdfs/Studien/Hazardous_20pesticides_ENG_final_20200422.pdf.

⁵¹ See <http://portal.anvisa.gov.br/documents/219201/2782895/Voto+Renato+Paraquate/fa409d90-a520-4302-9815-f39b683da509>.

⁵² See www.scielo.br/scielo.php?pid=S1413-81232017021003281&script=sci_arttext&tlng=en.

⁵³ See

https://www.rosalux.de/fileadmin/rls_uploads/pdfs/Studien/Hazardous_20pesticides_ENG_final_20200422.pdf.

“poison package”,⁵⁴ that appear to concentrate regulatory decision-making powers in the hands of pro-business authorities, paint a troubling picture of eroding governance.

4. Forest fires

32. The Amazon forest – the “lungs of the Earth” – is a splendour of nature, boasting rich biodiversity and supporting ecological balance and a stable climate.⁵⁵ Without the Amazon, the world would be devastated by the ravages of climate change, killing countless people and thrusting millions of people into destitution. The Amazon is also the home of indigenous peoples and other communities, which are constantly at battle with the strong opposing forces of agribusiness and extractive industries.⁵⁶ The burning of the Amazon forest presents a catastrophic risk to the human rights of billions of people around the world.

33. Furthermore, air pollution through forest fires releases 67 per cent of the particulate matter 2.5 emissions in Brazil, which, coupled with carbon monoxide emissions, are associated with various diseases and disabilities, including respiratory problems.⁵⁷ Not only does air pollution increase a population’s vulnerability to SARS-CoV-2, but the destruction of forest habitats also poses risks for the further introduction of zoonotic diseases that could develop into another global pandemic.

34. Brazil once made significant and commendable progress in curbing deforestation, with an 82 per cent drop in the 10 years leading up to 2014, designating protected areas, strengthening law and enforcement and implementing satellite imaging.⁵⁸

35. Today, Brazil is on a dangerous path of rampant deforestation. Since 2014, deforestation has increased.⁵⁹ In 2018, the deforestation rate of the Brazilian Amazon forest was the highest recorded in the preceding 10 years,⁶⁰ and the levels of deforestation have remained at elevated levels since then.

36. Grossly insufficient measures have been applied to address the increases in deforestation.⁶¹ The Government stands accused of encouraging the above-mentioned human rights violations, through a lack of monitoring or enforcement, where those responsible for environmental destruction walk free and those who depend on the environment for their livelihoods continue to suffer immensely.⁶² Disturbingly, the oversight of indigenous lands and the forestry service was transferred to the Ministry of Agriculture in 2019, which stands accused of promoting deforestation for agricultural expansion. Enforcement of the rule of law against what appears to be large-scale criminal operations, such as the perpetration of the Amazon fires, is virtually non-existent.⁶³ Treated as a petty offence and seldom as a criminal activity, the perpetrators of such violations appear empowered by the impunity they enjoy.⁶⁴

5. Industrial chemicals

37. Unnecessary and unquestionably toxic industrial chemicals remain unregulated. Multifaceted regulatory gaps are poisoning workers, communities near and “downstream” of

⁵⁴ See

<https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gId=23879>.

⁵⁵ See https://sustainabledevelopment.un.org/content/documents/24797GSDR_report_2019.pdf, p. 98.

⁵⁶ See www.hrw.org/report/2019/09/17/rainforest-mafias/how-violence-and-impunity-fuel-deforestation-brazils-amazon.

⁵⁷ See <https://climaesaude.iciet.fiocruz.br/en/tema/air>; www.scielo.br/pdf/csp/v27n9/03.pdf; and <https://doi.org/10.3390/ijerph17061984>.

⁵⁸ See www.oecd.org/economy/surveys/Brazil-2018-OECD-economic-survey-overview.pdf, p. 49.

⁵⁹ *Ibid.* p. 51.

⁶⁰ See https://sustainabledevelopment.un.org/content/documents/24797GSDR_report_2019.pdf, p. 98.

⁶¹ *Ibid.*

⁶² See www.hrw.org/report/2019/09/17/rainforest-mafias/how-violence-and-impunity-fuel-deforestation-brazils-amazon.

⁶³ *Ibid.*

⁶⁴ See www.oecd-ilibrary.org/docserver/9789264291652-en.pdf?expires=1590687519&id=id&accname=guest&checksum=22218887ABE388F339B3CA9BAF50544D, p. 45; and www.hrw.org/report/2019/09/17/rainforest-mafias/how-violence-and-impunity-fuel-deforestation-brazils-amazon.

manufacturing facilities and consumers. The cost of inaction on industrial chemicals includes the pain and suffering of victims and their families and a tremendous economic burden on the unified health system.

38. In 2018, the chemical industry in Brazil accounted for 10 per cent of its gross domestic product and was the eighth largest such sector in the world.⁶⁵ Many of those toxic pollutants have or are in the process of being more strictly controlled internationally because they do not readily degrade, bioaccumulate in people and have profound adverse health consequences across entire populations exposed through food, water, air and consumer products. For example, over 4,000 “forever chemicals” will persist in the environment indefinitely, and yet remain available for use in Brazil, whereas the European Union is moving to restrict all 4,000 of them.

39. Until 2019, Brazil was making significant process in aligning chemical management standards to international best practices, including the those of the Organization for Economic Cooperation and Development (OECD), thanks to the efforts of dedicated civil servants. However, after the change in administration, the necessary strengthening of chemical legislation was abruptly aborted. That was an incomprehensible dereliction of duty – not only failing to address ongoing violations from toxic chemicals, but also wasting significant resources invested and the opportunity for tremendous savings for the unified health system.

40. A significant opportunity still exists with respect to the draft law on the inventory, evaluation and control of chemicals. In legislative discussions at the National Congress, parliamentarians should ensure that the outcome includes chemicals management regulations establishing a system with strict controls and enforceable deadlines to phase out chemicals based on their intrinsic hazards and that Brazil neither uses nor exports chemicals prohibited from use by OECD members.

IV. Protecting the most vulnerable

41. The principles of equality and non-discrimination are central to realizing human rights implicated by toxic exposure, taking into account the circumstances of vulnerability, yet various examples exist in which Brazil is not upholding those rights without discrimination. Brazil has an obligation, and has reaffirmed its commitment, to prioritizing the protection of people in situations of vulnerability.⁶⁶

42. Human rights violations most often befall those who have faced discrimination historically.⁶⁷ Toxic exposure is no exception, with cross-sectional impacts and factors including race, income, occupation, age and gender contributing to differentiated implications on individuals and communities. In 2018, people of colour in Brazil represented 72.7 per cent of the poor, with 27.2 million of those 38.1 million people being women.⁶⁸ Although the National Council for Human Rights could play an important role in addressing environmental injustice, it does so inadequately, perhaps in part because half of the 22 members are government representatives.⁶⁹

1. Indigenous peoples, Brazilians of African descent and low-income communities

43. Numbering over 13,000, indigenous communities, *quilombola* communities and other communities of Brazilians of African descent are often the most exposed to toxic pollution, further accentuating their already precarious situations. There is a strong intersection with poverty, and low-income communities in urban centres are also affected.

⁶⁵ See www2.deloitte.com/content/dam/Deloitte/br/Documents/energy-resources/Deloitte-Abiquim-Chemical-Sector.pdf.

⁶⁶ See www.universal-rights.org/wp-content/uploads/2019/07/NV-199-19-Brazils-Voluntary-Pledges-and-Commitments.pdf, para. 8.

⁶⁷ See www.oas.org/es/cidh/prensa/comunicados/2018/238OPeng.pdf.

⁶⁸ See <https://agenciadenoticias.ibge.gov.br/agencia-noticias/2012-agencia-de-noticias/noticias/25882-extrema-pobreza-atinge-13-5-milhoes-de-pessoas-e-chega-ao-maior-nivel-em-7-anos>.

⁶⁹ See www.latinno.net/en/case/3105/.

44. The situation of indigenous peoples, Brazilians of African descent and the poor in Brazil is deteriorating rapidly due to changes in laws and policies in order to favour private interests, the dismantling of key institutions, the absence of meaningful enforcement and the rejection of the letter and spirit of human rights by the leadership in Brazil. For example, the National Indian Foundation is operating with only 10 per cent of its budget, thereby struggling to protect rights of indigenous peoples,⁷⁰ and certain bodies have been eliminated altogether, such as the National Council of Indian Policy that was tasked with promoting effective participation of indigenous peoples in decision-making.⁷¹ Recurrent proposals to legalize mining, hydroelectric projects and other business activities in the Amazon and elsewhere⁷² raise legitimate concerns of disregard of the right to free, prior and informed consent.

45. Indigenous peoples' close connection with nature places them at increased danger of toxic exposure, including with regard to pressure from industrial expansion, agriculture, extractive industries, urban growth and waste dumping.⁷³ Indigenous peoples and traditional communities dependent on the Doce River suffered tremendously from the Mariana dam collapse, losing access to water, crop production and livelihoods, including fishing activities.⁷⁴ Similarly, the residents of Pataxo villages in Nao Xoha decried the death of their river, including the destruction of fishing, following the Brumadinho dam collapse. Indigenous peoples in Ceará report air pollution from the Pecém industrial complex.

46. Low-income families, including Brazilians of African descent, suffered disproportionate exposure to dust and heavy metals through the mud heaped in Barra Longa by agents of the companies responsible for the mine and the Renova Foundation, following the Mariana dam collapse.⁷⁵ Those communities reported various respiratory and other diseases, compounding the pre-existing inequity and environmental injustice that they face.

47. Children in the northern and north-eastern regions and rural areas and Brazilian children of African descent suffer disproportionately from multidimensional poverty, lacking basic amenities, including clean water and sanitation.⁷⁶ Women in rural areas exhibit a persistence of bronchitis and asthma associated with indoor air pollution from the use of firewood or charcoal.⁷⁷

48. Land-grabbing and domineering political action against indigenous and *quilombola* communities is evident, contributing to toxic exposure.⁷⁸ Renegade artisanal gold miners continue to poison the Yanomami people, leaving irreversible impacts on children and a toxic legacy of disease and disability for future generations.⁷⁹ Ninety per cent of the Yanomami population has highly hazardous levels of mercury in their bodies,⁸⁰ and now, the Yanomami

⁷⁰ See https://cimi.org.br/wp-content/uploads/2018/12/Report-Violence-against-the-Indigenous-Peoples-in-Brazil_2017-Cimi.pdf; and submission from the Chamber of Deputies of Brazil (2019).

⁷¹ Submission from the Chamber of Deputies of Brazil (2019).

⁷² See www.hrw.org/news/2020/03/01/bolsonaros-plan-legalize-crimes-against-indigenous-peoples; and <https://amazonwatch.org/news/2020/0206-illegal-bill-to-permit-mining-on-indigenous-territories-proposed-by-bolsonaro>.

⁷³ See <https://setac.onlinelibrary.wiley.com/doi/full/10.1002/ieam.4239>; and www.ncbi.nlm.nih.gov/pmc/articles/PMC7187223/.

⁷⁴ See <https://cirdi.ca/wp-content/uploads/2017/07/Deep-into-the-mud-ecological-and-socio-economic-impacts-of-the-dam-breach-in-Mariana-Brazil.pdf>; and www.scielo.br/scielo.php?script=sci_arttext&pid=S2237-96222019000100900&lng=pt&nrm=iso&tlng=en.

⁷⁵ See www.scielo.br/scielo.php?script=sci_arttext&pid=S2237-96222019000100900&lng=pt&nrm=iso&tlng=en; and www.scielo.br/pdf/asoc/v21/1809-4422-asoc-21-e01222.pdf.

⁷⁶ See www.unicef.org/about/annualreport/files/Brazil_2018_COAR.pdf.

⁷⁷ See www.researchgate.net/publication/329778243_Indoor_Air_Pollution_and_Respiratory_Diseases_in_Rural_Areas_of_North_and_Northeast_Brazil.

⁷⁸ Submission from the Chamber of Deputies of Brazil (2019); and see www.aacademica.org/maria.del.carmen.villarreal.villamar/22.pdf.

⁷⁹ See www.ncbi.nlm.nih.gov/pubmed/29789499; submission from the Chamber of Deputies of Brazil (2019); and <https://portal.fiocruz.br>.

⁸⁰ See www.ncbi.nlm.nih.gov/pubmed/29789499.

people are facing yet another existential health risk, the COVID-19 pandemic, as indeed are many other vulnerable communities throughout Brazil.

49. Pesticide use as “chemical weapons” allegedly to drive indigenous communities and communities of Brazilians of African descent from their lands is alarming. Furthermore, 90 per cent of some of the fishing communities affected by the oil spill in northern and south-eastern Brazil that occurred in 2019 are Brazilians of African descent.⁸¹ Community members complained of coughing, nausea, loss of income through reputational damage concerning their fish and mental health problems associated with the disaster.

50. Brazil has made some notable progress. For example, the Special Rapporteur was encouraged to hear about bills that seek to make free, prior and informed consent a legal requirement in certain states. Furthermore, the federal public health policy is aimed at creating ways for communities in remote areas to gain access to services, including through ambulances and boats.

51. However, the rights to self-determination and free, prior and informed consent have yet to be implemented in national laws, therefore undermining implementation.⁸² Profound impacts of economic expansion on the rights of indigenous peoples who are reliant on the environment and biodiversity are often ignored.

2. Workers

52. The Brumadinho and Mariana disasters provide ample evidence of the grave risks presented to workers in Brazil by hazardous substances and wastes. Fourteen of the 19 deaths resulting from the Mariana dam collapse were of workers,⁸³ and most of the 270 victims in Brumadinho were Vale’s own workers.⁸⁴ Brazil dissolved the Labour Ministry, with its responsibilities incorporated into other ministries, a few weeks before the Brumadinho dam collapse.

53. Most violations of workers’ right to safe and healthy working conditions in Brazil come from chronic exposures. Factory workers face various obstacles in realizing their rights regarding protection from industrial chemical exposure. Workers of Cobrac/Plumbum, in Santo Amaro, suffer from lead poisoning.⁸⁵ Agricultural workers in Brazil face exposure to pesticides, placing their life and health at risk, including of chronic illnesses manifesting in them or their children later in life. Workers in the wood industry in Para, where 90 per cent of all wood-related companies in the Brazilian Amazon are based, present with a high incidence of cancer, including mouth, liver and stomach cancers associated with exposure to wood dust.⁸⁶

54. Over 300,000 workers in Brazil were exposed to asbestos in 2010.⁸⁷ Many of those workers will likely soon die from resultant cancers, with tens of thousands of cases (22 per cent) undetected due to the poor identification of disease types and tracking of occupational history.⁸⁸ As discussed above, Brazil has not closed its last asbestos mine, failing to enforce a Supreme Court decision and continuing to export asbestos that poisons workers and communities abroad.⁸⁹ Numerous countries, including most OECD members, have instituted full bans of asbestos.

55. Positive efforts include the General Coordination for Occupational Health of the Ministry of Health, strengthening the National Network of Comprehensive Attention to Occupational Health, as well as the CAREX Brazil project for addressing occupational exposure to carcinogens.

⁸¹ See www.scielo.br/pdf/csp/v36n2/en_1678-4464-csp-36-02-e00231019.pdf.

⁸² See www.upr-info.org/sites/default/files/document/brazil/session_27_-_may_2017/js22_upr27_bra_e_main.pdf.

⁸³ See www.ncbi.nlm.nih.gov/pmc/articles/PMC7138502/.

⁸⁴ Ibid.

⁸⁵ See www.sciencedirect.com/science/article/pii/S0925753517309566.

⁸⁶ See www.sciencedirect.com/science/article/abs/pii/S0013935104002427.

⁸⁷ See <http://docs.bvsalud.org/biblioref/2017/10/859582/49192-194253-1-pb.pdf>.

⁸⁸ Ibid.

⁸⁹ Submission from the Brazilian Association of the Asbestos Exposed (2019).

56. In Brazil, workers' rights are increasingly threatened, including through inadequate health data and monitoring systems, failures to protect workers who are most at risk, including women, and migrant workers and barriers to access to justice for workers who are victims of exposure. Protections are actively undermined by efforts to weaken labour unions, as discussed below.

57. Every worker has a right to safe and healthy working conditions, including protection from exposure to toxics. In 2019, the Human Rights Council encouraged States to implement 15 principles on protection of workers from exposure to hazardous substances.⁹⁰ While Brazil recognizes all of the human rights of workers contained in the principles, it has yet to implement most of them.

58. Brazil must do more to address the situation of workers' chronic exposure to hazardous substances. The best way to protect workers is to eliminate the hazard.⁹¹ As described above, in particular for industrial chemicals and pesticides, as well as for workers in extractive industries, workers in Brazil continue to be exposed to many hazardous substances and processes forbidden elsewhere in the world. In addition, Brazil has not ratified several key conventions of the International Labour Organization for occupational health, limiting the ability of the Government to improve the situation of workers.

59. Far too often, the Government and businesses' response in Brazil has been to blame the worker for his or her injuries. Placing the onus entirely on agricultural workers to protect themselves using personal protective equipment, which is well documented around the world to be improperly used and often unavailable, can amount to victim blaming when exposure occurs. However, the failure lies with the Government for not implementing progressive measures to reduce the toxic threats that workers face. Personal protective equipment should be the last resort, yet it is often the first and main measure of protection contemplated.

3. Children

60. Children in various parts of Brazil are subjected to toxic exposure, in violation of their rights, including their rights to maximum development, life, health and bodily integrity and to have their best interests taken into account, among many others. Children among indigenous, *quilombola* and low-income communities face the greatest risk of disease, disability and premature death from exposure, as illustrated by the cases of the Yanomami people, the residents of Piquiá de Baixo and Barra Longa, the rural communities sprayed by pesticides and others.

61. Those violations are not only a problem for children belonging to minority groups and low-income households. A wide range of human and business activities are resulting in children everywhere in Brazil being born "pre-polluted" and therefore pre-programmed for diseases and disabilities later in life.⁹²

V. Participation and human rights defenders

62. In Brazil, it is recognized that everyone has the right, and should be guaranteed the opportunity, to meaningful participation in environmental and other public affairs and to assemble, associate, and organize.⁹³ States should ensure children's right to be heard and that children are empowered to express their views freely.⁹⁴ Indigenous peoples have the right to participate in decision-making in matters which would affect their rights and to maintain and

⁹⁰ See A/HRC/42/41.

⁹¹ *Ibid.*, principle 4.

⁹² See www.who.int/ceh/publications/Advance-copy-Oct24_18150_Air-Pollution-and-Child-Health-merged-compressed.pdf?ua=1.

⁹³ International Covenant on Civil and Political Rights, article 25; Human Rights Committee, general comment No. 25 (1996) on participation in public affairs and the right to vote, paras. 6 and 8; and A/HRC/39/28, para. 19.

⁹⁴ Convention on the Rights of the Child, article 12; and A/HRC/39/28, para. 59.

develop their own indigenous decision-making institutions.⁹⁵ The rights to organize and to collective bargaining are inseparable from the right to safe and healthy working conditions.⁹⁶

63. Civil society and labour unions play a critical role, yet they are under attack in Brazil. Leaders, without any substantiation, brand advocates as “terrorists”, blaming them for environmental disasters, such as the oil spill that occurred in August 2019. Institutions with a mandate to ensure civil society participation have been undermined, and others are now closed to participation.

64. Parliamentary committees have reported a chilling effect and a fearful sense of impending danger among individuals, their families and their communities.⁹⁷ Particular concern is raised that indigenous and *quilombola* peoples do not have access to their right to participation in matters that affect their territories.⁹⁸

65. Changes to labour laws made in 2017 and 2019 have reduced union dues collection and collective bargaining power, threatening the viability and efficacy of labour unions.⁹⁹ Petitions and hearings about the assault on worker’s rights in Brazil have repeatedly been lodged with the Inter-American Court on Human Rights, including the *Fazenda Brasil Verde v. Brazil* case, demonstrating the State’s failure to provide effective remedies for violations, even with knowledge of such violations.¹⁰⁰ The Court has also raised concerns about the criminalization of protests against the erosion of worker rights in Brazil.¹⁰¹

66. Today, disturbing accounts illustrate the grave danger facing human rights defenders, including those working in the areas of environmental, indigenous, worker and other rights, in Brazil, a problem that predates the death of Francisco Alves Mendes Filho (known as Chico Mendes) in 1988. The killing and criminalization of indigenous and environmental rights defenders and members of non-governmental organizations is alarming. Increasingly, those brave individuals are targeted to prevent them from exercising any number of human rights, often at the behest of powerful interest groups. Brazil was the deadliest country for environmental human rights defenders in 2016, and ranked fourth in 2018, with the estimates at the time of reporting pointing to an increase in 2019.¹⁰² In 2017, three trade union activists were killed,¹⁰³ and that trend of murder and threats of worker representatives continues to 2020.¹⁰⁴

67. During his two weeks in Brazil, the Special Rapporteur heard of no less than three human rights defenders who had been killed and two who had been gravely wounded. During consultations held in north-eastern Brazil, word arrived of four indigenous human rights defenders who had been shot as they left a community mobilization meeting nearby, two of whom died. Another report was received at the end of his mission of another indigenous human rights advocate who was working as a journalist and had been assassinated in a horrifically brutal fashion.

68. Brazil has repeatedly pledged to protect human rights defenders and to implement concrete measures to ensure they may carry out their work without impediment.¹⁰⁵ Specific legislation and programmes demonstrate some motivation to take action.¹⁰⁶ The human rights defenders protection programme is aimed at coordinating the protection of all human rights

⁹⁵ United Nations Declaration on the Rights of Indigenous Peoples, articles 18, 19 and 20.

⁹⁶ See A/HRC/42/41; and [Human Rights Council resolution 42/21](#).

⁹⁷ Submission from the Chamber of Deputies of Brazil (2019).

⁹⁸ *Ibid.*

⁹⁹ See [www.corteidh.or.cr/docs/solicitudoc/soc_3_2019_ing.pdf](#), para. 44; and [www.solidaritycenter.org/brazil-unions-challenge-attacks-on-worker-human-rights/](#).

¹⁰⁰ See [www.cut.org.br/noticias/acao-contra-mp-dos-sindicatos-vai-ao-plenario-do-stf-c43f](#).

¹⁰¹ See [www.corteidh.or.cr/docs/solicitudoc/soc_3_2019_ing.pdf](#).

¹⁰² See [www.globalwitness.org/en/campaigns/environmental-activists/defenders-earth/](#).

¹⁰³ See [www.corteidh.or.cr/docs/solicitudoc/soc_3_2019_ing.pdf](#); and [www.ituc-csi.org/IMG/pdf/ituc-global-rights-index-2018-en-final-2.pdf](#).

¹⁰⁴ See [www.ituc-csi.org/IMG/pdf/ituc_globalrightsindex_2020_en.pdf](#).

¹⁰⁵ See [www.universal-rights.org/wp-content/uploads/2019/07/NV-199-19-Brazils-Voluntary-Pledges-and-Commitments.pdf](#).

¹⁰⁶ A/74/159, para. 61.

defenders.¹⁰⁷ Although Brazil does not recognize specific categories of human rights defenders,¹⁰⁸ environmental and health rights defenders are covered under the programme.

69. What are critically missing are specific measures to address the root causes of conflict, which is evident in the lack of sustainability planning and the rampant pressure to usurp lands by businesses. Instead of trying to prevent the situation, there is an insistence that efforts are under way to address the consequences. That approach, characterized by inadequate prevention strategies and investigations, has not succeeded in ending impunity.¹⁰⁹ Instead, physical protection for a limited number of identified human rights defenders appears to be prioritized.¹¹⁰ A general public policy to address inadequate coordination between state and federal agencies, including with respect to investigations, may be useful.¹¹¹

VI. Right to information

70. Prevention, expression and participation, truth, justice and remedy all depend on information. Only with adequate information can individuals and communities secure a clean and healthy environment and the related interconnected rights.¹¹² Health and safety information must be available and accessible and under no circumstances be considered confidential.¹¹³

71. Brazil has made various strides in that regard, including through federal access to information laws and institutions, including the National Environmental Information System and the Brazilian Geographical and Statistical Institute.¹¹⁴ Positive developments in air quality monitoring in Brazil include the establishment of monitoring stations in the 1970s in urban areas and the increase of such stations over time in other parts of the country.¹¹⁵ The health surveillance programme for populations exposed to pesticides collects data on pesticide exposure¹¹⁶ and maintains guidelines for the diagnosis and treatment of pesticide poisoning support detection and a registry of the incidence of poisoning.¹¹⁷ The Fundação Oswaldo Cruz (Fiocruz) has been instrumental in presenting interdisciplinary information that has helped to strengthen the unified health system¹¹⁸ and, in collaboration with the Peace and Conflict Science Institute and communities on air and water pollution, exchanging information with other organizations and participating in political mobilization for action.¹¹⁹

72. Data collection and dissemination processes should be independent, so as to instil trust, protect the integrity of institutions and ensure that concerns are acted upon. The reliance on company-reported data in the Brumadinho disaster led to the Government's failure to identify the risk of collapse.¹²⁰ Various technical reports produced for Vale in 2003, 2017 and 2018, the latter only months before the collapse, identified the need to adopt risk mitigation measures.¹²¹ Vale is believed to have kept secret health and safety studies concerning the toxicity of the mud, such as those of search dogs having been exposed to toxics. Similarly, with the Mariana dam collapse, the provision of safety information before, during and after the disaster was dominated by the companies, leading to an underestimation of potentially affected persons in the environmental impact assessment, inadequate mitigation measures

¹⁰⁷ See www.ohchr.org/Documents/Issues/Defenders/GA73/states/Brazil.pdf.

¹⁰⁸ Ibid.

¹⁰⁹ A/74/159, paras. 61–68.

¹¹⁰ Ibid.

¹¹¹ Ibid.

¹¹² See A/74/480.

¹¹³ See A/HRC/30/40.

¹¹⁴ See <https://ojs.imodev.org/index.php/RIGO/article/view/243/389>; https://repositorio.cepal.org/bitstream/handle/11362/43302/1/S1701020_en.pdf; and www.scielo.br/scielo.php?pid=S0102-311X2013000400002&script=sci_arttext&tlng=en.

¹¹⁵ See www.ncbi.nlm.nih.gov/pmc/articles/PMC4448729/.

¹¹⁶ See http://bvsms.saude.gov.br/bvs/publicacoes/diretrizes_vigilancia_populacoes_expostas_agrotoxicos.pdf.

¹¹⁷ See http://comitec.gov.br/images/Relatorios2019/Relatorio_DiretrizesBrasileiras_Agrotoxico_Capitulo5.pdf.

¹¹⁸ See <https://portal.fiocruz.br/colecao-saude-ambiente-e-sustentabilidade>.

¹¹⁹ Villarreal Villamar et al (2018) www.academica.org/maria.del.carmen.villarreal.villamar/22.pdf.

¹²⁰ See www.vale.com/PT/investors/documents/20.02.20_ciaea_report_i.pdf.

¹²¹ Ibid.

and a deep distrust among community members regarding virtually every aspect of the disaster.¹²²

73. The communities in Piquiá de Baixo suffered owing to a lack of independent information.¹²³ The information presented by the companies to the governments and the public remarkably shows no exceedances of air quality standards, despite the clear evidence of pollution and health impacts among the community.

74. Across various sectors, and in key cases, the unavailability of information was a recurrent concern. In extractive industries there is an apparent lack of reliable information on hazardous substances with respect to mining operations. Inadequate information was available about the toxicity of the waste after the Mariana disaster, and the companies insisted that it was non-toxic and rejected calls for precaution. Only three weeks after concerns were raised, including by the Special Rapporteur, was information made available. When health impacts among communities in Barra Longa emerged years later, the Renova Foundation sought to exert ownership over epidemiological and toxicological studies conducted by AMBIOS Engenharia e Processos, in order to suppress disclosure. In September of 2018, the Interfederative Committee revoked the Renova Foundation's determination of intellectual property on the studies, and no ownership clause allows the Renova Foundation to omit the studies' data.

75. The oil spill of 2019, which reached north-eastern and south-eastern Brazil, has been termed the worst oil spill in the history of Brazil.¹²⁴ Calls for a transparent, independent and comprehensive investigation into the causes and consequences of the spill ensued.¹²⁵ However, without reliable information, affected communities continue to struggle in the face of reputational impacts, unable to sell their produce at market and forced to consume fish that they fear is contaminated, while suffering severe distress from the impact on their livelihoods and possible future health consequences.

76. There is a consistent pattern of not providing advance notice of spraying or information about pesticides used. For example, landless workers decried that the only "notice" they had received was a cloud of chemicals above their encampments. The underreporting of pesticide poisoning is a major concern, and it is estimated that, for each case for which notification is received, 50 remain unreported.¹²⁶ Medical professionals are inadequately trained to diagnose pesticide poisoning. In several places, in particular in rural areas, access to the health system and viable laboratory tests for exposure is limited or non-existent. In some cases, respondents reported that the health system was not prepared to facilitate the registration of poisoning. Consequently, there was no registration of the vast majority of acute cases.¹²⁷ For those cases that were reported, the lack of transparency hindered public health analyses.

77. The absence of hazard and use information for industrial chemicals is another violation of the right to information, impeding the realization of various other human rights. Tens of thousands of industrial chemicals lack basic health information. As mentioned above, in 2019, the new Administration of Brazil unfortunately abandoned the significant work being undertaken to develop systems equivalent to those in place in OECD countries.

78. The various institutions tasked with monitoring and enforcement have inadequate capacity and resources. The imposition of cost-recovery systems on regulated industries, in order to increase capacity, is needed. The monitoring of pesticide use in Brazil is grossly inadequate, considering consumption, given the aforementioned consequences. The Ministry of Health programme created in 2011 to regulate and monitor drinking water quality only

¹²² See www.upr-info.org/sites/default/files/document/brazil/session_27_-_may_2017/js22_upr27_bra_e_main.pdf.

¹²³ See www.fidh.org/IMG/pdf/bresil734anglaisweb2019.pdf.

¹²⁴ See www.scielo.br/pdf/csp/v36n2/en_1678-4464-csp-36-02-e00231019.pdf.

¹²⁵ See www.oas.org/en/iachr/media_center/PReleases/2019/291.asp.

¹²⁶ See www.scielo.br/scielo.php?pid=S1413-81232017021003281&script=sci_arttext&tlng=en.

¹²⁷ See <https://doi.org/10.1590/1413-81232018247.19282017>.

monitors 27 pesticide active ingredients, even though over 2,000 active ingredients are permitted for use.¹²⁸

79. Where it is not ignored, science is under attack in Brazil. Instead of building capacity, the Government is defunding the institutions responsible for identifying environmental and health problems. Various public institutions in need of the capacity to conduct studies on toxics and their health effects already faced challenges, such as funding cuts and other undermining efforts, before the latest cuts.¹²⁹ Support to community members for active participation in research can contribute to improved public participation,¹³⁰ and adopting inexpensive methods and equipment can bridge the gap where minimizing exposure has been lacking.¹³¹

80. The reports of political interference at various levels to suppress collection, sharing or publication of health data are troubling. A recent example is the taking offline of the COVID-19 website of the Ministry of Health, the discrediting of statistics on COVID-19 cases, the collection of which was already impeded by the low capacity to conduct testing and the slow roll out of testing kits,¹³² and the obscuring of health data, in particular regarding favelas and rural areas.

VII. Access to justice and the right to an effective remedy

81. Everyone in Brazil has the right to an effective remedy for violations and abuses of human rights from exposure to hazardous substances. That is principally the duty of the State. However, when such abuses occur, businesses have corresponding responsibilities.¹³³

82. Brazil has made progress in ensuring the fulfilment of the right to remedy. Human rights institutions, including the strengthened Federal Public Defender's Office for Citizens' Rights, and public prosecutors have contributed to improving access to justice.¹³⁴ For example, the Public Defender's Office and public prosecutor's office have been instrumental in advocating for victims affected by the Brumadinho dam collapse and the communities in Piquiá de Baixo. There have also been notable efforts aimed at improving health services and addressing the health impacts of toxic exposure, as noted above.

83. In addition, a good practice in Brazil is the concept of indirect liability. That equitable doctrine can help to ensure the accountability of investors and other beneficiaries for human rights abuses.¹³⁵ Brazil notably improved remediation processes to address the Brumadinho disaster, compared with the response to the Mariana disaster.

84. Whether it be for illnesses arising from chronic exposure to toxic substances with some level of scientific uncertainty or the remediation processes, Brazil faces challenges in upholding its obligations to ensure that victims of toxic exposure realize their right to access to justice. For example, the people of Piquiá de Baixo have suffered since the 1970s, and continue to suffer, with the uncertainty of whether – and when – their promised remedy will finally materialize.¹³⁶

85. Accountability and reparations for victims is wanting; in many cases, no one is held accountable for unquestionable environmental crimes, attacks and murders. For example, investigations and prosecutions failed to hold accountable the perpetrators of the murder of José (Zé) Maria do Tomé, who advocated for protection against poisoning from the aerial

¹²⁸ Submission from the Aliança pela Alimentação Adequada e Saudável (2019); and see www.frontiersin.org/articles/10.3389/fpubh.2015.00246/full.

¹²⁹ See www.sciencedirect.com/science/article/pii/S0160412018320105.

¹³⁰ See www.cienciaesaudecoletiva.com.br/artigos/vigilancia-popular-ambiental-e-siderurgia-as-experiencias-de-piquia-de-baixo-ma-e-santa-cruz-rj/17475?id=17475.

¹³¹ See <https://doi.org/10.3389/fpls.2017.01575>; and www.frontiersin.org/articles/10.3389/fpls.2017.01575/full.

¹³² See www.msf.org/coronavirus-covid-19-nightmare-continues-brazil.

¹³³ See A/74/480.

¹³⁴ See www.oas.org/es/cidh/prensa/comunicados/2018/238OPeng.pdf.

¹³⁵ See www.lexology.com/library/detail.aspx?g=c1e1fda7-68f2-4572-8a53-ec02e4869488.

¹³⁶ See www.fidh.org/IMG/pdf/bresil734anglaisweb2019.pdf.

spraying of pesticides.¹³⁷ Following the Mariana and Brumadinho disasters, no corporate executive of Vale, BHP or Samarco has been convicted of criminal conduct – a travesty of justice suggesting that some in Brazil are indeed above the law.

86. An effective remedy includes access to health care. While the unified health system enables such access, challenges exist. While acknowledging efforts, including ambulances, health-care service provision in rural areas is still lacking.¹³⁸ Various examples exist, including in the oil and gas industry, where there is a lack of regard for health-care provision as part of accountability and reparations for victims. For example, in Piquiá de Baixo, community members reported that, when children are taken to a health centre, insufficient diagnoses are carried out and general medication is given for cases suspected to be the result of air pollution. The heightened vulnerability of the community members, including chronic respiratory diseases, places them in a situation of particular concern, including with regard to susceptibility to COVID-19. Moreover, mental health needs remain unsatisfactorily addressed among community members who suffered the intense trauma of the Brumadinho and Mariana disasters.¹³⁹

87. The inability to provide an effective remedy to the victims of the Mariana disaster is emblematic of what confronts those who seek justice and remedy against extractive industries. Since 2016, the Special Rapporteur has met with representatives of BHP and Vale on numerous occasions to discuss the many problems with their approach to remedy. In the aftermath of the disaster, BHP and Vale rushed to create the Renova Foundation to provide the affected communities an effective remedy. Unfortunately, the true purpose of the Renova Foundation appears to be to limit the liability of BHP and Vale, rather than to provide any semblance of an effective remedy. Its institutional shortcomings are well-documented in the literature on the matter and in litigation. Today, none of its 42 projects are on track. Over 200,000 affected indigenous and other community members, and others, have sought legal recourse against BHP and Vale in other countries, including the United Kingdom of Great Britain and Northern Ireland,¹⁴⁰ to secure an effective remedy.

88. While lessons were learned from the problematic model of the Renova Foundation, the occurrence of a dam disaster of such a magnitude involving the same company, Vale, is evidence of the State's failure to guarantee non-repetition. Furthermore, concerns persist among victims of the Brumadinho disaster regarding the remedies provided and how latent health effects that may manifest over time from exposure to toxic elements in the mud would be addressed.

89. Adding insult to injury, victims must bear an unjust burden of proving causation. The challenges of linking pesticide exposure with health impacts are further compounded by the repeated exposure of agricultural workers to a mixture of pesticides, at times in low doses for which symptoms may not be apparent in the short term, for different crops on various properties, and further confounded by the unavailability of lab tests, especially in rural areas.¹⁴¹

90. State-owned enterprises have a higher degree of responsibility to respect human rights.¹⁴² At the time of the oil spill in 2019, there were calls for transparency and comprehensive inquiries on the precise cause of the spill;¹⁴³ accurate accounts of the role of Petrobras, to support such investigations, would significantly improve the ability of victims of the spill to gain access to remedy.

¹³⁷ Submission from the Aliança pela Alimentação Adequada e Saudável (2019); and Brazil, State of Ceará, State Law No. 16.280.

¹³⁸ See <https://doi.org/10.1186/s12939-016-0450-5>.

¹³⁹ See www.ncbi.nlm.nih.gov/pmc/articles/PMC7138502/.

¹⁴⁰ See www.spglaw.co.uk/bhp-billiton-facing-5bn-lawsuit-from-brazilian-victims-of-dam-disaster/; and www.wsj.com/articles/german-prosecutors-open-probe-into-tuv-sud-which-certified-failed-brazil-dam-11576159293.

¹⁴¹ See www.omicsonline.org/peer-reviewed/an-evaluation-of-occupational-exposures-to-pesticides-in-brazil-31028.html.

¹⁴² Guiding Principles on Business and Human Rights.

¹⁴³ See www.oas.org/en/iachr/media_center/PReleases/2019/291.asp.

91. The companies responsible for the blatant disregard of the dignity and rights to life and health of the Piquiá de Baixo community made an insufficient effort to provide any remedy for over 30 years, until civil society and the local community heroically raised international awareness of their plight. Neither resettlement nor mitigation measures, among other possible measures, were implemented by the companies.¹⁴⁴ Vale has a responsibility to remedy the harms inflicted on the community, although it does not own the steel production facilities. The absence of government involvement for decades was notable in the ongoing violation of human rights.¹⁴⁵

92. States have an obligation to ensure the safety and security of all persons and to ensure that no life is arbitrarily deprived. However, as mentioned above, even during the visit, the Special Rapporteur received reports of the murders of indigenous human rights defenders in the context of land disputes. It is no excuse that the lack of robust investigations is due to the remoteness of police presence; rather, that illustrates a deficiency in ensuring accountability.¹⁴⁶ Activism opposing the aerial spraying of pesticides has come at the unfortunate high cost of many lives,¹⁴⁷ such as that of Mr. Do Tomé, a community member actively involved in drawing attention to pesticide poisoning through water, was shot 25 times and killed under mysterious circumstances, five months after a bill banning aerial spraying of pesticides was passed into law.¹⁴⁸

93. Brazil is not doing enough to ensure that, when human rights defenders are killed, threatened or coerced, those responsible are brought to account. Criminal syndicates, including those connected with exploitation on indigenous lands and territories, carry on their activities with impunity, and perpetrators instead are glorified as those bringing about development.¹⁴⁹ Reports abound of the harassment and deaths of indigenous leaders of the Yanomami community, as well as among other indigenous communities campaigning for the cessation of activities carried out without their free, prior and informed consent, and with political backing with the excuse of bringing development to the region. Over 300 people have been murdered, between 2009 and 2019, in relation to land and resource conflicts in the Amazon, many by perpetrators of illegal logging, yet only 14 cases have gone to trial.¹⁵⁰ Failing to address that impunity entrenches a notion that such human rights violations can be condoned.¹⁵¹

VIII. Conclusions and recommendations

94. **Brazil was for many years a leader in the recognition of environmental rights. Brazil was among the first countries to secure such rights in its constitution, collectively enshrining the right to a healthy environment. Over the years, the enactment of environmental health laws, the establishment of the Brazilian Institute of Environment and Renewable Natural Resources and the concentration of the National Health Surveillance Agency on environmental health issues have supported the realization of those rights for the general population and provided additional protections for vulnerable groups.**

95. **Despite positive advancements in recent decades, Brazil is in a state of deep regression from human rights principles, laws and standards, in violation of international law. To support its actions and inactions, the Government continues to deny incontrovertible scientific truths and to unjustifiably introduce uncertainties and mythical arguments. From the burning of the Amazon, to the insidious threats of toxic**

¹⁴⁴ Ibid.

¹⁴⁵ Ibid.

¹⁴⁶ See www.hrw.org/report/2019/09/17/rainforest-mafias/how-violence-and-impunity-fuel-deforestation-brazils-amazon.

¹⁴⁷ Submission from the Aliança pela Alimentação Adequada e Saudável (2019).

¹⁴⁸ Ibid.; and Brazil, State of Ceará, State Law No. 16.280.

¹⁴⁹ See www.ohchr.org/Documents/Issues/Water/HRViolations/VIVATInternational.pdf.

¹⁵⁰ See www.hrw.org/report/2019/09/17/rainforest-mafias/how-violence-and-impunity-fuel-deforestation-brazils-amazon.

¹⁵¹ A/74/159, paras. 2–4.

pollution and infectious diseases, it appears that Brazil has absconded from its duty to prevent and protect, eviscerating necessary institutions and hampering participation and expression by intimidating those who dare to speak against current trends, whether they be activists, scientists, international leaders or ministers.

96. Private actors are signalled to disregard laws designed to safeguard the global commons and the rights of indigenous peoples and people of African descent. Corporate crimes against workers and communities are perpetrated with impunity, and the rights to information and participation have been drastically scaled back. Various judicial and parliamentary decisions remain unimplemented where implementation would be unfavourable to private interests. Inflammatory rhetoric, a rejection of sustainability and a failure to prosecute has inflamed another epidemic, one of intimidation, attacks and murder perpetrated against human rights defenders.

97. For those and more resultant human rights issues, solutions are at hand. Brazil has the technical and economic capacity to transition to a greener, healthier future. However, government leaders are now using the COVID-19 crisis to further accelerate deregulatory and private sector agendas that threaten our common future and human rights around the world, instead of recognizing and rectifying an unquestionable national crisis that has global ramifications.

98. The separation of Brazil from international solidarity, and its regression from its human rights obligations, requires urgent attention and recalibration. If left unchecked, the situation in Brazil stands to spiral into not only a national catastrophe, but also one with phenomenal regional and global repercussions, including the destruction of our climate. International cooperation is required to help to turn Brazil back towards a path of progress. The Special Rapporteur sincerely hopes that the tide will turn – that Brazil will return to the path of sustainable development – with human rights at its heart.

99. In that context, the Special Rapporteur recommends that the Human Rights Council:

(a) Hold an inquiry into the current human rights situation in Brazil with a special focus on environmental, public health and labour protections and the situation of human rights defenders, drawing in particular on the expertise of the special procedures of the Human Rights Council;

(b) Hold a special session on the protection of the Amazon rainforest and human rights, ensuring the active participation of all stakeholders.

100. The Special Rapporteur recommends that the Government of Brazil:

(a) Establish permanent bodies of fully independent experts to help to:

(i) Decouple economic growth from environmental degradation, in particular reducing reliance on industrial agriculture and extractive industries;

(ii) Advise on all natural, physical, social and scientific matters relating to environmental and occupational risks;

(iii) Ensure that decision-making regarding hazardous substances is based on evidence, or the lack thereof, and the principles of international law, such as prevention and precaution;

(iv) Create safeguards against corporate capture, corruption and conflicts of interest within the Government, including the investigation of such allegations and enhanced protection for whistle-blowers;

(b) Urgently mobilize resources and capacity to monitor and enforce all environmental and occupational protections, collecting fees from responsible industries and eliminating self-monitoring by any regulated industries or entities chosen by business enterprises;

- (c) **Implement the principles on protection of workers from exposure to toxic substances, as encouraged to do by the Human Rights Council;¹⁵²**
- (d) **Elevate standards of environmental and occupational protection to equal to or greater than all trading partners to stop the abuse of the people of Brazil and their lands;**
- (e) **Align the National Council for Human Rights with the principles relating to the status of national institutions for the promotion and protection of human rights (the Paris Principles);**
- (f) **Ratify the conventions of the International Labour Organization on occupational safety and health and the Amendment to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, while reaffirming the international solidarity of Brazil and its commitment to international law, including the Paris Agreement;**
- (g) **Require mandatory human rights due diligence of all business enterprises in Brazil, including for abuses due to toxic exposure and pollution;**
- (h) **Implement timely, well-coordinated and effective emergency response mechanisms for environmental and occupational disasters, including forest fires, oil spills and industrial accidents;**
- (i) **Review all legislation relating to hazardous substances and wastes to ensure that the best interests of the child are a primary consideration, in line with the Convention on the Rights of the Child;**
- (j) **Ensure that environmental and occupational health and safety information is available, accessible and in a form that accounts for the needs of the most vulnerable, including that, inter alia:**
 - (i) **Complete information about which pesticides were applied when and where, is provided with advance notice to local communities and in the records of workers;**
 - (ii) **Assessments of safety and pollution from extractive industry activities, including health-related information, are generated and verified completely independently of operators;**
 - (iii) **The principle of “no data, no market” is rigorously applied for all chemical products and that industry is compelled by law to generate health and safety information for all industrial chemicals produced, used and imported in Brazil above 1 ton per year by 2030;**
- (k) **Respect the fundamental role of public participation in democracy and good governance, including the priceless role of human rights defenders, and fully protect that engagement by:**
 - (i) **Decriminalizing and securing the release of civil society actors, including environmental, indigenous and occupational rights defenders;**
 - (ii) **Securing public participation in all areas of governance and especially participatory processes relating to protection from toxic exposure;**
 - (iii) **Engaging in meaningful dialogue with civil society representatives;**
 - (iv) **Expanding government programmes for the prevention and investigation of threats, attacks and killings;**
 - (v) **Conducting robust investigations into and prosecutions of those who threaten, attack or kill human rights defenders, in order to address the impunity apparent among perpetrators;**

¹⁵² [Human Rights Council resolution 42/21](#).

(l) Fully implement judicial decisions, including the closure of the last existing asbestos mine and the implementation of a full ban on the mining, production, use, import and export of asbestos, and strengthen legal and institutional measures relating to the full life cycle of asbestos products;

(m) Improve accountability and access to justice and an effective remedy for victims by:

(i) Establishing a truth and reconciliation committee for those killed or harassed for protecting their human rights, including the rights to a healthy environment and safe working conditions;

(ii) Instituting reforms to enhance the ability of victims of hazardous substances and wastes to gain access to justice and an effective remedy, including by addressing challenges such as causation, timeliness, costs and technical assistance;

(iii) Identifying and implementing necessary reforms to ensure that corporate executives are always held accountable for environmental and occupational crimes, including those at Vale, BHP, Samarco, TÜV SÜD and other related companies for their inaction leading up to the Brumadinho and Mariana disasters;

(iv) Reforming the governance structure of the Renova Foundation to replace all members of the governance structure of the Foundation influenced by Vale, BHP and Samarco with independent experts free of conflict;

(v) Ensuring, in coordination with Vale and other companies implicated, that the necessary resources are made available for the resettlement of the Piquiá de Baixo community and for the formal issuance of an apology by the Government, Vale and the other companies implicated;

(vi) Commissioning an independent and transparent investigation into the role of Petrobras in the oil spill that occurred in August 2019;

(vii) Providing an effective remedy for fishers who continue to suffer from the loss of livelihoods and the negative mental and physical health impacts of the August 2019 oil spill;

(n) Develop time-bound plans to urgently reduce pesticide and toxic industrial chemical use and exposure, including by:

(i) Banning aerial spraying, especially over inhabited areas;

(ii) Phasing out the use of highly hazardous pesticides, including glyphosate and atrazine, and toxic industrial chemicals, prioritizing those already banned or restricted in OECD countries;

(iii) Enforcing buffer zones and installing mandatory monitoring devices around schools and residences and on spraying vehicles;

(iv) Abandoning deregulatory legislative proposals, including the “poison package”, and embedding a hazard-based approach to pesticides in law;

(v) Aligning the regulatory framework with OECD standards and best practices, including the performance of monitoring and reviews;

(vi) Phasing out the import of hazardous substances forbidden from use in the country of export;

(o) Ensure that all tailings dams are safe and that every community living downstream from a tailings dam is consulted on plans to eliminate the risks and that each individual is fully supported should they wish to relocate;

(p) Mitigate climate change and air pollution by:

- (i) Taking comprehensive measures to stop deforestation, including addressing forest fires, and creating a targeted plan to transition to renewable energy sources other than large-scale hydroelectric dams;
- (ii) Mapping socioeconomic data against independently generated pollution data, to reduce the disproportionately negative health impacts from pollution on the poor, indigenous peoples, Brazilians of African descent and other marginalized communities;
- (q) Protect indigenous peoples, minority groups and the poor by:
 - (i) Respecting the right of indigenous peoples to self-determination, including by implementing the United Nations Declaration on the Rights of Indigenous Peoples in national law;
 - (ii) Refraining from legalizing natural resource extraction on the lands of indigenous peoples without their consent and ensuring that criminal sanctions are issued for land-grabbers and polluters;
 - (iii) Providing sufficient funding and resources to protect the Yanomami community and other indigenous communities from the toxic impacts of artisanal and small-scale gold mining, pesticides, mining and other sources of exposure, as well as the impacts of the COVID-19 pandemic;
 - (iv) Addressing deficiencies in ensuring equality under the legal framework to prevent exposure, including for indigenous peoples, Brazilians of African descent and *quilombola* and other marginalized communities at risk.

101. The Special Rapporteur recommends that businesses:

- (a) Eliminate investments or linkages in their supply and value chains to areas of Brazil where human rights defenders are under attack or abuses of rights are documented among individuals or communities;
- (b) Establish and implement human rights due diligence processes, including in relation to exposures to hazardous substances and wastes;
- (c) Guarantee meaningful consultations with communities affected by the life cycle of production and consumption;
- (d) Engage in efforts towards ensuring access to justice, including by adhering to legislative and judicial provisions concerning providing remediation.

102. The Special Rapporteur urges Samarco and the Renova Foundation to facilitate the release of pertinent information to the public concerning research activities and their health and environmental impacts. He also urges Vale and related companies to cooperate with judicial authorities in remediation processes for the Brumadinho disaster, as well as with regard to the Piquiá de Baixo case.
