

The following text is the HRW submission for the Atmospheric Pollution Report of the Special Rapporteur on Human Rights and the Environment. It presents the key findings of our recent work on air pollution and human rights in Lebanon and Guinea. Please do not hesitate to reach out if there exists any additional information we might provide. Thank you for the opportunity to present our relevant findings.

1. WASTE MANAGEMENT IN LEBANON

Summary: Lebanon's waste management system, since the early 90s, consisted of ad hoc emergency arrangements rather than a robust national policy. The lack of a cohesive model eventually sparked a national crisis and, throughout the years, led to the widespread practice of open burning of waste in hundreds of dumps scattered across the country, exacerbating air pollution and jeopardizing the health of resident – especially children and older people.

Human Rights Watch published a report entitled “As If You’re Inhaling Your Death”¹ in 2017 that detailed the practice of open burning of waste and the associated health risks in Lebanon. In line with the report, we initiated a campaign and launched an online petition that gathered more than 12,000 signatures.² Despite the recent passage of a long-awaited – yet highly contested – law on solid waste management, we continue to document³ additional instances of open burning of waste taking place.

Findings: Between September 2016 and May 2017, Human Rights Watch researchers visited 15 locations and carried out 104 extensive and semi-structured interviews with public health experts, officials, doctors, pharmacists, activists, and residents living in close proximity to open dumps. At three dump sites, Human Rights Watch deployed drones and captured hundreds of aerial photographs that revealed black scars and ash deposits, indicating a history of massive burning taking place.

Human Rights Watch did not undertake surveys, scientific testing, or a statistical study. Rather, we based our findings on extensive qualitative interviews and reviewed a wide range of published and unpublished materials, in addition to meetings and correspondence with the several government agencies, including the Ministry of Environment, Health, and Interior, and the Civil Defense.

¹ <https://www.hrw.org/report/2017/12/01/if-youre-inhaling-your-death/health-risks-burning-waste-lebanon>

² <https://www.hrw.org/stoptheburning>

³ <https://www.hrw.org/news/2018/10/18/lebanon-no-action-enforce-new-waste-law>

In its report, Human Rights Watch found that open burning of waste is ongoing at more than 150 open dumps – out of 941 across Lebanon – and disproportionately taking place in lower income parts of the country including the Bekaa, Nabatieh, and the South.

In a letter to Human Rights Watch, Lebanon's Civil Defense indicated that they had responded to 4,426 reports of open burning of waste since the beginning of the 2015 waste management crisis. Of these, 108 were in Beirut, 3,504 were in Mount Lebanon, and the remaining cases elsewhere.

According to the Civil Defense, as compared to the period before the 2015 waste management crisis, the number of open burning cases reported in Mount Lebanon was 330 percent higher in 2015 and 250 percent higher in 2016. In Beirut, the number of cases was 50 percent higher in 2015 and 75 percent higher in 2016 as compared to rates of fires before the crisis.

Residents we spoke to have consistently reported a correlation between the burning of waste and the emergence of health symptoms, including chronic obstructive pulmonary disease, coughing, throat irritation, dermatitis, and asthma. While such illnesses are multifactorial, our research findings suggest a strong causal link between poor public health and air pollution from waste burning in Lebanon.

In 2016, the American University of Beirut issued the results of a series of scientific tests of air quality taken near the top of a residential building in Beirut, which was located near a dump site where burning of waste was taking place. The tests revealed an alarming presence of pollutants, including PAHs and PCDD. Exposure would result in a substantial increase in cancer risk, according to the study.

In another comparative study by a group of researchers at the American University of Beirut, researchers found more frequent reports of fatigue, headaches, sneezing, insomnia, and breathing difficulties among individuals working near dump site with open burning compared to areas without a dump site nearby.

Human Rights Watch spoke with ten doctors and a number of pharmacists regarding the health impact of open burning of waste, all of whom believed that the unlawful practice was responsible for a range of respiratory illnesses, noting a drastic increase in patients following the crisis in 2015.

The crisis – in both its environmental and public health aspects – was a direct result of the government's failure to put in place a national waste management policy, while leaving municipalities outside the capital to their own devices.

Human Rights Watch found that municipalities were openly defying the law by continuing to randomly dump and burn garbage. In October, our researchers visited two villages in South of Lebanon – namely, Qabrikha and al-Qantara – and spoke to residents who have witnessed the burning and complained of respiratory symptoms and a diminishing quality of life. Human

Rights Watch's researchers found burn marks upon examining the two sites. Qabrikha's dump, in particular, was still smoking and was located in the Wadi Hujer Nature Preserve.⁴

The government has not taken basic steps to monitor the impact of this open dumping on burning on people's health or the environment.

Human Rights Watch is also concerned about the government's current plan for the capital Beirut and surrounding areas, which relies on two seaside landfills that never passed an environmental impact assessment, according to the Ministry of Environment.

Relevant Laws, Domestic and International:

- Law No. 444/2002, Lebanon's environmental law, prohibits individuals and entities, public and private, from undertaking activities that lead to the emission of pollutants into the air, including harmful smells.
- Law No. 64/1988 on toxic waste and harmful pollutants prohibits the creation of toxic waste without proper disposal, and provides for penalties including fines and terms of imprisonment between three months and three years.
- Law No. 80/2018⁵ on integrated solid waste management, passed by parliament on September 24, 2018, prohibits random dumping and open burning of waste, setting fines and jailtime ranging from one month to three years for non-hazardous waste.
- Law No. 78/2018⁶ for air quality protection paves way to establish a national program to monitor ambient air quality, update a national emissions log, set emission limit values, require emission licensing and permits, carry out inspections, publish periodic reports, carry out awareness campaigns, and improve the overall air quality.
- In January 2018, the council of ministers passed a summary waste management plan and in February it allocated US\$20 million to begin closing or rehabilitating some open dumps.
- Guidelines to municipalities and unions of municipalities on solid waste management were however already circulated by the Ministry of Environment in November 2017.⁷
- In 2014, the Ministry of Environment presented a 25-year national integrated strategy for solid waste management to the cabinet, but cabinet has not approved it.

⁴ <https://www.hrw.org/news/2018/10/18/lebanon-no-action-enforce-new-waste-law>

⁵ https://www.hrw.org/sites/default/files/supporting_resources/iswm_law_80_october2018_english.pdf

⁶ <http://www.moe.gov.lb/getattachment/dc69b6e9-50dd-417c-95b7-aa1308cd4027/.aspx>

⁷ [Guidelines to municipalities and unions of municipalities on solid waste management](#)

Lebanon is a party to the International Covenant on Economic, Social and Cultural Rights (ICESCR).

Burning of waste and the government's lack of corrective measures triggers a range of obligations under international human rights law, including the government's duties to respect and protect the right to health.

- Victims of violations of the right to health are entitled to adequate reparations in the form of “restitution, compensation, satisfaction or guarantees of non-repetition.”
- Lebanon must take steps to achieve “the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.”
- Lebanon has an obligation to prevent and reduce the population's exposure to harmful substances such as “detrimental environmental conditions that directly or indirectly impact upon human health” and to adopt appropriate “legislative, administrative, budgetary, judicial, promotional and other measures towards the full realization of the right to health.”
- The right to health also includes the right to “seek, receive and impart information and ideas concerning health issues.”

Lebanon is a party to the Stockholm Convention on Persistent Organic Pollutants whose parties are required to take measures to eliminate or reduce the release of these pollutants into the environment and ensure that stockpiles and waste containing or contaminated with persistent organic pollutants are managed in a manner protective of human health and the environment.

Lebanon is also a party to the Basel Convention, which requires state parties to ensure the availability of adequate disposal facilities for the environmentally sound management of hazardous wastes, including toxic, poisonous, explosive, corrosive, flammable, ecotoxic, and infectious wastes.

The Convention on the Rights of the Child ties children's right to the highest attainable standard of health, including the right to nutritious food and safe drinking water, to issues of environmental pollution, and defines the child's right to information on environmental health issues and defines environmental education as one of the goals of education.

2. BAUXITE MINING IN GUINEA

Summary: Bauxite mining in Guinea, one of the world's poorest countries, is booming. Bauxite from Guinea now makes up a large proportion of the aluminum used across the world. With several more companies preparing to begin exports, Guinea, which has the world's largest bauxite deposits, may soon become the largest global producer.

Though profitable, Bauxite mining has profound human rights consequences for the rural communities that live closest to mining operations. Among these consequences is air pollution: the dust produced by bauxite mining and transport smothers fields and enters homes, leaving families and health workers worried that reduced air quality threatens their health and environment.

In October (2018), Human Rights Watch published a report entitled “What Do We Get Out of It?” documenting how the practices of mining companies, when combined with inadequate government oversight, upend the lives and livelihoods of rural communities.

Findings: In the course of writing this report, Human Rights Watch conducted 300 interviews in more than 30 mining-affected villages in the Boké region, as well as dozens of interviews with local and national government officials, civil society groups, environmental scientists, public health officials and company representatives.

- While bauxite dust is not toxic in itself, exposure to any fine particle dust (particulates) has been proven to cause, trigger, or exacerbate the occurrence of respiratory and cardiovascular diseases.⁸ Particulates of 10 micrometers or less (PM₁₀) can penetrate the lungs or enter the bloodstream, and can lead to heart disease, lung cancer, asthma, and acute lower respiratory infections.⁹ PM_{2.5} are smaller fine particles, with diameters that are 2.5 micrometers and smaller, that are inhaled deeper into the lungs and so create additional health risks.¹⁰ Both PM₁₀ and PM_{2.5} particles can be transported in the air, with PM_{2.5} potentially remaining airborne for long periods and PM₁₀ particles, which do not carry as far, often deposited downwind of emissions sources.¹¹
- Surface mining produces large quantities of particulate matter, both because of the dust produced during mining itself and the loading and road transport of raw material, although most (but not all) of the dust is larger than the dangerous PM₁₀ size and below.¹²
- During the transport of raw material from mines, haul roads in particular are a major source of airborne particulate matter due to the interaction between roads and fires, including particles (PM₁₀ and under) small enough to damage human health.¹³
- Exhaust emissions from diesel and gas-powered vehicles used on mining roads can also cause adverse impacts on respiratory health.¹⁴ Diesel powered-vehicles emit both sulfur and nitrogen oxides, which have been linked to a range of negative respiratory and cardiac illnesses and overall increased

⁸ http://www.euro.who.int/_data/assets/pdf_file/0006/189051/Health-effects-of-particulate-matter-final-Eng.pdf

⁹ Ibid.

¹⁰ Douglas Dockery and C. Arden Pope, "Acute respiratory effects of particulate air pollution," *Annual Review of Public Health*, vol. 15 (1994), pp. 107-132; Douglas Dockery et. al, "An association between air-pollution and mortality in United States Cities," *New England Journal of Medicine*, vol. 329 (1993), pp. 1753-1759.

¹¹ United States Environmental Protection Agency, "Particulate Matter Emissions."

¹² Aditya Kumar Patra, Sneha Gautam, and Prashant Kumar, "Emissions and human health impact of particulate matter from surface mining operation—A review," *Environmental Technology & Innovation*, vol. 5 (2016), pp. 233-249, at p. 237.

¹³ Ibid. See also Subrato, Sinhaa and S.P. Banerjee, "Characterization of haul road dust in an Indian opencast iron ore mine," *Atmospheric Environment*, vol. 31 (1997), pp. 2809-2814.

¹⁴ Health Effects Institute, "Traffic-Related Air Pollution: A Critical Review of the Literature on Emissions, Exposure, and Health Effects," January 2010.

mortality.¹⁵ Vehicle emissions are also an additional source of PM_{2.5} and PM₁₀ particles.¹⁶

- A mining ministry-commissioned audit undertaken in 2017 concluded that SMB, Guinea's biggest exporter, at the start of mining, conducted no monitoring of air quality and that the company didn't at the time have the equipment necessary to do so.¹⁷ This meant that, when the project began, neither SMB nor the Guinean government knew the extent of the consequences for air quality and public health.
- CBG's (Guinea's second largest exporter) estimated contribution to all the particulate matter collected, while moderate, is significant in light of WHO guidelines. The air quality observed in Kamsar did not meet WHO guidelines and could increase the risk of health effects on the respiratory system, for example. These would be accentuated in more vulnerable individuals, such as infants or [older people].¹⁸

Good practices:

- The World Bank Group's Environmental, Health, and Safety Guidelines (2007) state that companies should estimate the likely impact of their activities on air quality prior to beginning a project.¹⁹
- International environmental scientists and respiratory health experts told Human Rights Watch that, once the likely impact of mining on air quality is known, companies should conduct health risks assessments, which use statistical models to estimate the consequences of a change in air quality on the health of the local population.²⁰

Legal Guidelines:

¹⁵ <http://documents.worldbank.org/curated/en/329901468151500078/pdf/864850WP00PUBLOI0repor t002April2014.pdf>

¹⁶ Ibid. Health Effects Institute, "Traffic-Related Air Pollution: A Critical Review of the Literature on Emissions, Exposure, and Health Effects," January 2010, p. vii.

¹⁷ Study on the Implementation of Environmental and Social Management Plans for Mining Companies in Guinea, Louis Berger, May 2018, SMB analysis, p. 9.

¹⁸ CBG, "Assessment of Health Risks to Nearby Communities and Workers due to Emissions from Compagnie des Bauxites de Guinée," (December 2014) p. i. The assessment concluded that CBG's contribution to particulate matter in the Kamsar area (as opposed to the contribution from other emissions sources) is "a small percentage" (about 4%). CBG, "Assessment of Health Risks to Nearby Communities and Workers due to Emissions from Compagnie des Bauxites de Guinée," (December 2014), p. 23. See also EEM, "Supplementary Information Package (SIP) to the ESIA of the CBG Expansion Project," (October 2015), p. 17: "The atmosphere of Kamsar is therefore still loaded with fine particles from various sources other than CBG such as traffic (roads), burning, and other industrial or commercial operations. The low percentage of aluminum measured in collected dust samples corroborated this fact (about 2% while CBG's ore contains more than 48%). The contribution of CBG in the concentrations obtained in the background studies would therefore be less than 10%." However, later responses to supplemental questions from the IFC and other lenders state that the air quality readings conducted in residential areas near the Kamsar plant, "are considered to be very influenced by CBG operations," and that the correlation between predicted emissions from CBG's plant and the actual levels of particulate matter, "suggests that the processing facility is the primary source of fine particulate" at the two monitoring sites. EEM, "Supplementary Information Package (SIP) to the ESIA of the CBG Expansion Project," (October 2015) p. 34.

¹⁹ World Bank Group, "Environmental, Health, and Safety Guidelines, Air Emissions and Ambient Air Quality," 2007, p. 4.

²⁰ Human Rights Watch interview with Guy Marks, Professor of Respiratory Medicine, Woolcock Institute of Medical Research and University of New South Wales, March 26, 2018. Human Rights Watch interview with Mark Cherniak, Ph.D., Staff Scientist, Environmental Law Alliance Worldwide (ELAW), November 22, 2017 and December 4, 2017; Email correspondence between Cherniak and Human Rights Watch, February 23, 2018.

- Guinea's 1989 Code on Protection and Fulfillment of the Environment, Article 68: requires that "states take reasonable and other measures to prevent pollution and ecological degradation, to promote conservation, and to secure an ecologically sustainable development and use of natural resources."
- Guinea's 2011 mining code requires companies to, "ensure the rational exploitation of mineral resources in harmony with the protection of the environment and the preservation of health," as well as work for the "promotion or maintenance of the living conditions and general good health of the population." Specifically, Article 18 requires the National Assembly to ratify all mining agreements between the government and mining companies.²¹ The code also requires companies to conduct environment and social impact assessments to obtain approval for a project.
- The Guinean government's 2014 regulations on environmental and social impact assessments in the mining sector recommends that companies, "used recognized models" as the basis for their evaluation of likely environmental impacts, including as regards air quality.²²
- In 2015, the Guinean government adopted national standards for atmospheric pollution that included standards on air quality.²³ The standards include air quality targets for particulate matter less than 10 micrometers and smaller (PM₁₀).²⁴ BGEEE (Ministry of the Environment and the Office of Environmental Studies and Evaluation) is supposed to conduct an annual on-site inspection of companies, reviewing the entirety of a company's compliance with its environmental and social management plan.²⁵

Challenges:

- The Guinean government sometimes allows for circumventing the typical approval process by starting construction of major infrastructure before the applicable ESIA's are complete.²⁶

²¹ Mining Code, Article 143.

²² Ministry of the Environment, Water and Forests and Ministry of Mines and Geology, Directive on the Implementation of Environmental and Social Impact Assessments in Mining Operations, 2014, p. 21.

²³ Regulation Harmonizing Six Guinean Standards on Protection of the Environment, February 27, 2015. The standard was itself formulated in 2012. Guinean Institute for Standards and Measurement, Guinean Standard, Atmospheric Pollution, 2012.

²⁴ The ambient air quality standard for PM₁₀ is 230 µg/m³ for an average level over a 24-hour period, and 50 µg/m³ at the annual average. Guinean Institute for Standards and Measurement, Guinean Standard, Atmospheric Pollution, 2012, p. 15.

²⁵ Human Rights Watch Interview with environment ministry official, April 24, 2018. INSUCO, "Study on the Norms and Practices of Expropriation, Compensation, Removal and Resettlement for Communities Affected by Mining Projects in the Bauxite Region of Guinea," February 2018, p. 34.

²⁶ Human Rights Watch review of satellite imagery shows that major ground clearance for the port in Katougouma began in February 2015, with the related ESIA dated April 2015. The Guinean government told Human Rights Watch that it issued a Certificate of Environmental Conformity for SMB's first round of ESIA's, which includes Katougouma, on June 26, 2015. Review of satellite imagery showed that road construction from the port northwards started in March 2015. Major ground clearance for the Dapilon port started in April 2016, with the related ESIA dated May 2016. Construction of access roads to Dapilon started March 2016. Media reports suggest that the Dapilon ESIA was reviewed by the Guinean government in September 2016. "Guinée Minérale Ressource et la SMB-Malapouya présentent leurs études d'impact

- Although EIAs should in principle be public documents, companies often fail to disclose them, instead saying they are available at the environment ministry, and the BGEEE specifically. While the BGEEE should provide members of the public with copies of EIAs and ESMPs on request, civil society activists said that it often does not do so, or that obtaining the necessary documents requires a modest payment to cover for printing costs.