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**Promotion and protection of all human rights, civil,
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including the right to development**

Visit to Botswana

Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, David R. Boyd*

Summary

The Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, David R. Boyd, visited Botswana from 3 to 11 October 2023. The purpose of the visit was to examine the implementation of the right to a clean, healthy and sustainable environment in Botswana, to identify good practices and to investigate the environmental challenges that the country faces. Botswana, which is a leader in nature conservation, is home to several global biodiversity hotspots. However, the State faces multiple human rights and environmental challenges, including lack of access to safe and sufficient water and adequate sanitation, the global climate crisis, human-wildlife conflict, pollution and inadequate waste management. In addition, extreme economic inequality contributes to environmental inequality that jeopardizes the full enjoyment of human rights, especially for the most marginalized and vulnerable groups. In his recommendations, the Special Rapporteur encourages Botswana to recognize the right to a healthy environment in law at the national level, to prioritize the fulfilment of the rights to water and sanitation for all, to accelerate the transition to renewable energy by becoming a solar superpower and to address challenges regarding the procedural elements of the right to a healthy environment.

* 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 issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment on his visit to Botswana

I. Introduction

1. The Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, David R. Boyd, visited Botswana from 3 to 11 October 2023 at the invitation of the Government. The purpose of the visit was to examine the implementation of the right to a clean, healthy and sustainable environment in Botswana, to identify good practices and to investigate the environmental challenges that the country faces.

2. Botswana is a hot, dry, landlocked country which is home to a number of biodiversity hotspots. The country should be commended for the extent of its endeavours in the field of nature conservation, with at least 40 per cent of the land being devoted to national parks, wildlife management areas and other protected areas. In addition, the State led the development of the Gaborone Declaration for Sustainability in Africa¹ and has taken important steps to address the interconnected climate, environmental and human right crises. However, Botswana faces multiple human rights and environmental challenges, including water scarcity, lack of access to safe and sufficient water and adequate sanitation, the global climate crisis, human-wildlife conflict, pollution and inadequate waste management.

3. The country has made impressive economic and social progress since achieving independence in 1966, growing from one of the world's poorest nations to become an upper middle-income country, and currently ranks in the "medium human development" category on the United Nations Human Development Index.² Unfortunately, Botswana is plagued by poverty, unemployment and levels of economic inequality that are among the highest in the world.³ The extreme economic inequality contributes to environmental inequality that jeopardizes the enjoyment of the right to a clean, healthy and sustainable environment and other human rights, including the rights to water, sanitation, food and health.

4. Specific groups, in particular impoverished rural populations, Indigenous Peoples and women and children bear the brunt of economic and environmental inequalities. Those groups are far more likely than affluent urban populations to lack access to safe and sufficient drinking water and adequate sanitation, to suffer from malnutrition and to endure the adverse health effects caused by dependence on cooking and heating fuels that produce household air pollution. Women and girls face the daily challenge of securing water for their families and are the most exposed to the toxic smoke produced by cooking with wood, charcoal or dung.

5. Over the course of his visit, the Special Rapporteur spent some time in Gaborone and travelled to numerous places throughout the country, including the Gaborone Dam and reservoir, Habu, Ghanzi and Kuke, as well as Maun, in the north of the country near the world-renowned Okavango Delta. He met with officials from the Ministry of Foreign Affairs, the Ministry of Environment and Tourism, the Ministry of Health, the Ministry of Lands and Water Affairs, the Ministry of Minerals and Energy, the Ministry of Agriculture, the Attorney General's Chambers, and the Office of the Ombudsman. The Special Rapporteur also met with local officials, *kgosis* (chiefs), Indigenous Peoples, representatives of civil society and United Nations agencies, academics and youth. In Habu and Kuke, he also participated in a number of *kgotlas*, traditional community meetings, to discuss concerns related to human rights and the environment.

¹ See www.gaboronedeclaration.com.

² *Botswana 2022: Voluntary National Review Report* (Gaborone, Ministry of Finance and United Nations Office in Botswana, 2022).

³ See www.worldbank.org/en/country/botswana/overview.

6. The Special Rapporteur expresses his gratitude to the Government of Botswana for its invitation and excellent cooperation before, during and after the visit and would also like to thank all the interlocutors with whom he met.

II. Legal and policy framework

A. International law and policy

7. Botswana is State party to most of the major international human rights instruments and recently committed to ratifying the International Covenant on Economic, Social and Cultural Rights, which would be a positive step forward. The State was also a co-sponsor of General Assembly resolution 76/300 on the human right to a clean, healthy and sustainable environment. At the regional level, Botswana is a State party to the African Charter on Human and Peoples' Rights, which recognizes the right to a satisfactory environment (art. 24), although it has not yet ratified the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa, which contains important provisions on the right to a healthy and sustainable environment (arts. 18 and 19).

8. Commendably, Botswana is a party to key global environmental conventions, as well as important regional environmental instruments. This includes the United Nations Framework Convention on Climate Change, the Paris Agreement, the Convention on Biological Diversity, the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the Rotterdam on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, the Stockholm Convention on Persistent Organic Pollutants, the Convention on Wetlands of International Importance especially as Waterfowl Habitat and the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

B. National legal context

9. A constitutional review process was launched by the President of Botswana in December 2021. The Presidential Constitutional Commission of Inquiry was tasked, *inter alia*, to assess the adequacy of the Constitution of 1966, conduct inquiries and submit recommendations on potential amendments. The Commission published its final report in September 2022, following a consultative process. The Special Rapporteur echoes the concerns of the Working Group on Arbitrary Detention regarding effective public participation in the consultative process owing to the short time frame and language barriers.⁴

10. Botswana, unlike more than 45 other African States, does not recognize the right to a healthy environment either in its constitution or its legislation. In this regard, the Special Rapporteur strongly encourages Botswana to remedy this gap, with timely opportunities provided by the ongoing discussions about revising the Constitution and drafting a new framework environmental law. Botswana could be the first nation in the world to have a constitution that uses the language agreed upon by the United Nations, namely the human right to a clean, healthy and sustainable environment.

11. The Children's Act of 2009 is an example of good practice in terms of translating the Convention on the Rights of the Child into domestic law. Botswana has also published a child-friendly version of the law. However, the problems that continue to confront children, as described in part V below, illustrate that the scale and pace of implementation need to be increased in order to fulfil the country's human rights obligations.

12. The Special Rapporteur welcomes the recent expansion of the mandate of the Office of the Ombudsman to include addressing human rights issues.⁵ The Government should

⁴ A/HRC/54/51/Add.1, para. 21.

⁵ Parliament enacted the Ombudsman (Amendment) Bill in July 2021.

provide sufficient resources for the expanded mandate and ensure that the Office complies with the principles relating to the status of national institutions for the promotion and protection of human rights (the Paris Principles). Further, the establishment of the National Human Rights Coordination Committee, which aims to promote meaningful engagement between the Government and non-governmental organizations on human rights issues at the national level, is an encouraging development.⁶

13. While Botswana is a party to all key global environmental conventions, its environmental legislation has been criticized for being outdated and fragmented, a problem acknowledged in the eleventh National Development Plan.⁷ Key laws include the Environmental Assessment Act (2011), the Wildlife Conservation and National Parks Act (1992), the Atmospheric Pollution (Prevention) Act (1971), the Forest Act (1968) and the Waste Management Act (1998). The Special Rapporteur was encouraged to learn that Botswana recently enacted the Access and Benefit-Sharing of Biological Diversity Act (2022) and that a much needed new framework on environmental law and new laws governing toxic chemicals, food safety and quality and integrated waste management are being developed. Botswana is also developing a national health and environment strategy and a national strategy on electronic waste (e-waste) and is improving the regulatory framework for renewable energy.

14. While the legal framework to protect human rights and the environment is improving, the implementation of existing commitments remains a major concern. As stated by one civil society representative: “We have beautiful laws but problems persist due to lack of implementation”. This can be seen in the ongoing difficulties related to solid waste management, access to water and sanitation and pollution.

C. Political structure and economy

15. Botswana, a country comprising almost 600,000 square kilometres (larger than France), has a small and widely dispersed population of 2,400,000, more than 70 per cent of whom live in urban areas. In terms of corruption, the State ranks thirty-fifth out of 180 nations for having the least corruption, the second best rating in Africa behind the Seychelles,⁸ and ranks fifth out of 54 States on the Ibrahim Index of African Governance.⁹ The gross domestic product (GDP) in 2022 was approximately \$20.35 billion, with per capita GDP of approximately \$7,000.¹⁰ However, as noted above, Botswana suffers from extreme economic inequality, with 21 per cent of the population facing multidimensional poverty.¹¹

16. On the Environmental Performance Index published by Yale University, Botswana enjoys the second highest ranking among African States (after the Seychelles) and ranks thirty-fifth out of 180 nations.¹² Since 1993, Botswana has managed its lucrative diamond wealth through the Pula Fund, in a manner similar to the renowned management of the petroleum industry in Norway, including by applying high environmental standards, ensuring

⁶ A/HRC/WG.6/43/BWA/1, para. 5.

⁷ Tinashe Madebwe, “The quality of Botswana’s environmental protection framework”, *Journal of African Law*, vol. 64, No. 2 (2020), pp. 215–228; and *National Development Plan*, vol 1 (April 2017–March 2023) (2016), p. 142 (see <https://www.fao.org/faolex/results/details/es/c/LEX-FAOC175398>).

⁸ See <http://www.transparency.org/en/cpi/2022/index/bwa>.

⁹ See <https://assets.iiag.online/2022/scorecards/2022-IIAG-scorecard-bw.pdf>.

¹⁰ United Nations Environment Programme (UNEP) and Global Environment Facility, *Botswana State of Environment and Outlook Report 2022* (Government of Botswana, 2022), see http://www.researchgate.net/publication/363539207_Botswana_-_State_of_Environment_and_Outlook_Report_2022.

¹¹ “Pilot National Multidimensional Poverty Index for Botswana” (Statistics Botswana, United Nations Development Programme (UNDP), 2021).

¹² M.J. Wolf et al., *Environmental Performance Index* (New Haven, Yale Center for Environmental Law & Policy, 2022).

that the public gains extensive economic benefits and saving some of the revenue for the future.¹³

17. Vision 2036 outlines the country's long-term aspirations, including its environmental and human rights ambitions. According to the official report on the Vision 2036 initiative, "Botswana will be among the top countries in the protection of human rights" and "will be energy secure, with diversified safe and clean energy sources, and a net energy exporter".¹⁴ Other goals include safe, clean, sustainable communities, a low carbon footprint, respect for the carrying capacities of ecosystems and the sustainable use of natural resources.

18. Botswana has completed its eleventh National Development Plan and is a transition stage while the twelfth National Development Plan is being completed. The eleventh plan articulates a strong commitment to sustainable development, raising social and economic well-being while staying within ecological and environmental limits in order to meet the needs of future generations.¹⁵

19. A key demographic feature of Botswana is that 40 per cent of the population is under the age of 19.¹⁶ Children and youth belonging to Indigenous minorities, many of whom live in remote communities in the Kalahari Desert, are especially vulnerable because of poverty, marginalization and lack of access to the essential services needed to enjoy their economic, social, cultural and environmental rights.

20. In addition, it should be noted that the coronavirus disease (COVID-19) pandemic exacerbated inequality, negatively affecting women, Indigenous Peoples, migrants, refugees, children, youth, persons with disabilities, LGBTQ+ persons, people living in rural areas, people living in poverty and, in particular, persons belonging to two or more of those categories (intersectionality).

III. Fulfilling the right to a clean, healthy and sustainable environment

21. The role of the Special Rapporteur is to promote the implementation of obligations relating to the right to a clean, healthy and sustainable environment. This fundamental human right, supported by Botswana as a co-sponsor of General Assembly resolution 76/300, includes clean air, safe and sufficient water, healthy and sustainably produced food, a non-toxic environment, healthy biodiversity and ecosystems and a safe climate. It also includes rights of access to environmental information, public participation in environmental decision-making and access to justice with adequate remedies. In that context, the visit focused on the challenges Botswana must confront in order to successfully respect, protect and fulfil this right, the steps taken so far and future actions being planned.

A. Safe and sufficient water and adequate sanitation

22. A visit in 2015 by the Special Rapporteur on the human rights to safe drinking water and sanitation highlighted the challenges Botswana faces with respect to water and sanitation.¹⁷ In the eleventh National Development Plan it was acknowledged that water had become an increasingly scarce resource in Botswana. That situation has been exacerbated by the inefficient use and management of water, especially by institutional consumers, resulting in high water losses. Water scarcity may force some families and communities to rely on

¹³ Caitlin C. Corrigan, "Breaking the resource curse: transparency in the natural resource sector and the extractive industries transparency initiative", *Resources Policy*, vol. 40, Issue C., (2014), pp. 17–30; see also A. Iimi, A. "Escaping from the resource curse: evidence from Botswana and the rest of the world", International Monetary Fund (IMF) Staff Papers, vol. 54, No. 4, pp. 663–699 (2007).

¹⁴ "Vision 2036: Achieving Prosperity for All" (Vision 2036 Presidential Task Team, 2016), pp. 23 and 25.

¹⁵ See <https://botswana.un.org/sites/default/files/2020-10/NDP%2011%20full%202017.pdf>.

¹⁶ United Nations Children's Fund (UNICEF), Climate Landscape Analysis for Children.

¹⁷ See [A/HRC/33/49/Add.3](#).

unsafe sources of water. Diarrheal diseases linked to contaminated water and food are a major contributor to the under-5 mortality rate in Botswana.

23. Since 2015, the Government has made progress. The latest data indicate that 93 per cent of the population enjoys at least basic access to improved drinking water, although there is a gap between the access of urban populations, at 98 per cent, and rural populations, at 80 per cent.¹⁸ Progress in ensuring adequate sanitation is slower, with 81 per cent of the population having at least basic access to sanitation.¹⁹ Further, 5 per cent of the population is forced to rely on open defecation (disposal of human faeces in fields, forests, bushes and other open spaces).²⁰ It should also be noted that about 30 per cent of children in rural areas reside in households without any toilet facilities.²¹

24. Many people living in rural areas in Botswana lack access to safe and sufficient drinking water that meets international human rights standards, including: availability (sufficient quantity and reliable, consistent supply); quality; affordability; accessibility (including in schools); and acceptability (for example, taste, colour and odour).²² They also suffer from inadequate access to sanitation, which jeopardizes their health and pollutes the soil and groundwater.²³ The current goal of eliminating open defecation by 2036 should be moved forward to 2030 and achieved by prioritizing the allocation of resources to resolving this challenge.

25. When it comes to addressing water scarcity and availability, there are many options, including requiring large-scale agribusinesses to use efficient irrigation technologies and requiring mining companies to repeatedly recycle water and building desalination plants. Neighbouring Namibia provides an inspiring example of how to recycle wastewater so that it is fit to drink and the Special Rapporteur was pleased to learn that Botswana plans to adopt the same approach.

26. The Special Rapporteur heard compelling testimony about people's strong desire for access to safe and sufficient water as well as adequate sanitation while visiting Habu, Kuke and Ghanzi. In Kuke, he witnessed a long line of individuals, mainly women and girls, waiting to fill containers from one of only two standpipes that provide water for a community of more than 1,000 people.

27. Water quality standards in Botswana, which are developed by the Bureau of Standards, are strong (and in some cases stronger than World Health Organization (WHO) guidelines). However, the Special Rapporteur was informed that testing is limited to microbial contaminants, meaning there is a lack of information regarding other contaminants, including pesticides and heavy metals such as lead and copper. The lack of chemical testing creates risks to human health and human rights.

28. The Government of Botswana has a legal obligation to ensure that everyone has access to safe and sufficient water where they live, work, study and play. Human rights law is clear – the allocation of water must prioritize human rights first, the needs of ecosystems second (because healthy ecosystems are essential for the full enjoyment of multiple human rights) and the needs of industry third. Despite progress, there is still a substantial implementation gap.²⁴

29. To make matters worse, climate science indicates that levels of precipitation across Botswana will continue to decline in coming years, while the population is projected to grow, exacerbating water scarcity. A pipeline that carries out an inter-basin transfer of water from the north is being expanded to carry almost 200 million litres per day from the Okavango

¹⁸ World Health Organization (WHO) and UNICEF, Joint Monitoring Programme for Water Supply, Sanitation and Hygiene, see <https://washdata.org/>.

¹⁹ Ibid.

²⁰ Ibid.

²¹ UNICEF, "Child poverty in Botswana" (Statistics Botswana and UNICEF, 2021).

²² See <http://www.ohchr.org/sites/default/files/Documents/Issues/Water/10anniversary/EnglishQns.pdf>.

²³ K.A. Alexander and A. Godrej, "Greywater disposal practices in northern Botswana – the silent spring?", *International Journal of Environmental Research and Public Health*, vol.12, No. 11 (2015), pp.14529–14540.

²⁴ See [A/HRC/42/47/Add.5](#).

region to southern Botswana. It will be important to avoid ecological harm in the world heritage site or negative human rights impacts for the population closely connected to the Okavango Delta.

30. The impacts of climate change on water scarcity have immense implications for the human rights to health, water, food, a clean, healthy and sustainable environment and cultural rights. In adapting to climate change, it is imperative that Botswana take preventive and precautionary measures to ensure safe and sufficient water for everyone, prioritizing the human rights of those people whose rights are currently not being fulfilled. For example, the water in the town of Ghanzi often suffers from high saline concentrations, meaning that the Government should consider building one or more drinking water treatment plants there.

B. A safe climate

31. The climate crisis, which has been caused predominantly by wealthy countries in the global North, is also a human rights crisis. It threatens a myriad of human rights and increases the exposure of the most marginalized and vulnerable to human rights negative impacts and violations.

32. As a semi-arid nation, Botswana is highly vulnerable to the climate crisis and is already experiencing significant effects from climate change, with major consequences for health, human rights and livelihoods.²⁵ More specifically, changes in rainfall patterns, rising temperatures and increased rates of evapotranspiration across the country exacerbate water scarcity, threaten food security, increase risks of vector-borne diseases, endanger wildlife and undermine rural livelihoods, therefore preventing the full enjoyment of human rights. For example, malaria has spread further south in Botswana and schistosomiasis risks have risen, resulting in negative impacts on the rights to health and to a clean, healthy and sustainable environment.²⁶ The 2015–2016 drought had significant economic impacts, including large livestock losses, affecting the right to food.

33. The Intergovernmental Panel on Climate Change warns that in coming years Botswana will face an increasing number of hot days, with heat stress affecting agriculture and human health; rainfall decline of 10 per cent to 20 per cent; increases in drought and fire frequency, severity and duration; negative impacts on agricultural yields; and increased range and population of disease-bearing mosquitos.²⁷ These changes are expected to trigger further negative impacts, including on the enjoyment of the rights to food, health, water, sanitation and a healthy environment.²⁸

34. Despite producing only 0.02 per cent of global greenhouse gas emissions, Botswana is committed to doing its part to address the crisis. The country's nationally determined contribution pledges to achieve a 15 per cent reduction in emissions by 2030. The Government has created a National Climate Change Strategy and Action Plan and a National Adaptation Plan Framework and has submitted its third national communication to the United Nations Framework Convention on Climate Change.

35. States in the global North responsible for causing the climate crisis have a moral and legal obligation to provide financial and technological assistance for mitigation, adaptation and loss and damages. The Special Rapporteur calls upon those States to accelerate efforts to provide the required levels of assistance to climate vulnerable developing nations, including Botswana, where the impacts of the climate crisis are already so severe. Climate finance directed to Botswana should come in the form of grants, not loans, since the climate crisis is not its fault and paying interest on loans undermines the ability of developing countries to

²⁵ World Bank Group, "Climate Risk Country Profile: Botswana" (2020).

²⁶ K.P. Gabaake et al., "A mixed method analysis of the Botswana schistosomiasis control policy and plans using the policy triangle framework", *Global Health Research and Policy*, vol. 8, No. 39 (2023).

²⁷ Intergovernmental Panel on Climate Change, Working Group II, *Climate Change 2022: Impacts, Adaptation and Vulnerability*, see chap. 9.

²⁸ ClimSystems Ltd., "Tipping points in Botswana under climate change", report prepared for the Ministry of Environment, Natural Resource Conservation and Tourism (2020).

invest in education, health care, infrastructure and climate action. For example, Botswana should receive grant funding from the Just Energy Transition Partnership, created by the International Partners Group to finance the shift from coal to solar for electricity generation, following agreements reached by Senegal and South Africa.²⁹

36. One extraordinary advantage that Botswana enjoys is that has some of the best solar resources in the world, creating the opportunity to become a solar superpower in Southern Africa.³⁰ The country's first major solar project, in Phakalane, has successfully generated millions of kilowatt hours of clean electricity and prevented millions of kilograms of carbon dioxide emissions. Between 2012 and 2022, Botswana went from 2 megawatts to 6 megawatts of installed solar electricity generating capacity, a very small increase. A planned 6-megawatts solar photovoltaic facility at the University of Botswana would double the country's capacity. Despite its extraordinary potential, installed solar capacity in the country trails behind 42 other African States.³¹ Currently solar power provides less than 1 per cent of electricity nationwide.³²

37. Botswana can look to the incredible success of Chile, another developing country that enjoys massive solar potential, to envision a bright green future. A decade ago, Botswana and Chile had the same amount of installed solar electricity generating capacity at 2 megawatts. In contrast to the slow growth of the solar power supply in Botswana, Chile went from 2 megawatts to 6,250 megawatts of installed solar electricity generating capacity between 2012 and 2022.³³ In 2022 alone, Chile added a remarkable 1,782 megawatts. Chile has built the first concentrated solar plant in South America (capable of producing electricity 24 hours a day through the storage of heat in underground reservoirs of molten salt), produces a larger share of its total electricity from solar than any other nation and has solved a number of the implementation challenges that are facing Botswana. The rapid expansion of solar and wind infrastructure has enabled Chile to close eight coal-fired power plants, and it is expected that the remaining 20 coal plants in the country will be closed by 2030.

38. The delay in constructing additional large-scale solar plants in Botswana has a silver lining, in that costs have declined by almost 90 per cent in the past decade, while the technology has continued to improve. However, there is an essential prerequisite to the development of the country's renewable energy potential, which is the fulfilment of its human rights obligations. To achieve that goal, the Government must provide the public with clear, accessible information, in a variety of languages, as well as opportunities to participate in decision-making processes. Additional efforts must be made to include communities that may be in positions of vulnerability, particularly in remote locations. If renewable energy projects are going to be built in the territory of Indigenous Peoples and local communities, their right to free, prior and informed consent must be respected from the outset of planning processes. Further, large solar or other renewable energy projects should not be exempted from environmental assessment processes and communities where renewable energy projects are located should receive a fair share of the benefits produced. Following a human rights-based approach is a legal obligation for the State and also increases the likelihood of positive outcomes.

39. In the light of the extraordinary solar energy potential of Botswana, the Special Rapporteur is concerned about the planned new 300-megawatt coal-fired power plant. There is a reference in the eleventh National Development Plan to "clean coal", which is a form of greenwashing. The combustion of coal to generate electricity produces substantial emissions of greenhouse gases, mercury and other air pollutants. Capturing and/or sequestering these emissions to make coal somewhat cleaner is extremely expensive. Further investment in

²⁹ See https://ec.europa.eu/commission/presscorner/detail/en/IP_23_3448.

³⁰ K. Kawajiri and Y. Genchi, "The right place for the right job in the photovoltaic life cycle", *Environmental Science and Technology*, vol. 46, No. 13 (2012).

³¹ *Ibid.*

³² See <https://www.ub.bw/news/ub-construct-one-largest-commercial-solar-photovoltaic-plants-botswana>.

³³ International Renewable Energy Agency, *Renewable energy statistics 2023* (July 2023), see <https://www.irena.org/Publications/2023/Jul/Renewable-energy-statistics-2023>.

coal-generating capacity is inconsistent with the environmental and human rights commitments of Botswana.

40. Botswana aims to ensure that 30 per cent of its electricity supply will be renewable by 2030.³⁴ One gigawatt (1,000 megawatts) of new renewables are to be operational by 2030. While that goal is achievable, it will require rapid acceleration in the areas of planning and implementation. There are good opportunities for wind-powered electricity in the southern part of the Kgalagadi District, near Tsabong, and in the Southern District.³⁵ Renewable energy offers economic, environmental and social benefits, including reduced air pollution, reduced greenhouse gas emissions, improvements to human health and green jobs. Prior to the Special Rapporteur's visit, the Institute of Energy and Technology Development celebrated its first graduating class of solar technicians with skills in the installation and maintenance of solar photovoltaic systems.³⁶ Training in this area is essential in order to ensure that green jobs are available for young people; extra effort should be made to ensure that such programmes are available to rural youth.

41. During the course of his visit, the Special Rapporteur noted significant challenges in access to electricity, with roughly 30 per cent of households without access to electricity, especially in rural areas.³⁷ Because remote rural and Indigenous communities are often not connected to the grid as a result of their geographical location, distributed, small-scale renewable energy offers the best path forward. Solar can be used to provide access to electricity for remote communities at a much lower cost than connecting them to the national electricity grid. However, the Special Rapporteur was surprised to learn that Kuke and other Indigenous communities in northwestern Botswana are not connected to the national electricity grid, despite being situated very close to powerlines.

42. Botswana is striving to implement gender mainstreaming throughout its climate change and resilience programmes. The National Climate Change Strategy is an excellent example in this regard, with gender positioned as a cross-cutting theme that receives extensive consideration and recognition of the important role women in Botswana play in farming (whereas men are more involved in livestock) and of the primary responsibility of women and girls for collecting water. Addressing challenges to gender equality, which affect the realization of human rights of women and girls, will require increasing access to assets and credit, ending discrimination by institutions, providing equitable access to information, full participation in decision-making, access to justice and ensuring economic and leadership opportunities. Disaggregated data is vital for gender-transformative policy change but is often lacking in Botswana. In addition, the Special Rapporteur welcomes the revised land policy of 2019, which aims to ensure that women enjoy equal access to land.³⁸ While this is a positive step, further challenges should be addressed to guarantee continued progress and transformative equality. For instance, in 2019 the Committee on the Elimination of Discrimination against Women recommended that Botswana increase awareness among women of their rights concerning access to land and housing, including the right to have access to a land tribunal to challenge abuses in land allocation.³⁹ Furthermore, owing to the lack of access rights and poverty, land transactions are sometimes concluded informally, outside the legal framework, posing significant issues regarding land rights.⁴⁰

43. Botswana subsidizes the supply of coal-fired electricity and gas and diesel fuels, despite the fact that those fossil fuels worsen the climate crisis. The 2023–2024 budget

³⁴ Minister of Finance, 2023, national budget speech (People's Guide to the 2023/2024 Budget) (see <https://www.xchange.co.bw/policy/policies-publications/peoples-guide-to-the-20232024-budget>).

³⁵ World Bank, Botswana, Renewable Energy Scale Up Support project.

³⁶ See <https://allafrica.com/stories/202309270395.html>.

³⁷ See <https://ourworldindata.org/energy/country/botswana>.

³⁸ See <https://news.trust.org/item/20200917163703-1z7qr#:~:text=Botswana's%20revised%20Land%20Policy%20gives,were%20eligible%20for%20land%20rights>.

³⁹ CEDAW/C/BWA/CO/4, para. 40 (a).

⁴⁰ UNEP and the Global Environment Facility, *Botswana State of the Environment and Outlook Report 2022* (Government of Botswana and UNEP, 2022), p. 41, available at http://www.researchgate.net/publication/363539207_Botswana_-_State_of_Environment_and_Outlook_Report_2022/link/6321e6640a70852150f32ce7/download.

includes a subsidy of over \$37 million for electricity, which is overwhelmingly generated by coal. Those subsidies should largely be phased out, with the exception of targeted programmes supporting low-income households. The phase-out of the subsidies would free up Government resources for addressing, rather than exacerbating, the climate crisis. Other priority climate actions include investments in energy efficiency (for example, heat pumps for heating and cooling and better insulation for buildings). A rights-based approach to climate action would ensure that policies and programmes focus on those groups that are most vulnerable or marginalized, such as people facing poverty who live in buildings that are not energy efficient.

44. To date, Botswana has received an estimated \$81 million from the Green Climate Fund for three projects and \$1.4 million for readiness activities.⁴¹ This is only a small fraction of what Botswana requires in order to address mitigation and adaptation and to compensate for loss and damages. One promising project, co-financed by the Government, the Green Climate Fund and Conservation International, involves extensive rangeland restoration in Ngamiland, Kgalagadi and Bobirwa.⁴² If successfully implemented, the project will benefit an estimated 247,000 people (54 per cent of whom are women) and create thousands of jobs in addition to sequestering carbon in healthy landscapes.

C. Biodiversity and healthy ecosystems

45. As noted earlier, Botswana is a recognized leader in biodiversity conservation, including in transfrontier protected areas, which are important because ecosystems transcend political boundaries. A leading example is the Kavango-Zambezi wetland system, which is jointly managed by Angola, Botswana, Namibia, Zambia and Zimbabwe. The region is home to a variety of species, including populations of elephants, cheetah, white rhinoceros, black rhinoceros, African wild dogs and lions.⁴³ The Miombo woodland and the Okavango Delta are also important for global conservation.⁴⁴

46. In the past there have been serious human rights concerns about the eviction of Indigenous Peoples under the guise of conservation, most infamously the Basarwa communities which were removed from the Central Kalahari Game Reserve. While protecting biodiversity is essential for the realization of the right to a healthy environment, strict conservation measures, including through past practices of “fortress conservation”, may produce meagre conservation gains at the cost of evicting rural communities from their homes and ancestral lands, criminalizing their traditional livelihoods and violating their human rights to life, health, water, food, an adequate standard of living, non-discrimination and their cultural rights. The Special Rapporteur stressed in his recent policy brief that “Ending the current biodiversity crisis will require a transformative approach to what ‘conservation’ entails” and that “human rights-based conservation is the most effective, efficient, and equitable path forward to safeguarding the planet”.⁴⁵ It is essential that Botswana employ a rights-based approach to all aspects of conservation, as emphasized in the Kunming-Montreal Global Biodiversity Framework adopted in 2022.

47. The Special Rapporteur would like to echo the concerns and recommendations of the Human Rights Committee regarding former residents of the Central Kalahari Game Reserve, in particular the Basarwa and Bakgalagadi, who were not applicants in the case *Roy Sesana and Others v. the Attorney General*, and who are required to obtain entry permits to enter the reserve.⁴⁶ Also deeply concerning is the recent decision by the Court of Appeal of Botswana ruling against a family’s request to bury one of their family members on their ancestral land in the Central Kalahari Game Reserve. The Special Rapporteur emphasizes that respecting and protecting human rights of all, especially the rights of Indigenous Peoples and other rural

⁴¹ See www.greenclimate.fund/countries/botswana.

⁴² See <https://www.conservation.org/botswana/projects/botswana-gcf-project>.

⁴³ See <https://www.cbd.int/countries/profile/?country=bw>.

⁴⁴ Ibid.

⁴⁵ David R. Boyd and Stephanie Keene, “Human Rights-Based Approaches to Conserving Biodiversity, Policy Brief No. 1” (2021), p. 2 (ohchr.org).

⁴⁶ [CCPR/C/BWA/CO/2](https://www.ccrpr.org/c/bwa/co/2), paras. 37–38.

rightsholders, is an obligation under international law that applies in the context of all conservation actions.

48. An important issue in Botswana is human-wildlife conflict, particularly with respect to elephants. In northern Botswana, elephants have caused deaths by trampling people and have increased food insecurity by raiding crops. In addition, elephants, in moving closer to communities in search of water, have damaged water infrastructure. Predators attacking livestock is another type of human-wildlife conflict, affecting food security and livelihoods. For example, while visiting a camp near Habu, the Special Rapporteur viewed a goat recently killed by a lion. The Government has created a compensation scheme for crop and livestock losses, although the Special Rapporteur heard repeated concerns that payments are too small (below market value) and too slow (with alleged delays of up to two years in some cases) to provide the support needed. An innovative civil society initiative led by Ecoexist Trust uses a shuttle bus to help people avoid areas of high risk from elephants.⁴⁷ Scientists have suggested that changing crop types could help subsistence farmers enjoy increased food and income security as elephants prefer certain crops.⁴⁸

49. Botswana has been implementing community-based natural resource management since 1989 in an effort to ensure that local communities benefit economically from the sustainable use of biodiversity in their areas. The programme has had mixed success, as it is not as strong as the community conservancy model used in Namibia. The Namibian approach decentralizes more authority to communities that meet certain criteria and enables those communities to enjoy a much larger share of the revenues generated from wildlife.

50. In Habu, the Special Rapporteur witnessed several projects being implemented by Wild Entrust, in close collaboration with the local community, including rangeland restoration, a community garden, water boreholes for livestock and the development of camps to capitalize on wildlife tourism. The United Nations Educational, Scientific and Cultural Organization (UNESCO) community management of protected areas conservation programme, implemented in the Okavango Delta, in partnership with the United Nations Development Programme (UNDP) through the Global Environment Facility small grants programme and the Government of Botswana, is also a good practice in community-based conservation.⁴⁹

51. A Canadian corporation has been granted a lease for oil and gas exploration in northwestern Botswana and Namibia, raising concerns about risks to the Okavango Delta world heritage site. The Special Rapporteur expressed concern about the human rights impacts of the project in a joint allegation letter to the Government of Botswana in 2021; no response has been received from Botswana.⁵⁰ In the letter, the Special Rapporteur highlighted concerns related to the potential damages that the project may cause to the fragile ecosystem and protected areas on which Indigenous Peoples depend for their physical and cultural survival. A recently published scientific article concluded that “groundwater in ReconAfrica’s lease area flows towards the Okavango Delta, so there is a risk of oil contamination of the world heritage site from the proposed oil development”.⁵¹ The Special Rapporteur agrees with UNESCO that Botswana should implement rigorous environmental impact assessment procedures for activities outside the Okavango Delta world heritage site that have the potential to negatively impact its outstanding universal value.⁵² The Government indicated that it will require an environmental impact assessment prior to permitting oil and gas exploration.

⁴⁷ See <https://www.ecoexistproject.org>.

⁴⁸ T.A. Matsika et al., “Crop diversity and susceptibility of crop fields to elephant raids in eastern Okavango Panhandle, northern Botswana”, *Ecology Evolution*, vol. 13, No. 3 (March 2023).

⁴⁹ See <https://whc.unesco.org/en/activities/984/>.

⁵⁰ BWA 3/2021, available at <https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gId=26804>. No response has been received from the Government of Botswana as of 3 November 2023.

⁵¹ R. Sheldon et al., “Potential groundwater contamination from oil drilling in the Okavango”, *Physics and Chemistry of the Earth, Parts A/B/C*, vol. 131 (October 2023).

⁵² See <https://whc.unesco.org/en/list/1432/>.

D. Desertification and land degradation

52. Although desertification and land degradation occur naturally in semi-arid and drought-prone environments, they are exacerbated by human actions, including conversion of land for farming, overgrazing, the expansion of human settlements and infrastructure and resource extraction. While 75 per cent of Botswana is desert, the Government estimates that 17 per cent of land is degraded.

53. As a State party to the Convention to Combat Desertification, Botswana developed a national action programme and established a target for land degradation neutrality.⁵³ The Special Rapporteur was encouraged to learn that plans are under way for a Southern African version of the Great Green Wall initiative in the Sahel region, where billions of dollars are being invested in restoring degraded land, planting trees, improving food and water security, creating green jobs and increasing access to electricity through solar photovoltaic systems. Botswana is involved with the Southern African Development Community in creating the initiative.⁵⁴

54. Overpopulation of livestock also contributes to land degradation as a result of overgrazing in certain areas. In addition to impacting the land, overstocking can result in low productivity, which also has an impact on the right to food and on the livelihoods of populations.⁵⁵

E. Healthy and sustainably produced food

55. Botswana imports the majority of its food.⁵⁶ It is disturbing that approximately 23 per cent of the population experiences undernourishment and 50 per cent of the population suffers moderate to severe food insecurity.⁵⁷ According to the eleventh National Development Plan, land degradation, overstocking, dependence on rain-fed agriculture and poor soil are major challenges to rural households, eroding their resilience and ability to cope with climate change.⁵⁸

56. Possible responses include increased investments in water-smart drip irrigation, the use of more drought resistant, high temperature tolerant and short maturity crop varieties, as well as other types of climate-smart agriculture. Botswana is a pioneer in the use of agrivoltaics, meaning that crops are grown in the shade provided by solar photovoltaic panels. In this regard, the State should consider expanding upon the agrivoltaics pilot project led by the Botswana University of Agriculture and Natural Resources.⁵⁹

57. Data indicate that adults in Botswana are consuming recommended amounts of red meat, dairy, nuts and fish but are eating below the recommended amounts of fruit, vegetables, whole grains and legumes.⁶⁰ In that regard, the Special Rapporteur was delighted to visit the large community garden in Habu, which contributes to healthier diets for local people. The Special Rapporteur encourages the Government to support such projects across all rural areas. In the same vein, Botswana should consider increasing support for climate-smart, regenerative, local and organic agriculture.

⁵³ Botswana National Action Programme to Combat Desertification 2006, <https://www.unccd.int/sites/default/files/naps/botswana-eng2006.pdf>.

⁵⁴ See www.sadc.int/latest-news/sadc-great-green-wall-initiative-tipped-succeed-drawing-lessons-sahel-region.

⁵⁵ UNEP and Global Environment Facility, *Botswana State of Environment and Outlook Report 2022*, p. 41.

⁵⁶ Moseley, W., "Agriculture on the brink: climate change, labour and smallholder farming in Botswana". *Land*. Vol. 5, No. 3 (2016).

⁵⁷ Food and Agriculture Organization of the United Nations (FAO), Selected indicators: Botswana, see <https://www.fao.org/faostat/en/#country/20>.

⁵⁸ Eleventh National Development Plan, p. 142.

⁵⁹ A. Maramwidze, "Botswana varsity hits milestone with agrivoltaic project", ITWeb, 22 March 2023, see <https://itweb.africa/content/kYbe97XbVp1qAWpG>.

⁶⁰ See <https://globalnutritionreport.org/resources/nutrition-profiles/africa/southern-africa/botswana/>.

58. Highly hazardous pesticides pose a severe risk to human and ecosystem health; much safer alternatives are available. Through an excellent project conducted with the Food and Agriculture Organization of the United Nations (FAO), Botswana partially addressed the problem by strengthening the Agrochemicals Act and associated regulations, banning a number of highly hazardous pesticides and collecting more than 60 tons of dangerous pesticides that were shipped abroad for safe disposal.⁶¹

59. Despite this successful project, serious concerns remain, as demonstrated by two recent studies of pesticide residues in fruits and vegetables purchased in Botswana. One study found that 50 per cent of cabbages contained pesticide residues that exceeded international standards.⁶² The second study found that the contamination level of 13 per cent of samples of various types of produce exceeded international standards.⁶³ Some of the excessive pesticide residues were hazardous pesticides, including chlorpyrifos, triazophos, methamidophos and methomyl. Researchers were also concerned by the presence of pesticides not registered for use in Botswana, including the presence of imidacloprid, a neonicotinoid pesticide that is hazardous to both humans and bees.

F. Clean air

60. Clean air is one of the basic elements of the right to live in a clean, healthy and sustainable environment.⁶⁴ Air pollution, especially fine particulate matter, causes respiratory illness, cardiovascular disease, stroke, lung cancer and other adverse health effects.⁶⁵ Children and older persons are particularly vulnerable to poor air quality.

61. The Atmospheric Pollution Prevention Act was pioneering when it was enacted in 1971, but it is outdated and should be modernized. According to one expert, “There remains a lack of transparency in various aspects of air pollution control, poor environmental regulations or weak institutional mechanisms to enforce regulations”.⁶⁶

62. In 2019, the annual average concentration of fine particulate matter in Botswana was approximately 25 micrograms per cubic meter.⁶⁷ In 2022, WHO reduced its annual guideline for fine particulate matter from 10 micrograms per cubic meter to 5 micrograms per cubic meter, which means that average levels for this pollutant in Botswana are five times higher than the recommended limit. According to the State of Global Air reporting, there were 942 premature deaths in Botswana caused by air pollution in 2019 (primarily caused by fine particulate matter).⁶⁸

63. The main contributors to outdoor air pollution in Botswana are transport, industry (including coal-fired power plants), the burning of waste and household fires for cooking, as well as heat and dust from the Kalahari Desert, part of which is natural and part caused by overgrazing, which leads to loss of vegetation and higher levels of dust. As has been reported, air pollution from the Selebi-Phikwe copper-nickel smelter complex caused elevated levels

⁶¹ FAO, “Enhancing pesticide life-cycle management and treatment of pesticide contaminated sites in Botswana” (2019), see <https://www.fao.org/policy-support/tools-and-publications/resources-details/en/c/1244819>.

⁶² H. Machezano et al., “Cabbage or ‘pesticide’ on the platter? chemical analysis reveals multiple and excessive residues in African vegetable markets”, *International Journal of Food Contamination*, vol. 6, No. 2 (2019), pp.1–13.

⁶³ Thamani F. Gondo, et al., “Pesticide residues in fruits and vegetables from the southern part of Botswana”, *Food Additives & Contaminants: Part B*, vol. 14, No. 4 (2021), pp. 271–280.

⁶⁴ See A/HRC/40/55.

⁶⁵ See [www.who.int/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](http://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health).

⁶⁶ M. Wiston, “Status of air pollution in Botswana and significance to air quality and human health”, *Journal of Health and Pollution*, vol. 15 (2017), pp. 8–17.

⁶⁷ See <https://data.worldbank.org/indicator/EN.ATM.PM25.MC.M3?locations=BW>.

⁶⁸ See www.stateofglobalair.org/data/#/health/plot.

of respiratory disease in nearby communities,⁶⁹ Those industrial operations were closed in 2016.

64. Traffic congestion in Botswana is a growing problem, especially in urban areas.⁷⁰ While the increase in the number of vehicles, which create significant traffic jams in Gaborone, reflects increasing affluence, many imports are older models that increase levels of air pollution. Gaborone would benefit greatly from the development of a public transit system. The electrification of energy end-uses would contribute to cleaner air in Botswana and would also address the climate crisis as renewables replace fossil fuels in the electricity system.

65. Household air pollution is a significant concern as many people, in particular in rural areas, cook and heat with wood, charcoal or cow dung, fuels that expose households, especially women and children, to high levels of pollution.⁷¹ Approximately one-third of the population (including a much higher proportion of rural residents) do not have access to clean cooking fuels and technology, such as electricity and liquified petroleum gas.⁷² Acute respiratory infections associated with biomass burning are one of the leading causes of child mortality in Botswana.⁷³ Free or heavily subsidized clean cookstoves should be provided to low-income households. Improving access to electricity would also help address the problem, particularly if subsidies are provided for low-income households.

66. The development of the Southern African Development Community Regional Policy Framework on Air Pollution (the Lusaka Agreement) concentrates on the impacts of air pollutants on health from indoor and outdoor exposure, including the effects on crops and ecosystems. Although the Lusaka Agreement was adopted in 2008, as yet Botswana has no legally binding air quality standards, no vehicle emission standards, no effective controls for solid waste burning and allowable levels of sulphur in diesel fuel of between 51 and 500 parts per million.⁷⁴ In contrast, in Rwanda, which has legally binding air quality standards, vehicle emissions are regulated based on European Union standards (Euro 4 or higher), there are strict controls for solid waste burning and allowable levels of sulphur in diesel are set at less than 50 parts per million.⁷⁵ The Special Rapporteur encourages Botswana to review and strengthen regulations and programmes that protect and improve air quality.

G. Non-toxic environments

67. As acknowledged in the eleventh National Development Plan, the country suffers from poor management of all household waste, commercial waste, industrial chemicals, chemical waste and other hazardous waste, concluding that those substances pose a high risk to human health in urban areas.⁷⁶ That conclusion is confirmed by health experts, who report that, in addition to the absence of a systematic regulatory framework for toxic substances, there is a lack of reliable, accurate information on hazardous and toxic waste, leading to inadequate public awareness.⁷⁷

68. Botswana has a waste management strategy, although lack of implementation has been its Achilles heel for 25 years. A promising new strategy, based on circular economy principles, is in development, however, once again, implementation will be key to its success

⁶⁹ Reginald Dennis Gwisai et al., “Assessing the impacts of gaseous emissions on human health around the Selebi-Phikwe BCL copper nickel mine, Botswana”, *Journal of Sustainable Development in Africa*, vol. 17, No.7 (2015).

⁷⁰ Eleventh National Development Plan, p. 141.

⁷¹ T.S. Verma et al., “Study of indoor air pollution from household fuels in Gaborone, Botswana”, *Journal of African Earth Sciences*, 2010, vol. 58, No. 4 (2010), pp. 648–651.

⁷² See <https://ourworldindata.org/energy/country/botswana>.

⁷³ M. Wiston, “Status of air pollution in Botswana and significance to air quality and human health”, *Journal of Health and Pollution*, vol. 7, No. 15 (2017), pp. 8–17.

⁷⁴ See www.unep.org/interactives/air-pollution-note.

⁷⁵ Ibid.

⁷⁶ Eleventh National Development Plan, pp. 134 and 145.

⁷⁷ Patience Erick, “Botswana: country report on children’s environmental health”, *Reviews on Environmental Health*, vol. 35, No. 1 (2019), pp. 9–14.

or failure. Botswana should consider a comprehensive system of extended producer responsibility that shifts the burden of operating and paying for recycling systems from the Government to the industries that produce or import recyclable products and packaging.

69. Plastic pollution is a growing concern in Botswana, as well as globally. The Government has established a levy on plastic bags to discourage their use, although, as yet, there is no effective recycling or waste management system, meaning that the dumping and burning of garbage is still widespread. Recent studies revealing microplastics in the water, fish and sediments of the Okavango Delta are also disturbing.⁷⁸

70. With regard to lead contamination, the Special Rapporteur notes that a recent study found that lead in all 19 paint samples purchased from stores in Botswana was below the recommended regulatory limit.⁷⁹ Botswana does not regulate lead paint and there are no barriers to lead paint entering the market. The fact that the samples were below the regulatory limit is likely owing to the fact that six out of the seven brands of paint were imported from South Africa, which does regulate lead paint. It is also noteworthy that lead (likely from ammunition used in hunting) poses a risk to wildlife in Botswana, including at-risk species such as the white-backed vulture.⁸⁰

71. The Special Rapporteur was pleased to learn that new legislation governing toxic chemicals is under development, as well as a new national environmental health strategy, and he encourages the Government to ensure that sufficient resources are provided to enable their implementation and enforcement.

72. Mining activities can have significant impacts on the right to a healthy environment, including pollution, loss of biodiversity and reduced access to safe and sufficient water. The Special Rapporteur was informed of community concerns regarding mining activities in the northwest and in Ghanzi District, including air and soil pollution, loss of vegetation and negative effects on the water table. A recent study highlighted the lack of emphasis on health in environmental impact assessments of mining projects, noting that miners and ex-miners in Botswana “suffer from preventable injuries and disease due to a host of factors associated with working in the mines”.⁸¹

IV. Information, public participation and access to justice in environmental matters

73. The procedural elements of the right to a clean, healthy and sustainable environment include access to environmental information, public participation in environmental decision-making and access to justice. At a meeting with civil society, one participant said, “We all dream of a society that does things better”.

74. Many persons with whom the Special Rapporteur met expressed concern about their inability to gain easy, timely and affordable access to important environmental information, to participate meaningfully in environmental decision-making and to have their concerns addressed. Examples include information about the oil and gas development in the North-West District and plans for an additional coal-fired power plant. There is no legislation governing access to information in Botswana. On the other hand, the country deserves credit for producing the comprehensive *Botswana State of Environment and Outlook Report 2022*

⁷⁸ B.C. Dithlakanyane et al., “Microplastic load in the surface water and *Tilapia sparrmanii* (Smith, 1840) of the river systems of Okavango Delta, Botswana”, *Environmental Monitoring Assessment*, vol. 194, No. 8 (8 July 2022).

⁷⁹ R.A. Kambarami et al., “Lead levels of new solvent-based household paints in Zimbabwe and Botswana: a preliminary study”, *African Journal of Primary Health Care & Family Medicine*, vol. 14, No. 1 (2022).

⁸⁰ R. Garbett et al., “Association between hunting and elevated blood lead levels in the critically endangered African white-backed vulture *Gyps africanus*”, *Science of the Total Environment*, vol. 630 (15 July 2018), pp. 1654–1665.

⁸¹ See www.cesr.org/all-risk-and-no-reward-how-government-and-mine-companies-fail-protect-right-health-miners-and-ex.

and the informative speech by the Minister of Finance providing a “People’s Guide to the 2023/2024 Budget”.

75. Although traditional community meetings (*kgotlas*) are a useful way to engage with local communities, many people felt that there was only “an appearance of consultation”, owing to the limited information shared with the chief and the community prior to consultations. The Special Rapporteur heard that information shared with communities by private companies is sometimes incomplete and inaccurate and that it is not always updated as projects are developed. Concerns about unfulfilled commitments to provide local benefits and the inadequate implementation of the obligation to seek free, prior and informed consent of Indigenous Peoples were also reported.

76. Several people expressed concerns about shrinking civic space. The Special Rapporteur was surprised to hear from civil society organizations, human rights defenders and youth that they had been harassed and even threatened because of their work to protect human rights and the environment. Intimidation tactics are reprehensible and have no place in a free and democratic society like Botswana. States have the obligation to provide safe and enabling environments in which individuals, groups and organs of society that work on human rights or environmental issues can operate free from threats, harassment, intimidation and violence.⁸² Botswana must vigorously investigate and prosecute anyone who engages in unlawful intimidation activities.

77. Individuals and civil society organizations face daunting challenges in obtaining access to justice, in part due to the inadequate legal framework for the right to a clean, healthy and sustainable environment, the high costs associated with litigation and restrictive rules regarding standing to bring a case. Although Botswana is expanding legal aid programmes, they do not yet extend to environmental matters. The courts have ruled that access to justice is reserved for people directly affected by harmful activities but not to people acting in the public interest.⁸³ As a result, courts in Botswana have played a limited role in ensuring accountability in the context of climate, environment and human rights, unlike courts in other States in the region.⁸⁴

V. Children’s right to a clean, healthy and sustainable environment

78. The Special Rapporteur draws the attention of the Government to general comment No. 26 (2023) of the Committee on the Rights of the Child on children’s rights and the environment, with a special focus on climate change, which confirms that every child has the right to a clean, healthy and sustainable environment and clarifies State obligations related to respecting, protecting and fulfilling that right.

79. Unfortunately, not only will children in Botswana have to face the increasingly difficult challenges presented by the climate crisis, they will also face food insecurity, lack of access to water and sanitation and exposure to pollution and toxic substances, undermining their ability to enjoy their rights to food, water, health and a healthy environment. A large number of children in Botswana, with estimates ranging from 20 per cent to 30 per cent, suffer from stunting caused by inadequate nutrition.⁸⁵ In addition, around 49 per cent of children suffer from multidimensional poverty, with important disparities between rural and

⁸² See [A/HRC/37/59](#).

⁸³ K. Solo and P. G. Nsengaali (2022), “Access to justice in Botswana”, *Beijing Law Review*, vol. 13, pp. 489–495.

⁸⁴ See, for example, *Mohamed Ali Baadi and others v. Attorney General and 11 others* (2018), Petition No. 22 (2012), High Court of Kenya at Nairobi; and *South African Human Rights Commission v. Msunduzi Municipality et al.*, Case No. 8407/2020P, Order, 17 June 2021, High Court of South Africa.

⁸⁵ O. Ntshebe et al., “Household composition and child health in Botswana”, *BMC Public Health*, vol. 19, No. 1621 (2019); see also FAO, Selected indicators: Botswana, see www.fao.org/faostat/en/#country/20.

urban children, as 68 per cent of rural children are multidimensionally poor compared to 27 per cent of children living in cities or towns.⁸⁶

80. Children are disproportionately vulnerable to toxic substances as a result of physical factors (including the small size of their bodies and developing immune systems) and their behaviours (for example, crawling on the ground or putting items in their mouths). Contaminated water, air and soil and poor waste management pose significant risks to children's environmental health in Botswana. Outbreaks of waterborne disease, often caused by rotavirus, and pneumonia, often linked to exposure to air pollution, are major causes of mortality and morbidity among infants and children under the age of 5.⁸⁷

81. Lead is a high priority because of the severe risk to the neurological development of children. A 2010 study that tested blood lead levels in a sample of children from Botswana revealed that 31 per cent of children aged 6 and younger had blood lead levels above 10 micrograms per decilitre, indicating dangerously high exposure.⁸⁸ Health experts have urged the Government to conduct updated testing of young children for lead exposure, possibly when they are being vaccinated.⁸⁹

82. Botswana phased out leaded gasoline in 2006, addressing a major source of lead exposure. Unfortunately, soil near major roadways in Gaborone is still contaminated with lead.⁹⁰ Other prominent sources may include drinking water, lead paint, food products, traditional herbal remedies and some cottage industries, such as battery recycling. Botswana should establish and implement regulations to protect children's health and human rights from lead paint, lead in drinking water pipes and plumbing materials and other sources of potential exposure. A holistic initiative to protect children's environmental health would be an important investment. In addition, children and youth should be more involved in developing and implementing climate and environmental policies and programmes.

83. Like young people in many nations, youth in Botswana impatiently advocate for accelerated responses to society's climate and environmental challenges. In the words of one young Botswana environmentalist, "Enough is enough. We have talked, debated and researched about the environment for far too long, with too little action backing this up. It is time to focus on results and implementation."

VI. Conclusions and recommendations

84. **As a strong supporter of the Sustainable Development Goals, Botswana should strive to achieve a just social and ecological transition, avoiding the traditional economic model that exploits both people and nature for the benefit of a wealthy and powerful minority. This is essential for the country, which is facing growing climate and environmental challenges, as well as systemic inequality. Botswana will only succeed if human rights are placed at the heart of every law, policy and programme intended to accelerate climate and environmental progress. This is a legal obligation, not an option.**

85. **As Botswana continues to develop its enormous natural wealth, including diamonds, copper and abundant sunshine, it must do so in a way that respects human rights by recognizing the rights of Indigenous Peoples to free, prior and informed consent regarding projects in their territories, respecting the rights of local communities to participate in decision-making and to enjoy a fair share of benefits,**

⁸⁶ UNICEF, "Child Poverty in Botswana" (Statistics Botswana and UNICEF), April 2021.

⁸⁷ Erick, Patience, "Botswana: country report on children's environmental health", *Reviews on Environmental Health*, vol. 35, No. 1 (2020).

⁸⁸ Bontle Mbongwe et al., "Exposure to lead among children aged 1–6 years in the City of Gaborone, Botswana", *Journal of Environmental Health Research*, vol. 10, No. 1 (2010), pp. 17–26.

⁸⁹ Harriet Okatch et al., "Identifying contextually relevant lead exposures and risk practices/behaviors in Botswana and assessing caregiver lead knowledge levels", *Cogent Public Health*, vol. 10, No.1 (2023).

⁹⁰ Ibid.

imposing the highest possible environmental standards and maximizing public benefits.⁹¹

86. The Government should continue ongoing efforts to respect, protect and fulfil the human right to a clean, healthy and sustainable environment and related human rights, including by:

(a) Continuing to strengthen its human rights legal and policy framework, including by:

(i) Recognizing the human right to a clean, healthy and sustainable environment in the Constitution and legislation;

(ii) Ratifying the International Covenant on Economic, Social and Cultural Rights;

(iii) Ratifying the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa;

(iv) Recognizing the Indigenous Peoples of Botswana and respecting their rights, including to free, prior and informed consent;

(v) Providing sufficient resources for the expanded mandate of the Office of the Ombudsman and ensuring that the institution complies with the principles relating to the status of national institutions for the promotion and protection of human rights (the Paris Principles);

(b) Accelerating climate action, including by:

(i) Creating a goal of becoming a solar superpower in Southern Africa, harnessing the country's extraordinary potential to generate sufficient clean solar electricity to meet domestic needs and export substantial amounts to neighbouring States, in particular South Africa;

(ii) Ending investments in new coal-fired electricity generation and gradually phasing out coal while accelerating the transition to renewable energy, ensuring that at least 30 per cent of electricity will be renewable by 2030 in line with the current national plan;

(iii) Electrifying end uses of energy, including heating, cooling and transportation;

(iv) Increasing investments and incentives for energy efficiency, energy storage, public transport, active transport and climate-smart agriculture;

(v) Renegotiating trade and investment treaties to eliminate investor-State dispute settlement provisions or withdrawing consent to arbitration pursuant to those treaties;

(vi) Considering exploring opportunities for wind-powered electricity;

(vii) Expanding the use of distributed, small-scale renewable energy systems to contribute to the goal of universal access to electricity by 2030;

(c) Ensuring safe, sufficient water and adequate sanitation, including by:

(i) Applying a rights-based approach to all aspects of water governance, as set forth by the Special Rapporteur;⁹²

(ii) Taking immediate action to ensure safe and sufficient water for everyone, prioritizing the human rights of people whose rights are currently not being fulfilled;

⁹¹ In this regard, the Norwegian management of its oil and gas industry offers a useful model; the country established high environmental standards and policies to maximize public benefits, for example a 75 per cent tax on petroleum industry profits.

⁹² See [A/HRC/46/28](#).

- (iii) **Guaranteeing, in legislation, environmental flows for rivers and wetlands, ensuring that the quantity, timing and quality of freshwater flows are sufficient to sustain healthy aquatic ecosystems and the human livelihoods and well-being that depend on them;**
- (iv) **Protecting water sources from overexploitation and contamination and restoring the health of aquatic ecosystems;**
- (v) **Ensuring high efficiency standards for all equipment using water, including irrigation systems, toilets and appliances;**
- (vi) **Building one or more drinking water treatment plants in areas where water often suffers from high saline concentrations, for example in Ghanzi District;**
- (d) **Advancing healthy and sustainably produced food, including by:**
 - (i) **Increasing investments in water-smart drip irrigation;**
 - (ii) **Encouraging the use of drought resistant, high temperature tolerant and short maturity crop varieties and other types of climate-smart agriculture;**
 - (iii) **Prohibiting the import, manufacture, sale or use of all highly hazardous pesticides (category I and II) and collecting any remaining inventory for safe disposal;**
 - (iv) **Expanding the pilot project led by the Botswana University of Agriculture and Natural Resources using agrivoltaics where crops are grown in the shade provided by solar photovoltaic panels;**
- (e) **Protecting and restoring healthy ecosystems and biodiversity, including by:**
 - (i) **Employing a rights-based approach to all aspects of conservation, as emphasized in the 2022 Kunming-Montreal Global Biodiversity Framework;**
 - (ii) **Applying the Namibian model of community conservancies to increase local benefits and participation in decision-making related to land, water and wildlife;**
 - (iii) **Encouraging changes in crop types in areas where elephants raid certain crops, in order to help subsistence farmers to enjoy increased food and income security;**
 - (iv) **Implementing rigorous environmental impact assessment procedures for activities outside the Okavango Delta world heritage site that have the potential to negatively impact its outstanding universal value;**
- (f) **Improving air quality, including by:**
 - (i) **Following the seven steps set out in the report of the Special Rapporteur on the right to breathe clean air;⁹³**
 - (ii) **Reviewing and strengthening current regulations and programmes that protect and improve air quality;**
 - (iii) **Using the most recent guidance from WHO to strengthen air quality standards;**
 - (iv) **Investing in public and active transport and limiting the importation of the most polluting older vehicles;**
- (g) **Detoxifying environments in which people live, work, study and play by:**

⁹³ [A/HRC/40/55](#), paras. 63–78.

- (i) Ensuring that adequate resources are provided to enable implementation and enforcement of the legislation governing toxic chemicals that is under development;
- (ii) Devoting sufficient policy, human and financial resources for implementing the waste management strategy;
- (iii) Systematically applying extended producer responsibility in the context of solid waste management so that producers and importers of paper, plastic, packaging, batteries, tyres and other materials become fully responsible for financing and operating an effective recycling programme;⁹⁴
- (iv) Redirecting subsidies away from activities and products that produce pollution and release toxic substances to support non-toxic and sustainable products;
- (h) Ensuring access to environmental information, meaningful participation and access to justice and remedies by:
 - (i) Adopting a law on access to information;
 - (ii) Providing strong protections for environmental human rights defenders, diligently investigating, prosecuting and punishing the perpetrators of crimes against human rights defenders and increasing civic space for conversations about human rights;
 - (iii) Enabling affordable and timely access to justice and effective remedies for all;
- (i) Advancing the right of children to a clean, healthy and sustainable environment by:
 - (i) Establishing and implementing regulations to protect children's health and human rights from lead paint, lead in drinking water pipes and plumbing materials and other sources of potential lead exposure;
 - (ii) Working with local experts to develop a holistic initiative to protect children's environmental health;
 - (iii) Securing informed and meaningful participation of children and youth in developing and implementing climate and environmental policies and programmes;
 - (iv) Creating an action plan for implementing State obligations set forth in general comment No. 26 (2023) of the Committee on the Rights of the Child on children's rights and the environment, with a special focus on climate change;
 - (v) Consistently appointing child and youth representatives to national advisory bodies and national delegations to international environmental meetings, including conferences of the States parties to the conventions on climate, biodiversity, desertification and toxic substances.

87. Regarding the global climate crisis that is exacerbating problems such as water scarcity, food insecurity and poverty in Botswana, States in the global North should:

- (a) Accelerate efforts to provide the required levels of assistance, including funding for loss and damage, adaptation and mitigation to climate vulnerable developing nations, such as Botswana, where the impacts of the climate crisis are already severe;

⁹⁴ See British Columbia, Canada, extended producer responsibility policy five-year action plan 2021–2026; and British Columbia, Environmental Management Act, Recycling Regulation No. 449/2004.

(b) **Provide grant funding from the Just Energy Transition Partnership to finance the country's shift from coal to solar for electricity generation and improved transmission infrastructure to enable electricity exports;**

(c) **Increase the ambition and equity of actions to rapidly reduce greenhouse gas emissions and protect and restore natural carbon sinks;**

(d) **Apply the multidimensional vulnerability index instead of per capita GDP when determining eligibility for climate finance, concessional loan rates, debt relief and development assistance.**
