

## Pressures to obtain foreign currency fortify the bauxite-alumina industry's dominance in Jamaica. This dominance has been reinforced by World Bank and International Monetary Fund structural adjustments in the aftermath of colonial underdevelopment — at the expense of ecosystems and environmental justice.

Jamaica is an island nation rich in biodiversity, particularly in organisms not found anywhere else, called endemic species — it is ranked 5th among islands for endemic plants.<sup>195</sup> That biodiversity is at risk, with 2022 data classifying a total of 214 plant species and 48 fish species in the country as under threat,<sup>196</sup> and rates increasing over time.<sup>197</sup>

Biodiversity has been declining in Jamaica due in part to land use changes and destruction of unique habitats that host these endemic species.<sup>198</sup> While certainly not the only cause of degradation, bauxite mining in Jamaica is a considerable driver.<sup>199</sup> The most recent government economic planning document explicitly states that bauxite mining is linked to: "[m]ajor environmental impacts including loss of biodiversity; reduction of forest cover; loss of habitats, and watershed degradation."<sup>200</sup>

Concerns about water quality, cultural heritage, and biodiversity have come to a head in Cockpit Country, home to the Maroons, an ethnic group descended from enslaved Africans and Indigenous Taino communities.<sup>201</sup> The area is a biodiverse limestone forest region in the northeast of Jamaica, with many of the island's endemic species.<sup>202</sup> In 2022 the National Environment and Planning Agency (NEPA) issued permits to Noranda Jamaica Bauxite Partners II and New Day Aluminium (Jamaica) Limited to mine 1,300 hectares of land in Cockpit County.<sup>203</sup> In 2 Supreme Court filings (2021 and 2022), residents of the area claimed violation of constitutional rights and significant injuries due to mining, including to their health, homes, crops, drinking water, livelihood, and at least 1 death.<sup>204</sup> While awaiting the decision on these constitutional claims, the plaintiffs filed for injunctions to stop mining. In early 2023, the court sided with the plaintiffs,

<sup>195</sup>Environmental Solutions Limited, "National Strategy and Action Plan on Biological Diversity in Jamaica 2016–2021," NEPA, 2017, [www.cbd.int/doc/world/jm/jm-nbsap-v2-en.pdf](http://www.cbd.int/doc/world/jm/jm-nbsap-v2-en.pdf).

<sup>196</sup>Erick Burgueño Salas, "Number of Threatened Living Species in Jamaica on the IUCN Red List in 2022, by Taxonomic Group," Statista, last modified April 17, 2023, [www.statista.com/statistics/978559/number-threatened-species-jamaica-type/](https://www.statista.com/statistics/978559/number-threatened-species-jamaica-type/).

<sup>197</sup>In 2015, Jamaica's score on the International Union for Conservation of Nature Red List Index was 0.673. It declined to 0.668 in 2018 and further to 0.665 in 2020. This suggests that biodiversity loss is worsening, although data is limited; see: "Voluntary National Review 2022: Goal 15," Planning Institute of Jamaica, 2022, [www.pioj.gov.jm/wp-content/uploads/2022/10/VNR\\_Goal\\_15.pdf](http://www.pioj.gov.jm/wp-content/uploads/2022/10/VNR_Goal_15.pdf).

<sup>198</sup>Dionne Newell, "Fifth National Report for the NBSAP Project," NEPA, 2015, [www.cbd.int/doc/world/jm/jm-nr-05-en.pdf](http://www.cbd.int/doc/world/jm/jm-nr-05-en.pdf).

<sup>199</sup>Bauxite is the primary ore used in making aluminum. After it is mined, the ore is dehydrated, refined into aluminum oxide (alumina), and finally smelted into aluminum through a chemical and energy-intensive process.

<sup>200</sup>"Vision 2030 Jamaica," Planning Institute of Jamaica, 2018, 260, [www.pioj.gov.jm/wp-content/uploads/2019/08/MTF-2018-2021-March-2019.pdf](http://www.pioj.gov.jm/wp-content/uploads/2019/08/MTF-2018-2021-March-2019.pdf); in addition to forest and other ecosystem clearing needed for open-pit mining, there is evidence of long-term decline of soil fertility due to bauxite leaching and topsoil loss through erosion. Moreover, bauxitic soils respond poorly to restoration, making the reclamation of post-mining land difficult. On the impacts of bauxite mining, see: Christer Berglund and Tommy Johansson, "Jamaican Deforestation and Bauxite Mining — The Role of Negotiations for Sustainable Resource Use," *Minerals & Energy* 19, no. 3 (2004): 2–14, <https://doi.org/10.1080/14041040310034383>; Madeline Lorch Tramm, "Multinationals in Third World Development: The Case of Jamaica's Bauxite Industry," *Caribbean Quarterly* 23, no. 4 (1977): 1–16, [www.jstor.org/stable/40653340](http://www.jstor.org/stable/40653340).

<sup>201</sup>Robert Connel, "Maroon Ecology: Land, Sovereignty, and Environmental Justice," *The Journal of Latin American and Caribbean Anthropology* 25, no. 2 (2020): 218–235, <https://doi.org/10.1111/jlca.12496>; Jean Besson, *Transformations of Freedom in the Land of the Maroons: Creolization in the Cockpits, Jamaica* (Kingston: Ian Randle Publishers, 2016).

<sup>202</sup>"Cockpit Country: Jamaica's Treasure Trove of Biological Diversity," Forestry Department of Jamaica, 2020, [www.forestry.gov.jm/newsDetails?newsID=19](http://www.forestry.gov.jm/newsDetails?newsID=19).

<sup>203</sup>Noranda Bauxite Limited is now going by the name Discovery Bauxite, which is fully owned by Atlantic Alumina (US-based smelting operation). Atlantic Alumina has a 49 percent interest in what is called the "Discovery Jamaica Bauxite Partners II", with the Government of Jamaica (GOJ) owning the remaining 51 percent. A concession from the Government of Jamaica permits Atlantic Alumina to mine bauxite in Jamaica through 2030; see: "Discovery Bauxite," Atlantic Alumina, accessed November 18, 2023, <https://raccoon-horse-y9tn.squarespace.com/discovery-bauxite>.

issuing an injunction, effectively halting mining operations in the area.<sup>205</sup> Jamaica and its partners in the project appealed the injunction, and it was lifted later in 2023.<sup>206</sup> As of early 2024, the constitutional claim has yet to be heard. Given the government-acknowledged role of mining in eroding biodiversity, and these environmental justice issues, why would the government side with the bauxite industry over its citizens? What keeps the bauxite-alumina sector in place, despite the known environmental and social impacts? As this case study shows, the bauxite industry's influence in Jamaica stems from pressures to chase foreign currency that have been reinforced by World Bank (WB) and International Monetary Fund (IMF) structural adjustments in the aftermath of colonial underdevelopment.

## The growing but uneven economic benefits from bauxite

Initial sector development in the post–World War II boom was negotiated between the British colonial government and American multinational companies — Alcan, Reynolds, and Kaiser. While these arrangements had low royalty rates “far below the value of the bauxite and alumina exported” — rates which were eventually renegotiated — the industry did bring new wealth and growth to the country.<sup>207</sup> However, Jamaica gains less revenue from its natural resources than it could. Since Jamaica extracts bauxite, but refines only a small amount to alumina, it misses out on capturing more valuable parts of the commodity, including smelting into aluminum.<sup>208</sup> Data from the earlier phase of the industry (1950–1967) suggests that the lack of value added resulted in “95 [percent] of the gross value generated from Jamaican bauxite being accrued abroad rather than domestically.”<sup>209</sup> Further, Jamaican mining operations result in negative impacts like land ownership concentration and peasant dispossession.<sup>210</sup>

In line with rising “Third World” economic nationalism in the 1970s and in response to the growing oil prices that strained their balance of payments and import costs, Jamaica placed a levy on bauxite exports in 1973 to increase its take from the sector.<sup>211</sup> That year Jamaica also began acquiring stakes in mining companies, including 51 percent share in Kaiser Aluminum's operations in the country, followed by other partial nationalizations. These measures increased the benefits Jamaica received from the sector, but with increasing competition from other bauxite producers with lower taxes and royalties (such as Australia, Brazil, and Guinea), Jamaica's bargaining power was reduced significantly.<sup>212</sup>

<sup>204</sup>The first case was filed by the Southern Trelawny Environmental Agency (STEA) and Clifton Barrett in January 2021, with specific reference to Special Mining Lease (SML) 173. The second case was filed by nine residents of rural communities in St. Ann in July 2022, with respect to mining activities carried out pursuant to SMLs 165 and 172, and the mining proposed to be carried out pursuant to SML 173. In 2022, the Inter-American Commission on Human Rights (IACHR) concluded the St. Ann communities are facing significant harms, and called for the government of Jamaica to take precautionary measures to prevent these harms, see: “IACHR Grants Precautionary Measures in Favor of Afro-Descendant Persons from Peasant Communities of St. Ann in Jamaica,” Organization of American States, December 2, 2022, [www.oas.org/en/IACHR/jsForm/?File=/en/iachr/media\\_center/PReleases/2022/267.asp](http://www.oas.org/en/IACHR/jsForm/?File=/en/iachr/media_center/PReleases/2022/267.asp).

<sup>205</sup>Balford Henry, “Bauxite Mining Case Hits Appeal Court,” *Jamaica Observer*, May 22, 2023, [www.jamaicaobserver.com/news/bauxite-mining-case-hits-appeal-court/](http://www.jamaicaobserver.com/news/bauxite-mining-case-hits-appeal-court/).

<sup>206</sup>“Claim of ‘Irreparable Harm’ from Noranda Bauxite Mining ‘Speculative’ — Court of Appeal,” *Jamaica Gleaner*, June 17, 2023, <https://jamaica-gleaner.com/article/news/20230617/claim-irreparable-harm-noranda-bauxite-mining-speculative-court-appeal>.

<sup>207</sup>Madeleine Lorch Tramm, “Multinationals in Third World Development: The Case of Jamaica's Bauxite Industry,” *Caribbean Quarterly* 23, no. 4 (1977): 8, <https://www.jstor.org/stable/40653340>.

<sup>208</sup>The value added to the sector is through the refining to alumina (250 percent added) and then to aluminum (225 percent). Jamaica participates in the mining and the refining to alumina, but not to the smelting stage; see Monica Silberberg, “The Jamaican Bauxite Industry & Decolonization,” *Caribbean Quilt* 2 (2012): 92–106, <https://doi.org/10.33137/caribbeanquilt.v2i0.19314>.

<sup>209</sup>Richard Auty, “Multinational Corporations and Regional Revenue Retention in a Vertically Integrated Industry: Bauxite/aluminum in the Caribbean,” *Regional Studies* 17, no. 1 (1983): 4, <https://doi.org/10.1080/09595238300185011>; in the early 1950s, government revenue amounted to only 3 percent of the bauxite and alumina export value, going up to 17 percent after negotiations of terms in 1957 (Tramm, “Multinationals in Third World Development,” 8); see also George L. Beckford, “The Social Economy of Bauxite in the Jamaican Man-Space,” *Social and Economic Studies* 36, no. 1 (1987): 1–55, [www.jstor.org/stable/27862872](https://www.jstor.org/stable/27862872); Michael Witter, “Prospects for Jamaica's Economic Development in the Era of the FTAA,” in *The Caribbean Economies in an Era of Free Trade*, Michael Witter (London: Routledge, 2004), 169–186, <https://doi.org/10.4324/9781351147521>.

<sup>210</sup>Tramm, “Multinationals in Third World Development,” 8.

<sup>211</sup>The Government of Jamaica imposed a levy (7.5 percent of the price of aluminum on the world market in the previous year) on bauxite mined in Jamaica and exported to North America, raising government revenues significantly from Jamaican dollars (JMD) 24.51 million per annum in 1973 to JMD \$185 million in 1977; see: Silberberg, “The Jamaican Bauxite Industry & Decolonization,” 102.

Multinational companies responded to Jamaica's efforts to capture more of its share by investing elsewhere; "[f]oreign direct investment shunned Jamaica for more than a decade after the imposition of the Bauxite Levy."<sup>213</sup> Facing capital flight, stagnant growth, and increasing pressure from the IMF, in the 1980s Jamaica effectively ended these policy efforts to capture more benefit. Production increased as a result, but Jamaica never regained its global share.

This omnipresent fear of capital flight makes improving environmental monitoring/enforcement and capturing more value through increased taxation challenging. Furthermore, with Jamaica's direct stake in the mining industry, civil society organizations claim that the primary regulatory institution is tasked with both regulating and promoting the sector, a situation some describe as "regulatory capture."<sup>214</sup>

Bauxite-alumina has historically been an important source of government revenue, GDP, and employment — although these have all declined over time. While the share of the bauxite-alumina industry in government revenues was as high as 25 percent in the 1970s, one commentator suggests that it now contributes only 0.6 percent.<sup>215</sup> In terms of GDP contributions, the mining and quarrying sector encompasses an average of 1.9 percent from 2018 to 2022.<sup>216</sup>

Jobs have declined from peak employment in the early 1970s; one report suggests an almost 50 percent decline from 1975 levels, with the industry employing approximately 0.3 percent of the working population in 2018.<sup>217</sup> But even at its peak employment levels in the early 1970s, the sector only provided employment for 1.1 percent of the working population.<sup>218</sup> Particularly early on in the sector development, Jamaicans primarily occupied the low-level, manual labour positions with little occupational mobility.<sup>219</sup>

## Chasing foreign currency: debt and balance of payments

Key to understanding government support of the bauxite-alumina industry is the sector's role as a crucial source of foreign exchange needed for balance of trade and debt repayments. Responding to the Cockpit Country court cases and injunction, the Finance Minister framed the situation in existential terms, asserting that the industry's "survival is under threat and the Jamaican economy faces major upheaval."<sup>220</sup> He pointed to jobs, but also to the sector's role in generating "between US\$300–US\$500 million in foreign exchange each year."<sup>221</sup> So while the industry is a relatively small part of the Jamaican economy in terms of GDP, it is critical for earning the foreign exchange needed to service external debts, with contributions to export revenue ranging from 15 to 60 percent of total export revenue, with a 5-year average of 42 percent (see Table 1).

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<sup>212</sup>For an analysis of 1970s bauxite tax and royalty rates, see: Sidiki Conde, "The Competitive Environment for a New Bauxite Mine in Guinea," MSC thesis (Colorado School of Mines, 1984), [https://repository.mines.edu/bitstream/handle/11124/176378/Conde\\_10782501.pdf?sequence=1](https://repository.mines.edu/bitstream/handle/11124/176378/Conde_10782501.pdf?sequence=1).

<sup>213</sup>Witter, "Prospects for Jamaica's Economic Development in the Era of the FTAA," 180; "The companies reacted to the measures of the Jamaican government by decreasing exports from Jamaica to the U.S., and increasing the production of their plants in Guinea to supply the American market ... In 1975 the companies doubled their imports into the U.S. from Guinea, a new-comer to the industry, who were now threatened to experience similar economic and societal problems from the presence of these MNCs [multinational corporations] as Jamaica did," Silberberg, "The Jamaican Bauxite Industry & Decolonization," 103.

<sup>214</sup>Jamaica Environment Trust, *Red Dirt*. Jamaica's National Environment and Planning Agency (NEPA) is the primary regulatory institution for the environment in Jamaica but through a memorandum of understanding, the Jamaica Bauxite Institute is tasked with regulating the bauxite sector.

<sup>215</sup>Paul Ward, "Phase Out Crude Bauxite Exports to Save the Cockpit Country," *Jamaica Observer*, November 29, 2022, [www.jamaicaobserver.com/columns/phase-out-crude-bauxite-exports-to-save-the-cockpit-country/](http://www.jamaicaobserver.com/columns/phase-out-crude-bauxite-exports-to-save-the-cockpit-country/).

<sup>216</sup>"Economic and Social Survey Jamaica 2022: Selected Indicators & Overview," Planning Institute of Jamaica, 2022, [www.pioj.gov.jm/product/economic-and-social-survey-jamaica-2022-selected-indicators-overview/](http://www.pioj.gov.jm/product/economic-and-social-survey-jamaica-2022-selected-indicators-overview/).

<sup>217</sup>The Jamaica Environment Trust reports employment in 1975 to be 6,900 direct employees, 4,530 wage workers; in 2018 this declined to 4,000 direct employees, with 1,429 wage workers, see Jamaica Environment Trust, *Red Dirt*.

<sup>218</sup>Diane J. Austin, "Jamaican Bauxite: A Case Study in Multi-National Investment," *The Australian and New Zealand Journal of Sociology* 11, no. 3 (1975), <https://doi.org/10.1177/144078337501100312>.

<sup>219</sup>Silberberg, "The Jamaican Bauxite Industry & Decolonization."

<sup>220</sup>"Mining Injunction 'Death Knell' for New Day, Noranda," *The Gleaner*, February 20, 2023, <https://jamaica-gleaner.com/article/lead-stories/20230220/mining-injunction-death-knell-new-day-noranda>.

<sup>221</sup>"Mining Injunction 'Death Knell' for New Day, Noranda."

Jamaica has struggled with its balance of payments for decades. In particular, high oil prices in the 1970s pushed the problem over the edge, leading the country to take out WB and IMF loans. The country continues to experience economic consequences from the 1980s–90s debt crises that enforced austerity, liberalization of trade, deregulation, wage suppression, privatization, and overall reduced autonomy; one commentator argues the result was “policy making effectively moved from Kingston to Washington.”<sup>222</sup>

**Balance of payments and the constant chasing of foreign currency and investment remains a challenge for Jamaica, and is part of explaining the “indispensability” of bauxite, despite its environmental and social impacts, and relatively low economic benefits for employment and state revenue.**

Despite WB and IMF loans, the country suffered from rising unemployment, and both urban and rural poverty. The loan conditionalities required removal of import tariffs, which also exacerbated the balance of payments problem and turned the country into a “consuming appendage” to the US.<sup>223</sup> Balance of payments and the constant chasing of foreign currency and investment remains a challenge for the country, and is part of explaining the “indispensability” of bauxite, despite its environmental and social impacts, and relatively low economic benefits for employment and state revenue. What’s also crucial to note is that the IMF and WB policy prescriptions contributed to problems that bauxite-alumina revenue is now rationalized as solving.

## Outlook

Although the bauxite-alumina industry contributes to the economy in ways that international financial institutions and the Government of Jamaica position as indispensable, Jamaican civil society organizations challenge this narrative by asking what the industry delivers in terms of economic benefits, raising questions about an overreliance on an industry with limited time before exhaustion.<sup>224</sup> Downstream communities are making the case before the Supreme Court that the highly constrained development pathway that bauxite represents is not worth the devastation it causes.

Yet development narratives sustained by major lenders and international institutions continue to shape the policy terrain in Jamaica. These narratives foreground austerity and fiscal consolidation measures that impede investment in environmental policy related to bauxite and also, more broadly, the development of alternative development strategies.

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<sup>222</sup>Tony Weiss, “Restructuring and Redundancy: The Impacts and Illogic of Neoliberal Agricultural Reforms in Jamaica,” *Journal of Agrarian Change* 4, no. 4 (2004): 461–491, <https://doi.org/10.1111/j.1471-0366.2004.00088.x>; see also Witter, “Prospects for Jamaica’s economic development in the era of the FTAA.”

<sup>223</sup>Witter quoted in Weiss, “Restructuring and Redundancy,” 475; imports of fresh fruits and vegetables overtook exports, which led the World Bank to state that “the market is telling you that agriculture is not the way to go for Jamaica,” Witter quoted in Weiss, “Restructuring and Redundancy,” 471.

<sup>224</sup>These organizations include the Southern Trelawny Environmental Agency (STEA), Jamaica Environment Trust, and Windsor Research Centre, among others, see: “Bauxite Mining In Cockpit Country,” STEA, accessed November 18, 2023, <https://stea.net/Issues.html>; “Compensation Within the Bauxite-Alumina Industry in Jamaica,” Jamaica Environment Trust, September 13, 2023, <https://jamentrust.org/download/compensation-within-the-bauxite-alumina-industry-in-jamaica/>; “This is Windsor Research Centre’s Home Page,” Windsor Research Centre, accessed November 18, 2023, <https://wrc.cockpitcountry.com/>.



From the 2000s to present, Jamaica focused on reducing its debt, which also baked austerity into the core of government operations, including wage freezes and a reduction of public programs.<sup>225</sup> As of 2023, the IMF considers the country well-managed because of its low levels of debt and fiscal restraint, but these strong caps on external debt also mean that the government has limited ability to invest in productive infrastructure and industry, poverty measures, climate risks, ecological degradation, and biodiversity loss. The IMF acknowledges that infrastructure development is needed to attract investment and also to become more climate resilient, yet it is unclear where those funds will come from.<sup>226</sup> Jamaica thus finds itself in a cramped space: dependent on an extractive industry that doesn't directly benefit its ecology or economy, and with little ability to shape alternative futures.

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<sup>225</sup>Michael Witter, "COVID-19: Intensifying the Existential Threat to the Caribbean," *Agrarian South: Journal of Political Economy* 10, no. 1 (2021): 155–172, <https://doi.org/10.1177/22779760211003540>.

<sup>226</sup>IMF, "IMF Reaches Staff-Level Agreement with Jamaica on a Precautionary and Liquidity Line (PLL) and the Resilience and Sustainability Facility (RSF) and conducted the 2022 Article IV Consultation," IMF, last modified December 15, 2022, [www.imf.org/en/News/Articles/2022/12/15/pr22345-jamaica-imf-reaches-sla-pll-rsf-conducted-2022-article-iv-consultation#:~:text=Building%20on%20Jamaica%E2%80%99s%20commitments%20under%20the%20Paris%20Agreement%2C,climate%20risks%20are%20properly%20managed%20by%20financial%20intermediaries](https://www.imf.org/en/News/Articles/2022/12/15/pr22345-jamaica-imf-reaches-sla-pll-rsf-conducted-2022-article-iv-consultation#:~:text=Building%20on%20Jamaica%E2%80%99s%20commitments%20under%20the%20Paris%20Agreement%2C,climate%20risks%20are%20properly%20managed%20by%20financial%20intermediaries).

