

IGF MINING POLICY FRAMEWORK ASSESSMENT

Jamaica

June 2020



IGF

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Mining Policy Framework Assessment: Jamaica

June 2020

Written by Alec Crawford, Norman Davis, and Matthew Bliss

Cover photo: Shanti Persaud

IISD HEAD OFFICE

111 Lombard Avenue
Suite 325
Winnipeg, Manitoba
Canada R3B 0T4

IISD.org
[@IISD_news](https://twitter.com/IISD_news)

IGF/IISD OTTAWA OFFICE

220 Laurier Avenue W.
Suite 1100
Ottawa, Ontario
Canada R3B 0T4

IGFMining.org
[@IGFMining](https://twitter.com/IGFMining)

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ABOUT THE MPF ASSESSMENT SERIES OF REPORTS

With support from the Government of Canada, the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF) is working with a voluntary selection of its member states to help them operationalize practices consistent with the IGF's Mining Policy Framework (MPF). The first assessments were carried out in 2014 in the Dominican Republic, Madagascar, and Uganda. Based on the success of these initial evaluations, the IGF has conducted 14 assessments to date in response to member requests.

The MPF assessment process itself is made up of two main steps. First, the MPF assessment team evaluates relevant national, regional and international laws, policies, conventions, and administrative frameworks for mining and minerals development and management relative to the six themes of the MPF: the Legal and Policy Environment, Financial Benefit Optimization, Socioeconomic Benefit Optimization, Environmental Management, the Post-Mining Transition, and Artisanal and Small-scale Mining (ASM). This work is done both through desk- and field-based research involving diverse stakeholders. The assessment identifies key strengths, weaknesses, and gaps in the country's mining laws and policies, as compared to the international best practices outlined in the MPF, which helps measure the readiness of the member state to implement the MPF through its existing government measures. Building on the outcomes of this assessment process, the second phase of the project involves working with the participating state to develop a capacity-building and technical support program that addresses key weaknesses and gaps, in the hopes that these strengthened capacities and increased understandings can enhance national legislation and policies, thereby optimizing the contribution of the mining sector to sustainable development.

This report presents the assessment for Jamaica, with a view toward the following: helping the government and their partners at the Inter-American Development Bank (IADB) target their efforts in implementing the MPF; informing capacity-building efforts; and allowing for monitoring of progress over time. The authors would like to thank their colleagues from the Government of Jamaica, particularly those at the Ministry of Transport and Mining, for their help and support with this project. A special thanks to Oral Rainford, Roy Nicholson, Stacey Plummer and Taniquea Callam at the Ministry of Transport and Mining (MTM), to Shanti Persaud-Levy, Dianne Gordon and Hugh Lambert at the Jamaica Bauxite Institute, and to Malaika Masson, Francesco De Simone, and Martin Walter at the IDB for their invaluable help and support in conducting this assessment.



EXECUTIVE SUMMARY

This report presents an assessment of Jamaica's readiness and capacity to implement the Mining Policy Framework (MPF) of the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF). The IGF Secretariat, in collaboration with the Inter-American Development Bank (IADB), conducted the assessment between November 2018 and April 2019. The process involved a scoping mission to Kingston by Secretariat staff to discuss the assessment, map stakeholders, and collect documentation; an extensive desk-based review of key domestic and international laws and policies (see Annexes); and a week-long field visit to the country, during which the project team met with a broad array of stakeholders from government, civil society, academia, international organizations, and the private sector to discuss Jamaica's mining laws and policies. In addition to the MPF assessment, the project team also undertook an assessment of the institutions that govern the mining sector in Jamaica, with a view to recommending how these can be reorganized and aligned to increase efficiencies in mining governance. The institutional assessment, while referred to in this assessment, is presented as a separate document.

The assessment phase of this project concludes with this report. The assessment team identified the following **key strengths** in Jamaica's mining laws and policies:

- The government is well advanced in the process of developing Jamaica's first mining policy, which has a defined timescale, periodic review mechanisms, and largely reflects international best practice.
- Mining revenues are generated through a mix of taxes, royalties, fees, and dividends: together, these revenues make up a significant portion of the government's operating budget. There is a mechanism in place to ensure that revenues from large-scale mining adjust according to commodity price volatility.
- There are regulations and structures in place to manage the resettlement of communities or individuals impacted by the expansion of bauxite mining.
- There are rigorous processes in place for the permitting and monitoring of environmental performance within Jamaica's bauxite/alumina subsector, and mining entities are required to submit an environmental management plan as part of the permitting process. These must be updated when there are significant changes during the operating life of the mine.
- Small-scale quarries are largely integrated into formal economic and legal systems, with formal laws, regulations, licences, taxes, and institutions in place to govern the sector.

The assessment team identified the following **key gaps** in Jamaica's mining laws and policies:

- The legal and policy framework governing mining in Jamaica is largely outdated. It is governed by a number of overlapping pieces of legislation, including the Mining Act, the Bauxite and Alumina Industries (Encouragement) Act, the Bauxite and Alumina Industries (Special Provisions) Act, the Quarries Control Act, the NRCA Act (which speaks to environmental management), and the Factories Act. This can be convoluted to navigate for private, community, and civil society stakeholders, though it should be noted that the new National Minerals Policy recommends the introduction of a comprehensive Minerals Development Act, which would consolidate many of the acts into one piece of legislation.
- The institutional structures governing the mining sector in Jamaica are overlapping and convoluted. These structures could be rationalized and consolidated to increase their efficiency and effectiveness.



- There is a strong need to update the country's geological database of known and predicted metalliferous and non-metalliferous resources, and to expand public access to this information, as access is currently limited to in-person access at the MGD offices in Kingston.
- Public participation remains low in mine decision making via the community councils established in communities adjacent to bauxite mining and alumina manufacturing, and there is insufficient interaction between the affected stakeholders. Similarly, there are low levels of public engagement in and understanding of the environmental impact assessment (EIA) feedback process.
- There is no policy in place on local content and the promotion and support of local goods and services providers who can support a mine site. A policy on local content would be a significant opportunity to increase the industry's contribution to local economies and the amount of investment captured by Jamaican businesses. The draft minerals policy does recognize the importance of increasing local content.
- Integrated energy planning that incorporates the energy needs of the mining and quarrying sector has historically been limited, constraining the efficiency gains and cost savings that could be realized by exploiting synergies between energy-intensive industries and the power generation sector.
- Environmental management standards for surface and groundwater are not consistently and strictly monitored and enforced within the entire sector, including quarries and pits, with appropriate penalties given out for non-compliance. National sewage effluent standards have chemical oxygen demand, faecal coliform, and residual chlorine effluent limits that are less stringent than other international mining jurisdictions, and the legislative framework regarding processing wastes and related facilities also does not adhere to international best practices.
- Mine closure legislation and related guidance do not fully cover all aspects of current international best practice, nor do they adequately address all environmental, social, and economic elements of mine closure. Consultation is conducted, notably as part of the Bauxite Community Development Programme; however, some stakeholders consider the consultation to be inadequate, especially in the early development of mine closure objectives, concepts, and plans. Stakeholders note there is a lack of consideration for post-mining transition and how affected communities will transition—economically, socially, and environmentally—once a mine has closed. Similarly, some stakeholders and interviewees noted that the related legal requirements and guidance for financial assurance to cover the costs of rehabilitation and closure are inadequate.

A more detailed table of key strengths and gaps is presented in Table ES1.

**TABLE ES1. SUMMARY OF KEY STRENGTHS AND GAPS OF EACH PILLAR OF THE MPF**

MPF THEME	LEVEL OF PROGRESS TOWARD MPF STANDARDS	STRENGTHS	GAPS
Legal and policy framework	MEDIUM	<ul style="list-style-type: none"> • The government is well advanced in the process of developing and adopting Jamaica's first mining policy, which has a defined timescale, periodic review mechanisms, and largely reflects international best practice. • Mining permits and licences cover the various segments of the mining sector, including prospecting, exploration, production, and quarrying. • To obtain a mining permit, applicants must: demonstrate financial and technical abilities; obtain an Environmental Permit; submit both an environmental management plan and a closure and rehabilitation plan. • Access to mining legislation and regulations is open and public. • Detailed EIAs are required as part of the permitting process, include public participation, and must be submitted as part of the mining permit application. • EIAs are conducted by third-party and independent consultants. • The process in place for the approval or rejection of mining permit applications is robust and multisectoral. • There are strict regulations and structures in place to manage the resettlement of communities or individuals impacted by the expansion of bauxite mining. • Through the Jamaica Bauxite Institute, the government can focus considerable attention on the island's primary exploited ore and keep current developments for bauxite mining aligned. 	<ul style="list-style-type: none"> • There is a strong need to update the country's geological database of known and predicted metalliferous and non-metalliferous resources. • Public access to geological data is limited to in-person access at MGD offices. • The Mining Act of 1947, while amended since, is out of date and does not reflect current knowledge or best practice. It does not deal with all aspects of mining, from exploration and production to closure and post-closure management. • The sector is governed by a number of overlapping pieces of legislation, including the Mining Act, the NRCA Act, the Bauxite Encouragement Act, the Quarries Control Act, and the Factories Act, which can be convoluted to navigate for private, community, and civil society stakeholders. • The institutional structures governing the mining sector in Jamaica are overlapping and convoluted. These structures could be reorganized and consolidated to increase their efficiency and effectiveness. • The quality of public engagement in the EIA and permitting processes is often inadequate. • Permit applications are required to focus on rehabilitation and restoration of mined lands, but less attention is paid to the post-mining transition and local social and economic impacts of mine closure. • There is a need to improve the transparency and timeliness of the permitting process; permit approvals must go through multiple approvals across a number of government agencies, creating space for significant bottlenecks in the process.



MPF THEME	LEVEL OF PROGRESS TOWARD MPF STANDARDS	STRENGTHS	GAPS
Financial benefit optimization	MEDIUM	<ul style="list-style-type: none"> • Mining revenues are generated through a mix of taxes, royalties, fees, and dividends, and together these revenues make up a significant portion of the government’s operating budget. • Mining is well integrated into Jamaica’s social and economic development. • There is a mechanism in place to ensure that revenues from large-scale mining adjust according to commodity price volatility. • The corporate income and general consumption (sales) taxes applied to the mining sector are similar to those applied to non-mining entities operating in the same jurisdiction. • There are personnel within the Ministry of Finance devoted to monitoring the mining sector. • Adoption of the draft minerals policy will trigger the process of Jamaica submitting its application to become a member of the Extractives Industries Transparency Initiative (EITI). 	<ul style="list-style-type: none"> • There are multiple tax regimes for the mineral industry, which makes it more challenging for collection and compliance by the government. • There is a lack of open or transparent data on how revenues from the sector are being distributed at the local, regional, and national levels. • The continued presence of informal, non-registered, and illegal quarry operations represents a source of lost revenues for the government. • The government’s resources and staff capacities to administer the tax system, deal with transfer and other pricing issues, and to audit results are low. • Revenue generation from the mining industry is limited by the lack of domestic value addition in the bauxite and quarry sectors. • Many commercial and development banks categorize quarrying as medium-high risk and are hesitant to provide loan capital to the sector.



MPF THEME	LEVEL OF PROGRESS TOWARD MPF STANDARDS	STRENGTHS	GAPS
<p>Socioeconomic benefit optimization</p>	<p>LOW</p>	<ul style="list-style-type: none"> • Mining is integrated into the country’s fabric and is a significant source of both formal and informal employment and livelihoods, making a considerable contribution to the national budget and development. • The Jamaica Bauxite Institute (JBI) has established a formal structure and mechanism to consult with residents living adjacent to bauxite and alumina facilities, and any concerns and issues can be raised via community councils and other entities. • The social impacts of mining are considered as part of the EIA process, and funding for local development projects is meant to be generated from the bauxite levy through the Capital Development Fund. • The Ministry of Labour and Social Security and MGD are responsible for protecting and enforcing occupational health and safety standards. • In order for a mining company to obtain a work permit for a foreign worker, they must prove that a Jamaican national cannot adequately do the job and must provide a plan by which they will move toward Jamaican representation through training pathways. 	<ul style="list-style-type: none"> • Public participation and consultation are limited via the community councils established in mine-adjacent communities, and there is insufficient engagement or understanding in the EIA feedback process for bauxite operations. • Community consultations are not usually required by MGD in the permitting process for quarry licences. • Legislation on occupational safety and health (OSH) is out of date. • The land titling process is often slow and challenging for people who have been resettled due to the expansion of bauxite mining. • For many mine- or quarry-adjacent communities, there is a dependence on mining that leaves these communities vulnerable to boom and bust cycles in commodity prices and the consequent impacts on production levels and employment. • There is also no policy in place on local content and the promotion and support of local goods and services providers who can support a mine site.



MPF THEME	LEVEL OF PROGRESS TOWARD MPF STANDARDS	STRENGTHS	GAPS
Environmental management	MEDIUM	<ul style="list-style-type: none"> • There are rigorous processes in place for the permitting and monitoring of environmental performance within Jamaica’s bauxite/alumina subsector. • The water quality standards used for surface and groundwater are mostly consistent with good international industry practice. • Those operating in the bauxite/ alumina subsector are required to ensure that water and waste-leaching or percolating waste dumps, tailings storage areas, and leach pads have adequate protection or programs of action to address. • Biodiversity and ecosystem health are included in the National Environment and Planning Agency’s (NEPA’s) environmental permit application screening process. • Mining entities are required to submit an environmental management plan as part of the permitting process. These must be updated when there are significant changes during the operating life of the mine. • Operators in the bauxite/alumina subsector must ensure their structures, including waste dumps and tailings storage facilities, are planned, designed, and operated with appropriate consideration for geotechnical risks and environmental impacts through the entire mine cycle and after mine closure. • The government requires all mining operations to have an emergency preparedness and response program in place prior to commencing operations. • JBI works with NEPA to ensure air quality related to the bauxite and alumina sector is monitored and to standard. Biannual environmental reviews with all operating companies include the MGD and other Ministry representatives. 	<ul style="list-style-type: none"> • The approvals and management processes for environmental issues, including EIAs, are guided by a screening process and a series of committees, which, while comprehensive, is thought to be overly complicated and difficult to track and enforce. • Environmental management standards for surface and groundwater of quarries are not always strictly monitored and enforced, which would include appropriate penalties for non-compliance. • The NRCA National Sewage Effluent Standards have chemical oxygen demand, faecal coliform, and residual chlorine effluent limits that are less stringent than other international mining jurisdictions. • The legislative framework regarding processing wastes and related facilities does not adhere to international best practices. • With existing legislation focusing so heavily on bauxite mining and development of mineral quarries, there is a lack of clarity— particularly among exploration companies operating outside of these two subsectors—regarding how their activities will be governed. • Legislation and guidance do not clearly and consistently require that water-leaching or percolating waste dumps, tailings storage areas, and leach pads are designed, built, operated, or maintained in alignment with international best practice or with external expert review throughout the mine lifecycle. • There is no clear guidance on how operators are required to consistently manage biodiversity or how Jamaica consistently and effectively governs biodiversity protection and management. • Emergency preparedness programs are not consistently based on ongoing consultation and cooperation with local and other stakeholders and government.



MPF THEME	LEVEL OF PROGRESS TOWARD MPF STANDARDS	STRENGTHS	GAPS
Post-mining transition	LOW	<ul style="list-style-type: none"> • Mine closure and rehabilitation are included in the legal and regulatory frameworks governing the mining and quarrying sectors. • NEPA has developed a closure plan template and expects that licensees make costing and technology revisions to closure plans throughout the mining cycle as conditions change. • Quarry operators are required by law to provide a financial assurance or bond to cover the costs of site rehabilitation. 	<ul style="list-style-type: none"> • Mine closure legislation is outdated and does not comprehensively cover current best practice, failing to address many of the environmental, social, and economic elements of mine closure. • The government does not provide comprehensive requirements for stakeholders to be consulted in the development of mine closure objectives and plans. • Closure and rehabilitation plans are not required to consider the post-mining transition and how affected communities will transition—economically, socially, and environmentally—once a mine has closed down. • Mine operators are not legally required to use external experts for risk assessment, bauxite residue disposal area design, and related closure planning. • Environmental bonds for incomplete or insufficient closure activities are not a standard operating requirement. • Financial assurances to cover the costs of rehabilitation and closure are not required by the Mining Act. • A comprehensive framework to encourage progressive rehabilitation is not included in the legislation, although an amendment allows three years for certification. • The fines and penalties associated with incomplete restoration and rehabilitation, or not adhering to the required timeline for certification of mined-out lands, are low.



MPF THEME	LEVEL OF PROGRESS TOWARD MPF STANDARDS	STRENGTHS	GAPS
<p>Artisanal and small-scale mining</p>	<p>MEDIUM</p>	<ul style="list-style-type: none"> • Small-scale quarries are largely integrated into formal economic and legal systems, with formal laws, regulations, licences, taxes, and institutions in place to govern the sector. • Efforts are underway across the island to improve land titling. • There is no child labour in Jamaica’s quarry sector, and effective regulations and enforcement are in place to ensure this continues going forward. • Large-scale quarries require an environmental permit, and operators must submit a closure plan to the government with a bond to cover the costs of rehabilitation. 	<ul style="list-style-type: none"> • Compliance with regulations on occupational health and safety and environmental management is poor among small-scale quarry operations. • Competition exists between the bauxite/alumina, quarrying, and tourism industries over access to and use of transportation infrastructure—specifically the country’s ports. • Tax exemptions for bauxite mining and alumina producing companies on key inputs outlined in the Bauxite and Alumina Industries (Encouragement) Act work against the promotion of domestic value addition. • The government relies on quarry operators’ volume reports for taxation, though most operators do not have scales to accurately measure these production volumes. • Smaller-scale quarries are not well organized, neither are they well represented within the quarry association. • Quarries have limited access to domestic financing, hindering their potential. • Women are not well represented in the quarry sector either as employees or owners.



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ACRONYMS

AGD	Attorney General's Department
APEC	Asia-Pacific Economic Cooperation
ASM	artisanal and small-scale mining
BATCO	Bauxite and Alumina Trading Company of Jamaica
BCDP	Bauxite Community Development Programme
BLLTC	Bauxite Lands Land Titling Committee
BRDA	Bauxite Residue Disposal Area
CAP	Clarendon Alumina Production
EBITDA	earnings before interest, tax, depreciation, and amortization
EDT	Education Tax
EHS	environment, health, and safety
EIA	Environmental Impact Assessment
EITI	Extractives Industries Transparency Initiative
EPL	Exclusive Prospecting Licence
GCT	General Consumption Tax
GDP	gross domestic product
GNI	gross national income
HDI	Human Development Index
HEART	Human Employment and Resource Training Trust
IADB	Inter-American Development Bank
ICMM	International Council on Mining and Metals
IFC	International Finance Corporation
IGF	Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development
IISD	International Institute for Sustainable Development
JBI	Jamaica Bauxite Institute
JBM	Jamaica Bauxite Mining Limited
JISCO	Jiuquan Iron and Steel Company
LAC	Latin America and the Caribbean
LAMP	Land Administration Management Program
LDUC	Land Development and Utilisation Commission
LME	London Metal Exchange
MAC	Mining Association of Canada
MFPS	Ministry of Finance and Public Service
MGD	Mines and Geology Division
ML	mining lease



MLSS	Ministry of Labour and Social Security
MPPDD	Minerals Policy, Planning and Development Division
MPF	Mining Policy Framework
Mt	metric tonne
MEGJC	Ministry of Economic Growth and Job Creation
MTM	Ministry of Transport and Mining
NEPA	National Environment and Planning Agency
NGO	non-governmental organization
NHT	National Housing Trust (tax)
NIS	National Insurance Scheme
NJBP	Noranda Jamaica Bauxite Partners II
NLA	National Land Agency
NRCA	Natural Resources Conservation Authority
OSH	Occupational Safety and Health
PR	prospecting right
QAC	Quarries Advisory Committee
QL	quarry licence
SEPL	Special Exclusive Prospecting Licence
SML	special mining lease
TAJ	Tax Administration of Jamaica
TCPA	Town and Country Planning Authority
TRC	Technical Review Committee
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
WINDALCO	West Indies Alumina Company
WRA	Water Resources Authority



Photo: Shanti Persaud

1.0 INTRODUCTION

For the mining sector to be a central pillar of Jamaica’s continued development as envisaged in its national development plan, Vision 2030, a strong legal and policy framework is required, one that maximizes the benefits accrued to the nation and to communities from the mining sector. This framework should promote investment while upholding strong environmental and social standards. Mining—from large-scale bauxite operations to smaller-scale limestone quarries—can play a significant role in Jamaica’s long-term social and economic development: it can generate revenues for the government; create employment, skills development, and business opportunities for local communities; provide the material inputs for infrastructure; and support investments in education, health, and clean technology. At the request of the Government of Jamaica, and in collaboration with the Ministry of Transport and Mining, the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF) is working to advance such policies and good governance practices in Jamaica, through the use of its Mining Policy Framework (MPF).

This assessment report first presents Jamaica’s development, mining, and legal contexts. It then highlights the key strengths and gaps in Jamaica’s mining policies and laws across all six of the MPF’s thematic areas before making recommendations for further capacity building and reform. The six MPF thematic areas are: Legal and Policy Environment, Financial Benefit Optimization, Socioeconomic Benefit Optimization, Environmental Management, the Post-Mining Transition, and Artisanal and Small-scale Mining. The IGF Secretariat carried out the assessment in cooperation with the Inter-American Development Bank (IADB) in late 2018 and early 2019 using the following methodology:

- Scoping mission to Kingston, Jamaica to meet with key stakeholders from government, civil society and the private sector: November 2018.
- Desk-based research, including an extensive review of the laws, policies, regulations, and agreements that govern the national mining sector, as well as relevant literature on the sector: November 2017 to January 2019.
- Assessment visit to Kingston and field visits to Saint Catherine, Clarendon, and Manchester parishes for consultations with relevant stakeholders from government, civil society and the private sector: January 2019.
- Drafting of the assessment report: January to May 2019.
- Completion of final assessment report: June 2019.



THE NATIONAL CONTEXT

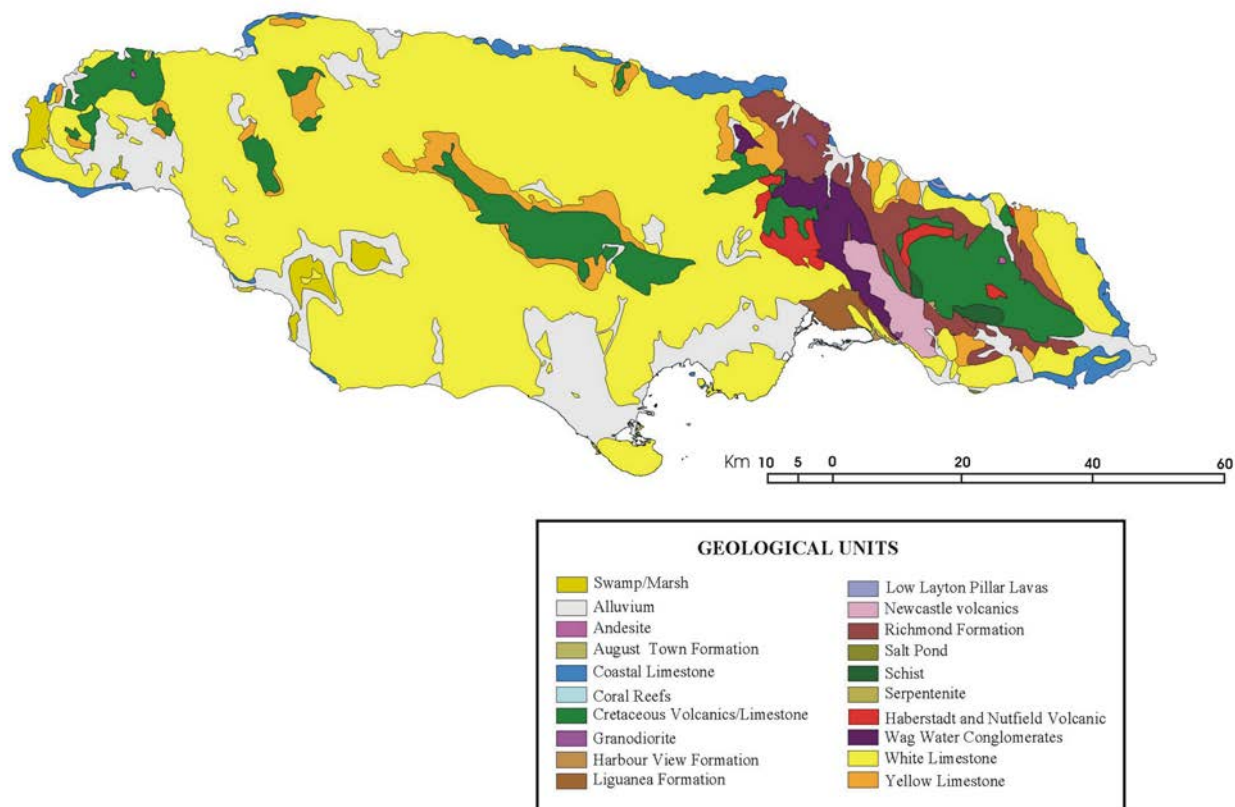
Jamaica lies in the western part of the Caribbean Sea, with Cuba to its north, Haiti to the east, and the Cayman Islands to the west. The island covers an area of 10,991 km², making Jamaica roughly the same size as Kosovo and the Gambia. With 2.9 million inhabitants, it is the largest English-speaking country in the Caribbean and one of the most populous countries in the region, trailing only Cuba, the Dominican Republic, and Haiti. More than half of the population live in the country's cities, with Kingston (the capital), Spanish Town, Portmore, Montego Bay and Mandeville being the largest urban centres on the island (UNDP, 2018). Kingston has the seventh largest natural harbour in the world.

The country has seen good progress in key areas of human development over the past three decades (see Table 1). Since 1990, life expectancy has increased from 72.1 years to 76.1 years, with women expected to outlive men by nearly four years. Children now spend nearly 10 years on average in school, up from 5.9 years (UNDP, 2018). This places Jamaica above the averages for both of these indicators for the Latin American and the Caribbean (LAC) region. Gross national income per capita has similarly increased, from USD 6,759 to USD 7,846 (UNDP, 2018). The country spends on average 5.4% of its GDP on education, which is in line with its LAC neighbours, and 5.9% of its GDP on health, which is slightly lower than the regional average of 7.4% (UNDP, 2018). Approximately 4.7% of the population suffers from multidimensional poverty, indicating that, while progress has been encouraging, work remains to be done to address the challenges faced by the most vulnerable Jamaicans.

TABLE 1. UNDP HUMAN DEVELOPMENT INDEX TRENDS, 1990-2017

	1990	2000	2010	2015	2016	2017
HDI score	0.638	0.662	0.712	0.730	0.732	0.732
Life expectancy at birth	72.1	72.3	74.9	75.8	76	76.1
Mean years of schooling	5.9	7.3	8.9	9.6	9.8	9.8
GNI per capita	6,759	7,717	7,699	7,841	7,832	7,846

Source: UNDP, 2018.

**FIGURE 1. GEOLOGICAL MAP OF JAMAICA**

Source: MGD, 2019.

ECONOMIC CONTEXT

Jamaica's GDP (adjusted for purchasing power parity) in 2018 was USD 27.4 billion, growing at a rate of 1.9% per year (World Bank, 2018). The service sector accounts for more than 70% of GDP and 68% of total employment, and most foreign exchange earnings come from tourism, remittances, and mining (CIA, 2019). For tourism, the number of annual visitors is climbing; in 2017, nearly 4.3 million people visited the island, an increase of 11.4% over 2016 (JTB, 2018). The country's primary exports are alumina and bauxite, chemicals, coffee, mineral fuels, waste and scrap metals, and agricultural crops such as sugar and yams. The economy's high reliance on weather-dependent sectors like tourism and agriculture means that it is vulnerable to extreme weather events.

While economic growth rates remain low, the country's unemployment rate hit a 50-year low of 8.4% in 2018 (Smith, 2018). Of note, youth employment fell to 22.2% in 2018, down from 27.7% in 2017 (Smith, 2018). Also encouraging, the Jamaica Stock Exchange, while small, was named the world's best-performing stock market in 2018 by Bloomberg Businessweek. Jamaica's main trading partner is the United States, with other important partners, including Trinidad and Tobago, China, Brazil, Canada, and Japan.

Among Caribbean nations, Jamaica trailed only Trinidad and Tobago in the World Economic Forum's 2018 Global Competitiveness Report (Schwab, 2018). While largely a peaceful country, high rates of crime remain a problem and a brake on economic growth for Jamaica: the country ranked 90 out of 163 countries on the 2018 Global Peace Index and was 17th in terms of the highest economic costs of violence (Institute For Economics & Peace, 2018). Corruption remains a problem, though



the situation is improving: Jamaica ranked 70 of 180 globally on Transparency International's 2018 Corruption Perceptions Index, with a score that has gradually improved since 2015 (Transparency International, 2018).

GENDER CONTEXT

Jamaica placed 95 out of 189 countries on the UN's 2017 Gender Inequality Index (UNDP, 2018). The country's index value, at 0.412, is slightly higher than the regional average for LAC, indicating that there are greater levels of gender inequality in Jamaica than the average in the region. Jamaican women live, on average, approximately four years longer than their male counterparts and spend an additional 0.5 years in school. Unfortunately, higher education levels and healthier lives have not yet translated into greater earnings; Jamaican men, on average, make USD 9,812 per year, while women's annual earnings lag behind at USD 5,898 (UNDP, 2019). Men similarly make up a much greater portion of the labour force, with 77.4% of men active in the labour market compared with 57.3% of women. Parity also remains far off in terms of government representation; only 19% of parliamentary seats are held by women, putting Jamaica behind both the regional and global averages (UNDP, 2018).

ENVIRONMENTAL CONTEXT

Jamaica is the third largest island in the Caribbean, after Cuba and Hispaniola. The island is mostly mountainous, with the hilly interior surrounded by a narrow coastal plain. The coastal climate is tropical, with hot and humid weather transitioning to a more temperate climate as one moves toward the higher altitudes inland. This varied climate and topography in turn support a wide variety of plant and animal species, some of which are endemic to the island. Some 15.9% of the country's land area has been given protected area status, with the country's only national park, the rugged and heavily forested Blue and John Crow Mountains, established in 2000 and inscribed onto the list of UNESCO World Heritage Sites in 2015 (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2015). In 2017, the Prime Minister announced the establishment of the Cockpit Country Protected Area (CCPA), which, once gazetted, will add over 76,000 hectares to Jamaica's protected areas network. The rainforests of the country's interior contribute to an abundance of rivers on the island, with over 100 flowing toward the country's coasts; among them, the Rio Minho and Black River are the longest and largest.

Nearly a third of the country remains forested, while 41% of the land is used for agriculture, with sugar cane, bananas, coffee, citrus, and yams all being major crops (World Bank, 2017). The health of coastal waters and coral reefs surrounding Jamaica remains a key area of concern for those whose livelihoods are tied to marine resources, particularly those operating in the fisheries and tourism sectors. Beyond coastal water pollution and the loss of and damage to coral reefs, additional environmental concerns for Jamaicans include deforestation, air pollution in urban centres (including from vehicular emissions), and land erosion (CIA, 2019).

Jamaica, as a small island developing state, is particularly vulnerable to the impacts of climate change. Increases in temperature, rainfall variability, and sea levels are leading to a number of observed and anticipated impacts, among them floods, landslides, tropical depressions, tropical storms, and hurricanes, declining coral reef health, drought, and erosion (NAP Global Network, 2017). Given Jamaica's position within the Caribbean hurricane belt, strong storms and hurricanes are of particular concern; in the decade leading up to 2019, such events led to considerable loss of life and livelihoods on the island, and associated property damage totalled USD 129 billion (Ministry of Economic Growth and Job Creation [MEGJC], 2019). Based on these vulnerabilities, and as part



of the country's National Adaptation Planning process, the Government of Jamaica has identified a number of priority sectors for adaptation action, including: forestry, agriculture, waste, energy, transport, finance, water, human settlements, coastal resources, health, tourism, and fisheries. While Jamaicans have long coped with hurricanes and other extreme weather events, climate change threatens to make such events increasingly frequent and intense, highlighting the urgent need to increase the climate resilience of the island and its population.



2.0 THE MINING CONTEXT

Jamaica has a range of commercially exploitable minerals, including metallic minerals (including bauxite and gold), non-metallic minerals (clay, dolomite, gypsum, limestone, marble, sand and gravel, silica sand, volcanic rocks and shale) and semi-precious minerals. With the exception of the bauxite/alumina sector, most of Jamaica's minerals are in the early stages of development. The sector accounts for approximately 2.2% of Jamaica's GDP and employs around 6,000 workers, mostly Jamaicans. The impact that these mining jobs have is spread widely across communities at large; it has been estimated that the impact of one employee's salary in the mining industry on average feeds and clothes the equivalent of five people.

BAUXITE AND ALUMINA SECTOR (METALLIC)

Jamaica has a long history of mining bauxite and manufacturing alumina, which remains an important part of the national economy; it has among the world's largest reserves of the mineral (United States Geological Survey [USGS], 2018). The ownership structure of the bauxite and alumina industry in the country has evolved over time: industry growth was initially driven by foreign direct investment by North American companies, followed by government acquisition of assets in the 1980s as several foreign companies divested their interests. Recent years have seen increased foreign direct investment in the industry.

The main players in the bauxite industry are:

WINDALCO: The West Indies Alumina Company (Winalco) operates bauxite mines in the centre of the country and owns the Ewarton and Kirkvine alumina refineries. It has a total annual production capacity of approximately 1.2 million metric tonnes (Mt) of alumina. The company is owned by UC RUSAL, the Russian multinational alumina producer. UC RUSAL closed the two Winalco refineries in 2009, with Ewarton reopening in 2010 and Kirkvine remaining closed. Ewarton is currently operating at a full load capacity of approximately 0.6 million Mt of alumina per year, and product is exported via Port Esquivel in St. Catherine (Onstad, 2018).

JISCO ALPART: Alumina Partners of Jamaica (ALPART) operates in the south of Jamaica. The refinery was initially closed in early 2009 but was then sold to Jiuquan Iron and Steel Company (JISCO) by UC RUSAL in 2016. The refinery was reopened in June 2017 by JISCO and was producing smelter grade alumina up to September 2019; it has since closed for further plant upgrades. Full capacity of the refinery is 1.65 million Mt per year, and the product is exported via Port Kaiser in St. Elizabeth.



Jamalco: Jamalco is a joint venture between Noble Group and Clarendon Alumina Production Limited (CAP), a government entity. Jamalco mines bauxite in the south of the country and refines it into alumina before exporting it from its port at Rocky Point, Clarendon. The company has a production capacity of 1.4 million Mt of alumina per year.

Noranda: Noranda Jamaica Bauxite Partners II (NJBPI) is a partnership between the Government of Jamaica (via their company, Jamaica Bauxite Mining Limited (JBM)), which owns a 51% stake, and New Day Aluminium, which owns a 49% stake. The company produces crude bauxite for export from Port Rhoades, St. Ann in the north of the country. The company is permitted to export up to 5.2 million Mt of crude bauxite per year. Approximately half of Noranda's crude bauxite is exported to Gramercy Alumina in Louisiana in the United States for refining.

Jamaica's bauxite and alumina industry faces a number of challenges. The sector is vulnerable to fluctuations in the price of its products and of its inputs, primarily energy and caustic soda. The country has also witnessed a gradual decline in the quality of the aluminum content in its bauxite ore, a function of the sector's long history and ore depletion. Beyond externally-influenced operating costs linked to caustic soda, fuel, and commodity prices, production costs are increasing due to the age of the refineries; bauxite ore quality; the small size of current bauxite ore bodies; and high relocation and compensation costs for those persons occupying or living in close proximity to bauxite-bearing lands and mining and processing operations. In addition, the country's refineries have fairly small operating capacity (and as such are unable to capture economies of scale), high energy costs, high costs associated with residue storage areas, and high logistic costs.

PRECIOUS AND BASE METALS (METALLIC)

Jamaica has small deposits of base and precious metals such as gold, silver, and copper. Gold and silver deposits are found across the island in the areas where old volcanic rocks are exposed, including in Clarendon, St. Catherine, Portland and St. Thomas. The most recent economic exploitation of these resources was for gold and silver at Main Ridge Mine in Clarendon. The most abundant base metal found in Jamaica is copper. Jamaica also has some rare earth metals, which are concentrated in the bauxite waste arising from alumina processing operations; as of January 2019, four companies had Special Exclusive Prospecting Licences (SEPLs) for rare earth metals in Jamaica.

INDUSTRIAL MINERALS SECTOR (NON-METALLIC)

Jamaica's non-metallic mineral resources consist of limestone, sand and gravel, dolomite, marble, gypsum, shale, pozzolan, silica sand, clay, and hard volcanic rocks such as dacite, andesite and granodiorite, from which skid-resistant aggregates are produced. These non-metallic minerals are used in their natural and processed state in the construction, chemical, and manufacturing industries, among others.

Limestone is the country's largest mineral resource. It is primarily used in the construction industry, though also in the manufacturing industry to make calcined and hydrated lime for various applications, including alumina refining, flocculants, and fillers as well as for agricultural purposes. Jamaican limestone is deemed by international standards to be of a high quality, as large quantities typically contain over 99% calcium carbonate, with high brightness and with very low amounts of deleterious trace metals, among other desirable characteristics.

With the exception of bauxite, these minerals remain in the early stages of being commercially developed, and are largely confined to the extraction and primary processing stages. The majority of



the output is used in the local construction industry, while gypsum and shale are almost exclusively used in domestic cement production. The estimated reserves of these mineral resources are outlined in Table 2.

TABLE 2. ESTIMATED RESERVES OF KEY MINERAL RESOURCES IN JAMAICA

MINERAL	RESOURCES AND RESERVES¹ (MILLION)	MINE LIFE²
Bauxite	1,600 Mt (Resources and reserves. Approximately 30%–45% proven reserves) ²	50–100 years (proven and probable) at an extraction rate of 11 million Mt/a
Clay	Over 160 Mt (Reserves and estimated resources. Approximately 10% proven reserves) ²	
Gypsum (including 90%, 80%, 70% gypsum and anhydrite)	29 Mt (Reserves) ²	35–40 years (including anhydrite)
Black Sands (including sand, iron, and titanium oxide)	19 Mt (Estimated resources)	
Aggregate (skid-resistant)	271 Mt (Probable reserves) 1,130 Mt (Probable reserves)	
Alluvial sand and gravel	600 Mt ³ (Probable reserves)	
Dolomitic limestone	Over 2,700 Mt (Resources and reserves. Approximately 10%–15% proven reserves)	
Limestone (whiting grade)	1,115 Mt ⁴ (Resources and reserves. Approximately 20% proven reserves)	
Limestone (chemical, industrial, metallurgical grade)	5,750 Mt ⁴ (Resources and reserves)	
Silica Sand	To be determined	

Source: Mines and Geology Division, Ministry of Transport and Mining.⁵

¹ Mineral deposits are classified according to an internationally agreed set of definitions such as JORC and NI 43-101, where the increasing level of geological knowledge and confidence is the first key variable and the consideration of mining, metallurgical, economic, social, and political factors is the second set of so-called modifying factors. Resource represents a lower level and reserve a higher level of confidence. A reserve can usually be mined at a profit.

² Based on current rates of exploitation and present price levels, as well as land ownership, access, and ore quality.

³ Estimated 10-year replenishment rate.

⁴ Estimated 10-year replenishment rate.

⁵ Summaries provided by MGD for this publication.



Photo: Shanti Persaud

3.0 KEY MINING INSTITUTIONS, LAWS AND POLICIES

Jamaica achieved its independence from the United Kingdom in 1962. The government is a parliamentary democracy under a constitutional monarchy, with Queen Elizabeth II the Head of State and Andrew Holness currently serving as Prime Minister. The country uses a common law system based on the English model. Prime Minister Holness was elected in 2016 to serve a five-year term. Administratively, Jamaica is divided into 14 parishes, governed by municipal corporations and coordinated by the Ministry of Local Government.

INSTITUTIONAL FRAMEWORK

MINISTRY OF TRANSPORT AND MINING: MINES AND GEOLOGY DIVISION

The Mines and Geology Division (MGD) of the Ministry of Transport and Mining is responsible for regulating the mining and quarrying sector. The Division is headed by the Commissioner of Mines who—in addition to other duties under the Mining Act—has statutory responsibility under both this act and the Quarries Control Act to exercise general supervision over all prospecting, mining, and quarrying operations throughout the island. The MGD also manages the investigation, characterization, documentation, and release of information on all aspects of the geology of Jamaica. It also conducts geological and natural hazard risk assessments to guide development and minimize risks associated with natural hazards. Finally, it also provides analytical services for the geoscience community through its laboratory.

MINERALS POLICY PLANNING AND DEVELOPMENT DIVISION

The Minerals Policy Planning and Development Division (MPPDD) is responsible for the government's minerals policy development, with a specific focus on promoting sustainable development and contributing to the ongoing modernization of the minerals industry. Activities include proposing new policies and amendments to minerals-related legislation, introducing new minerals-related legislation, developing programs and projects to facilitate the sector's continued development, leading mining investment-focused negotiations on behalf of the Government of Jamaica and the efficient management of mineral-bearing lands.



JAMAICA BAUXITE INSTITUTE

The Jamaica Bauxite Institute (JBI) was established in 1976, primarily to deal with the sovereign aspects of the government's participation in the bauxite and alumina industry. Its main functions include monitoring and studying the bauxite and alumina industry; providing technical advice; undertaking research and development activities; assessing and ensuring rationalization in the use of Jamaica's bauxite reserves and bauxite lands; and monitoring and making recommendations on pollution control and other environmental concerns in the industry. While the industry typically complies with standards, incidents do occur which affect communities, such as soot emissions, dust emissions, or chemical spills that are not controlled at source and in turn affect the wider environment. The JBI's role in such situations is to coordinate response agencies and the industry to effect immediate containment and clean-up, as well as investigate long-term options to prevent a future occurrence.

In conjunction with other agencies, such as the MGD and NEPA, the JBI is also involved in environmental monitoring and interfacing with communities hosting bauxite and alumina operations. A memorandum of understanding was signed between the JBI and the Natural Resources Conservation Authority (NRCA) in 1994 (updated and renewed in 2013), which acknowledged the role played by the JBI and made it responsible for managing and monitoring the impacts of the industry on the environment. In line with its role and function in the environmental stewardship and sustainability of communities impacted by the bauxite/alumina operations, the JBI established the Bauxite Community Development Programme (BCDP) to address the economic and social development of affected communities. The JBI has a board of 10 members with expertise stretching across various disciplines.

JAMAICA BAUXITE MINING LIMITED

Jamaica Bauxite Mining Limited (JBM) was established in 1975, and its primary function was to manage the government's equity in any operations which include bauxite mining and alumina processing. The company has since disposed of most of its equity in bauxite alumina operations—the most recent divestment was the sale of its 7% equity stake in WINDALCO—with the only association with the industry being its 51% equity stake in Noranda Jamaica Bauxite Partners II. JBM also manages the legacy assets of Reynolds Jamaica Mines, which include bauxite and other lands, buildings, and the Reynolds Pier in Ocho Rios, as well as the closure bond for Rio Tinto on the now-out-of-use bauxite residue disposal areas (BRDAs) at Kirkvine, Manchester and Mount Rosser, St. Catherine. JBM has a board of up to 10 members with varied expertise drawn from both the public and private sectors. JBM is paid an asset usage fee for its equity and does not contribute to Noranda's working capital or receive any of the bauxite it produces.

BAUXITE AND ALUMINA TRADING COMPANY OF JAMAICA

The Bauxite and Alumina Trading Company of Jamaica Limited (BATCO) was established in 1977 as the trading arm for the Government of Jamaica's alumina and bauxite interests. JBM and BATCO have traditionally been involved in the marketing of the government's share of bauxite resources and sale of alumina. BATCO is now in the process of being wound up, and CAP alone now manages the sale of its alumina allocation.

CLARENDON ALUMINA PRODUCTION LIMITED

Clarendon Alumina Production Limited (CAP) was established by the government in 1985. It was created as a strategic response to a number of adverse developments that threatened Jamaica's



bauxite and alumina industry (and by extension the overall economy), including steep declines in employment, foreign exchange earnings, and government revenues associated with the sector. Chief among these developments was the decision by Alcoa Minerals to close its alumina plant without giving prior notice to the government, its partner. The government, under the joint venture agreement they had with Alcoa, had the right to buy any production not wanted by the company. CAP is now a 45% partner in the Jamalco alumina refinery through a joint venture with Noble Group, which owns the rest of the company's equity. CAP is mandated to monitor the operations of the venture, fund 45% of the venture's operating costs, and is entitled to 45% of the alumina produced by Jamalco. CAP then sells its share of the production on its own behalf. CAP has equal representation with Noble Group on both the operation's executive committee (four members each), and on the operations committee (two members each). CAP's board of directors comprises a maximum of 10 members drawn from various disciplines.

QUARRIES ADVISORY COMMITTEE

The Quarries Advisory Committee (QAC) was established under the Quarries Control Act. The QAC's role is to advise the responsible minister on matters of general policy with respect to quarries, including applications for licences and any other matter referred to it by the minister. The QAC consists of a maximum of 10 members drawn from both the public and private sectors. The committee assesses all applications for quarry licences and takes into account the recommendations of the relevant authorities, including: the National Works Agency, NEPA, the Ministry of Agriculture (Agricultural Land Management Division), the Ministry of Health (Environmental Health Unit), the Water Resources Authority, and the relevant municipal corporations, which were formerly known as parish councils). Based on the responses received from these authorities, the QAC recommends the granting or rejection of an application for a licence.

BAUXITE LANDS LAND TITLING COMMITTEE

The Bauxite Lands Land Titling Committee (BLLTC) is a multi-sectoral public and private sector committee that focuses on ensuring that those people who have been resettled due to the operations of bauxite and alumina companies are issued land titles. The committee is housed within the MTM and is chaired by the minister responsible for mining (or his/her nominee). The BLLTC comprises representatives from all government entities associated with land titling and subdivision permitting, development and handing-over processes, and the bauxite and alumina companies. The BLLTC requires, encourages, and facilitates the timely processing of land titles for persons displaced by mining. It also promotes the rapid and timely completion of subdivisions by the bauxite and alumina companies to allow for the resettlement of persons whose lands they had acquired for mining and other purposes. Bauxite and alumina companies must dedicate sufficient annual budget to cover resettlements. They must also have the staff and systems in place to manage the submission of applications for resettlement subdivisions, receive approvals, the construction of said subdivisions to the satisfaction of the planning and development authorities, and the eventual handing over of said subdivisions to the respective parish councils.

NATIONAL ENVIRONMENT AND PLANNING AGENCY

The National Environment and Planning Agency (NEPA) was founded in April 2001 as an executive agency to carry out the technical and administrative mandate of three statutory bodies:

- The Natural Resources and Conservation Authority (NRCA)
- The Town and Country Planning Authority (TCPA)
- The Land Development and Utilisation Commission (LDUC).



NEPA operates under the following Acts: Executive Agencies Act; the Natural Resources Conservation Authority Act; the Town and Country Planning Act; the Land Development and Utilization Act; the Beach Control Act; the Watersheds Protection Act; the Wild Life Protection Act; and the Endangered Species (Protection, Conservation and Regulation of Trade) Act. Operating as the government's environmental watchdog and permitting and planning authority, NEPA has seven core functions (NEPA, 2019):

1. Policy and Programme Development: Development of proposals for national environment and planning policies, legislation, regulations, standards, and programs.
2. Conservation and Protection: Management of species, habitats, and ecosystems; protected, watershed, coastal and marine areas management; and wild fauna and flora protection, rescue, and relocation.
3. Environmental Management: Pollution prevention and control; pollution monitoring and assessment; and pollution incident investigation and reporting.
4. Spatial Planning: Development of a strategic framework for orderly and progressive development of the rural and urban areas of the archipelago and the territorial waters, and the preparation of Development Orders and Spatial and Development Plans.
5. Application Management for Environmental Permits and Licences: Receive and process applications to provide recommendations for decisions on licences and permits for Planning, Subdivisions, Beaches, Environment, Hazardous waste export, import, or transportation; and provision of pre-application assistance.
6. Compliance and Enforcement: Monitoring for compliance with planning and environmental requirements; responding to complaints; investigating incidents of non-compliance; and undertaking enforcement actions and legal proceedings.
7. Public Education and Outreach: Corporate communications; documentation management; information/library services; Access to Information management; public awareness and outreach initiatives; facilitating public consultations; and developing and maintaining partnerships with stakeholders, including community groups, non-governmental organizations (NGOs) and private companies in support of environmental and planning requirements and education.

MINISTRY OF FINANCE AND THE PUBLIC SERVICE

The Ministry of Finance and the Public Service (MFPS) has overall responsibility for developing the government's fiscal and economic policy framework; collecting and allocating public revenues; and playing an important role in the socioeconomic development of the country. It works to enable growth and national development through: managing a sound and predictable macroeconomic policy framework that maintains low inflation, stable exchange rates, and competitive interest rates; strengthening the level of financial accountability and efficiency in the public sector; and improving the capacity of the ministry to effectively regulate financial institutions and combat financial crimes. MTM works very closely with the various divisions in the MFPS, particularly with the Tax Policy Division, to ensure that the fiscal regime included in agreements with mining companies reflects the government's fiscal and policy objectives. The ministry also plays an integral role in the development of mining policy and in the review and revision of legislation governing the fiscal regime of the mining sector.



MINISTRY OF LABOUR AND SOCIAL SECURITY

The Ministry of Labour and Social Security (MLSS) is responsible for providing effective social protection and promoting social inclusion. It is also tasked with promoting a stable industrial relations climate, encouraging productivity growth, ensuring the safety and health of workers, and maintaining an effective and efficient labour market. The MLSS conducts occupational safety and health inspections at bauxite/alumina ports and at select minerals processing operations throughout the island. The Occupational Safety and Health (OSH) Department in the MLSS is responsible for monitoring and enforcing the OSH requirements of the Factories Act, which is the primary OSH Act in Jamaica. Its accompanying regulations include the Factories Regulations (1961) and the Building Operations and Works of Engineering Construction Regulations (1968). The government is in the process of developing an Occupational Safety and Health Act (OSHA), spearheaded by the MLSS, which will play a pivotal role in streamlining existing laws and regulations governing OSH in the workplace; current laws and regulations do not cover all areas of employment.

NATIONAL LAND AGENCY

The National Land Agency (NLA) manages the core land information functions of government, including: land titles; surveys and mapping; land valuation; and estate (crown land) management. In bringing these functions under one roof, the government was able to create in the NLA a modern national land (spatial) information system to support sustainable development. The NLA, in providing land registration services, offers a foundational service for the country's continued development, as most investment decisions, for both small and large enterprises, are linked to land titling. All crown lands are vested with the Commissioner of Lands, who also acts as the head of the NLA. MTM and the bauxite and alumina companies work very closely with NLA with regards to the mining of both privately-owned and crown lands. Lands purchased by companies for mining are actually purchased on behalf of the government through special agreements, with the lands returned to the control of the state upon mine closure and rehabilitation; these lands are then made available for other economic activities. The NLA also enters into lease agreements with companies and individuals who plan to engage in the mining or quarrying of industrial minerals or construction materials.

ATTORNEY GENERAL'S DEPARTMENT

The Attorney General's Department (AGD) is responsible for providing advice to the government, including ministries and agencies, on all matters of law connected with legislative enactments and on all matters of law referred to that office by the government. The AGD works very closely with MTM and its agencies in the development of policy, and in the review and revision of mining and quarrying legislation and agreements. The AGD also offers advice on clauses and other provisions that would be part of any special conditions included in statutory instruments granted by the Minister of Mining and the MGD/Commissioner of Mines.

DOMESTIC LAW AND POLICY

Under the Minerals (Vesting) Act 1947, all minerals being in, on, or under any land or water, whether territorial waters, river or inland sea, are vested in and subject to the control of the government. As a result, the winning of a mineral licence is subject to the law and regulations governing mines and mining, or in other words, under license to the government.

The main pieces of legislation governing the minerals sector are the Mining Act, the Quarries Control Act and their Regulations, the Minerals (Vesting) Act, and the taxation and incentive legislation for



the Bauxite and Alumina Industries. In addition, there are several other statutes that influence mineral exploitation in Jamaica.

MINING LEGISLATION

- The Mining Act, 1947
- The Minerals (Vesting) Act, 1947
- The Quarries Control Act, 1983
- The Petroleum Act, 2006

ENVIRONMENTAL LEGISLATION

- Forestry Act, 1937
- Wildlife Protection Act, 1945
- Underground Water Control Act, 1959
- Watershed Protection Act, 1963
- Clean Air Act, 1964
- Jamaica National Heritage Trust Act, 1985
- Public Health Act, 1985
- Natural Resources Conservation Authority Act, 1991
 - Permits and Licences Regulations (1996, amended 2015)
 - National Ambient Air Quality Standards Regulations, 2006
 - Wastewater and Sludge Regulations, 2013, Jamaica
- Disaster Preparedness & Emergency Management Act, 1993
- Water Resources Act, 1995
- Endangered Species Act, 2000
- National Solid Waste Management Authority Act, 2001
- The Beach Control Act, 2004

LAND USE LEGISLATION

- Local Improvement Act, 1914
- Land Acquisition Act, 1947
- Town and Country Planning Act, 1958
- Crown Property (Vesting) Act, 1960
- Land Development and Utilization Act, 1966

TAXATION LEGISLATION

- Property Tax Act, 1903
- Harbour Fee Act, 1927
- Stamp Duty Act, 1937



- The Customs Act, 1941
- The Cement Industry (Encouragement and Control) Act, 1948
- The Bauxite and Alumina Industries (Encouragement) Act, 1950
- Income Tax Act, 1955
- Land Valuation Act, 1957
- Land Taxation (Relief) Act, 1959
- Transfer Tax Act, 1971
- The Bauxite (Production Levy) Act, 1974
- The Bauxite and Alumina Industries (Special Provisions) Act, 1977
- General Consumption Act, 1991

OTHER OPERATING STATUTES

- Wharfage Act, 1895
- The Export Industry (Encouragement) Act, 1956
- Foreign Nationals and Commonwealth Citizens (Employment) Act, 1964
- Standards Act, 1969
- Labour Relations and Industrial Disputes Act, 1975
- The Cargo Preference Act, 1979
- The Free Zone Act, 1985
- Shipping Act, 1999
- The Caribbean Community, 2005

INTERNATIONAL COMMITMENTS

Jamaica has signed and ratified a number of international agreements and commitments relevant to the mining sector, including but not limited to the following international laws, protocols, and conventions:

- Key international human rights conventions and declarations, including the Universal Declaration of Human Rights, the United Nations (UN) Convention on the Elimination of All Forms of Discrimination Against Women (ratified 1984), and the UN Convention on the Rights of the Child (1991).
- UN conventions relating to the environment, including the UN Framework Convention on Climate Change (1999), the Convention on Biological Diversity (1995), the Ramsar Convention on Wetlands (1998), the UN Convention to Combat Desertification (1997), and the Convention on the Illegal Trade in Endangered Species of Wild Fauna and Flora (1997).
- UN conventions relating to waste and pollution, including the Basel Convention for Controlling Transboundary Movements of Hazardous Wastes and their Disposal (2003), the Stockholm Convention on Protecting Human Health and the Environment from Persistent Organic Pollutants (2007), and the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (2002).
- The Minamata Convention on Mercury (2017).



- Jamaica is a member state of the International Labour Organization (ILO) and has ratified all of the ILO's fundamental conventions: Freedom of Association and Protection of the Right to Organise Convention, Right to Organise and Collective Bargaining Convention, Forced Labour Convention, Abolition of Forced Labour Convention, and the Worst Forms of Child Labour Convention, the Equal Remuneration Convention, Discrimination (Employment and Occupation) Convention, or the Minimum Age Convention. Jamaica has not signed or ratified the International Convention on the Protection of the Rights of all Migrant Workers and Members of their Families (1999), nor the Convention concerning Occupational Safety and Health and the Working Environment.
- Jamaica is not a member of the Extractives Industry Transparency Initiative (EITI).
- Jamaica is a member of the Caribbean Community (CARICOM), the Community of Latin American and Caribbean States, the Caribbean Basin Initiative, the Caribbean Forum (CARIFORUM), and Petro Caribe.



Photo: IISD/Alec Crawford

4.0 ASSESSMENT: JAMAICA AND THE MINING POLICY FRAMEWORK

The MPF presents the standards and good practices that, if integrated into mining law, policy, institutions, and regulations, can help countries optimize mining's contribution to sustainable development and poverty alleviation. Developed by the Member States of the IGF, the MPF represents their commitment to ensuring that mining activities within their jurisdictions are compatible with the objectives of sustainable development and poverty reduction (IGF, 2013).

This assessment, conducted at the request of the Government of Jamaica, evaluated the degree to which the standards and practices of the MPF were integrated into existing national laws and policies. It is hoped that by identifying the strengths and gaps present in existing mining laws and policies, the assessment will help the Jamaican government improve its governance of the mining and minerals sector, inform capacity-building efforts, and allow for monitoring of progress over time.

The assessment is organized according to the six themes of the MPF: the legal and policy environment, financial benefit optimization, socioeconomic optimization, environmental management, post-mining transition, and artisanal and small-scale mining. Each of the following subsections offers a short summary of the theme, the key legislation and policies applicable to the theme, and the strengths (where implementation is advanced), and gaps (where implementation needs more progress) within each theme. The assessment concludes with recommendations, consistent with the request of the Ministry of Transport and Mining.

 **THE LEGAL AND POLICY ENVIRONMENT**

 **FINANCIAL BENEFIT OPTIMIZATION**

 **SOCIOECONOMIC BENEFIT OPTIMIZATION**

 **ENVIRONMENTAL MANAGEMENT**

 **POST-MINING TRANSITION**

 **ARTISANAL AND SMALL-SCALE MINING**



LEGAL AND POLICY FRAMEWORK

The first thematic area of the MPF focuses on national mining laws and policies, and permitting processes. It encourages a mature, modern legislative system with clear lines of responsibility and accountability, and highlights the types of laws and policies that serve as a basis for good governance and sustainable development. The MPF standards featured in this thematic area fall into the following categories:

- The ongoing generation of and equal access to geological information.
- The periodic revision and updating of mining legislation and policies.
- A timely, transparent, unambiguous and consistent permitting process that requires:
 - Consultation with communities in the planning and development stages of a mine.
 - Submission of integrated social, economic, and environmental impact assessments.
 - Identification of sustainable development opportunities.
 - Planning for mine closure, with adequate financial assurance.
 - Protection of Indigenous rights and cultural heritage, and addressing resettlement and community safety and security issues.

KEY LAWS AND POLICIES

- The Mining Act, 1947
- The Minerals (Vesting) Act, 1947
- The Quarries Control Act, 1984 (amended 2015)
- The Quarries Control (Quarry Tax) Resolution, 1990
- Quarries (General) Regulations, 1958
- Natural Resources Conservation Authority Act, 1991
- Natural Resources Conservation (Permits and Licences) Regulations, 1996 (amended 2015)
- The Factories Act, 1943 (amended 2009)
- The Bauxite and Alumina Industries (Encouragement) Act, 1950
- The National Minerals Policy 2017–2030 (draft)
- Vision 2030 Jamaica

THE PERMITTING SYSTEM

A comprehensive licensing and registration system for mines and quarries in Jamaica allows regulators to screen permit applications at an early stage in the decision-making process to identify potential social and environmental impacts and risks prior to approval. This system also allows the government to monitor those impacts and risks to ensure compliance with permit obligations or any special operation conditions of the licences and leases, across all stages of mining and quarrying. Under the current legislation, all minerals in Jamaica are property of the government, while quarry materials are the property of the landowner.

The Natural Resources Conservation (Permits and Licences) Regulations (1996, amended 2015) stipulate that environmental permits are also required to undertake certain activities in Jamaica, including minerals exploration, mining and mineral processing (of bauxite, construction and industrial minerals, and aggregate).



Permission to mine and quarry in Jamaica is granted by the minister with responsibility for mining and quarrying; nonetheless, an environmental permit is first required depending on the scale of the operations, based on the recommendations made by the relevant environmental authorities, namely the boards of the NRCA and TCPA.⁶ A Technical Review Committee (TRC), made up of representatives from key agencies including the National Works Agency (NWA), MGD, JBI, the Water Resources Authority (WRA), and the Environmental Health Unit of the Ministry of Health among other government stakeholders, including, but not limited to the Ministry of Local Government, planning authorities, JAMPRO, and the Commissioner of Lands, reviews applications for environmental permits, and makes recommendations to the NRCA and TCPA boards regarding approval or refusal of applications. The NRCA Act also requires that before the MGD grants any statutory instrument (licence, lease) to quarry, explore, or mine minerals, NEPA must first be consulted. Once an application is approved by the boards, the ministry with responsibility for mining can proceed with the granting of the lease (mining lease [ML], special mining lease [SML] or licence [quarry licence, or QL], prospecting licence [PL], exclusive prospecting licence [EPL], or special exclusive prospecting licence [SEPL]).

A number of mining and quarrying licences and leases are available in Jamaica (see Table 3). A quarry licence (QL) is a permissive right that is required to remove or extract quarry materials or minerals from a specific area of a landowner's property. Currently, a QL⁷ may be granted for periods ranging from 6 months to 10 years⁸, depending on the type and availability of the specific quarry material. A QL is transferable; however, the area over which the licence has been granted remains constant. There are a number of special conditions imposed when a licence is granted; these include conditions or restrictions laid out by any or all of the relevant agencies.

A prospecting right (PR) is required to conduct a general search for minerals throughout the island. A PR is typically granted for one year and can be renewed for further one-year periods.

An EPL or SEPL is required to search for mineral(s) in Jamaica and is granted for a specific mineral(s) in a specified area. Special operating conditions are included in an SEPL that impart certain rights and impose certain obligations on the licensee. An EPL is usually granted for a year and is renewable up to a maximum of 6 years, while an SEPL can be renewed for longer periods and takes into consideration factors associated with the activities.

An ML is required for the extraction or removal of a mineral or minerals. An ML is granted for a specific mineral(s) from a specified area subject to certain conditions, rights and obligations. They can be granted for up to 25 years. The minister may, notwithstanding anything in the Mining Act, also grant an SML for longer periods, subject to certain conditions, rights, and obligations.

⁶ The boards of the NRCA and TCPA are comprised of 10 and 9 members, respectively.

⁷ QLs for river-based quarries are generally granted for up to one year, while QLs for the quarrying of in situ materials are most often granted for three years.

⁸ To facilitate development within the industrial minerals industry, the draft National Minerals Policy proposes the granting of quarry licences for terms exceeding 10 years where the investment warrants such action.

**TABLE 3. MINING LEASES, QUARRY LICENCES, AND OTHER PERMITS IN JAMAICA**

LICENCE TYPE	DESCRIPTION	DURATION	RENEWABLE	REMARKS
Export Permit	Gives authorization to a person or company who wishes to export samples or bulk of any natural resources of Jamaica.	Three months	No	Can be used for only one person or company at a time.
Quarry Licence	Gives the applicant authorization to mine or quarry non-mineral items in a particular area, including sand, marl, or low-purity limestone.	Ranges from 6 months to 10 years	Yes	Site-specific.
Prospecting Right	Gives a person/company the right to “search” for mineral(s) samples anywhere in the island.	One year	Yes	Not transferable.
EPL	For an area of up to 18 km ² . Granted for specific mineral or minerals and gives authorization to the applicant to prospect after finding mineral(s) under their Prospecting Right.	One year	Yes	Must meet work and expenditure obligations and submit biannual reports.
SEPL	For an area above 18 km ² . Granted for specific mineral/minerals and gives authorization to the applicant to prospect after finding mineral(s) under their prospecting right.	One year	Yes	Must meet work and expenditure obligations and submit biannual reports.
ML/SML	Grants exclusive rights to the mining area. Granted for bauxite and high-purity limestone. ML grant for an area below 18 km ² , SML granted for an area larger than 18 km ² .	Between 5 and 26 years	Yes	Must demonstrate financial and technical ability to develop and operate a mine. Must also obtain an environmental permit.

Source: Mines and Geology Division, Ministry of Transport and Mining.⁹

STRENGTHS

- While there is not currently a mining or minerals policy in Jamaica, the government is well advanced in the process of developing the country’s first mining or minerals policy. The draft document, while not yet adopted, has been accepted by the cabinet, which has directed that it be presented to Parliament. It proposes a defined timescale (2017–2030) and a periodic review mechanism (in 2020, 2025 and 2030), and largely reflects international best practice. It was developed through public and private consultation. The goal of the policy is to optimize the mineral sector’s contribution to Jamaica’s sustainable development, and national

⁹ Summaries provided by MGD for this publication.



development plans (including Vision 2030) are integrated into the policy. It acknowledges key areas of mining governance, including environmental management, waste minimization, rehabilitation, value addition, transparency, and inter-sectoral coordination, while also discussing emerging challenges around addressing climate change and ensuring gender equality. The adoption of the new mining policy will also trigger the process of applying for membership in the EITI.

- Legislation relevant to the mining sector is available to stakeholders through the website of the Ministry of Justice. Stakeholders can also access information pertaining to the mining sector through requests made via the Access to Information Act, though the format in which this information is often delivered can be difficult to understand for the average reader.
- Permits and licences cover the various segments of the sector, including prospecting, exploration, production, mining, and quarrying. Applicants must demonstrate they have the financial and technical ability to operate a mine prior to the granting of an ML. They must also obtain an environmental permit before the lease is granted; this requires the submission of both environmental management plans along with closure and rehabilitation plans for the site. There are guidelines relating to regular reporting obligations, as well as for the renewal or transfer of permits and licences; special reporting requirements can be included as conditions to a mining lease.
- Environmental permit applications are screened, and this process determines whether an environmental impact assessment (EIA) is required. If a detailed EIA is required as part of the permitting process, it must be submitted as part of the environmental permit application. EIA requirements are set out in guidelines (draft regulations are awaiting adoption by Parliament), and include public participation and consultation, a baseline description of current conditions, and the identification of risks, possible impacts, and possible mitigation measures. Social considerations are also included in the EIA process. The submission of the draft EIA must be announced to the public via three newspaper notices. Public participation requirements for the EIA process include a three-week period in which the public can review submitted EIA drafts, which are posted online upon submission. During this review period, public meetings are held, after which consolidated comments must be sent to the NEPA review committee for consideration. Applicants then adjust their draft EIAs based on the feedback garnered during this process.
- EIAs are conducted by independent third-party consultants. EIA consultants do not currently need to be certified, though certification will be required once the draft EIA regulations have been adopted. The process in place for the approval or rejection of environmental permit applications is robust and multisectoral. Through NEPA's TRC, environmental permit applications related to mining, quarrying, and related operations are screened by authorities focused on mining, geology, water, planning, environment, and public works. Beyond the TRC, NEPA must be consulted prior to the granting of any statutory instruments. This approvals process helps to ensure that environmental and social concerns are integrated into applications.
- There are strict regulations and structures in place to manage the resettlement of communities or individuals impacted by the expansion of bauxite mining. Resettlement is managed in part through the BLLTC described above. Government policy on resettlement states that the quality of new housing and lands must be at least as good as what is given up. Resettlement includes considerations on housing and infrastructure, but also on livelihood aspects such as farming, livestock, and the loss of fruit trees. Land titles must be given to community members once they have been resettled, even if these community members did



not have a formal title to begin with; this is part of the broader, island-wide effort to title and formalize land tenure across the country (the Land Administration Management Program). The bauxite mining companies must bear the cost of resettlement, and have dedicated staff working on resettlement.

- Through the JBI, the government can focus considerable attention on the island's primary exploited ore and align developments and governance for bauxite mining.

GAPS

- The generation of and access to geological data remain key gaps for Jamaica. There is a strong need to update the country's geological database of known and predicted metalliferous and non-metalliferous resources; most of the maps available were produced in 1981. These efforts should include the expansion of this database to cover Jamaica's offshore mineral resources, to ensure that this information is known and understood prior to policy decisions on deep-sea mining. Key areas should be covered by 3D models if possible.
- Public access to geological data is limited. Currently, most maps are only available in hard copy at the MGD offices in Kingston, limiting access to those members of the public who can access these offices. For those with fewer resources based in another part of the island, access to this information is restricted. Encouragingly, efforts continue to digitize the maps, which will help make the information available online and more widely accessible.
- The Mining Act of 1947, while amended since, remains the foundational law governing the sector and should be updated. The age of the legislation means that it does not reflect current knowledge or best practice, nor does it deal with all aspects of mining, from exploration and production to closure and post-closure management. The out-of-date nature of the Mining Act contributes to the fact that the sector is governed by a number of overlapping pieces of legislation, including the NRCA Act, the Bauxite Encouragement Act, the Quarries Control Act, and the Factories Act, which can be convoluted to navigate for private sector, community, and civil society stakeholders. Taken together, these pieces of legislation govern most aspects of the mining cycle, though coverage of the post-mining transition remains limited.





- Stakeholders note that the quality of public engagement in the EIA and permitting processes is often inadequate. Public meetings tend to be poorly publicized, and no requirements are in place regarding the minimum number of people who must be present at a consultation in order to comply with the EIA guidelines. As a result, these meetings tend to be poorly attended. NEPA attends the meetings solely as an observer, rather than acting as a voice for environmental concerns.
- There is a perceived conflict of interest within the current institutional arrangement governing bauxite mining: the JBI is central to the monitoring and regulation of the sector but is also expected to act as an advocate and promoter of Jamaican bauxite mining. It should be noted that the establishment of a National Minerals Institute, as recommended in the draft National Minerals Policy, would help to address this.
- Permit applications are required to focus on rehabilitation and restoration of mined lands, but less attention is paid to the post-mining transition and local social and economic impacts of mine closure. Financial bonds are required for basic rehabilitation, but the management of bonds is not standardized across the industry; quarry bonds are held by the government, while bauxite companies hold their own bonds for rehabilitating residual storage facilities, with no bonds required for land restoration (see Pillar 5: Post-mining Transition).
- The government must work to improve the transparency and timeliness of the processing of licences and leases. Stakeholders note that the outdated laws governing the granting of licences and leases allow for too much ministerial discretion, particularly in the review of exploration and quarry licence applications. In addition, it can take a long time to receive word on whether a licence or lease application has been granted or rejected; while an extreme example, one stakeholder noted that they had to wait 15 years for a quarry licence. Multiple levels of permit approval across agencies can also lead to bottlenecks. Improved timeliness in the granting of these permits would have a positive impact on resource mobilization, particularly for smaller exploration and quarrying operations.

FINANCIAL BENEFIT OPTIMIZATION

The Mining Policy Framework's second thematic area focuses on the optimization of financial benefits through taxes, royalties, and other payments, and reflects the value of mineral resources to society. The other major subtopic of this pillar is revenue transparency on both the municipal and national levels. Policy recommendations under this section fall into the following categories:

- The implementation of a revenue-generation framework that optimizes returns from mining activities and allows some minimum level of financial return during low price periods.
- The integration of planning for the mining sector with that of other economic sectors.
- Providing a policy that optimizes revenues while offering an adequate rate of return to investors, that uses income tax based on net profits, and that applies such taxes in a similar manner as to non-mining activities.
- The need for a high level of human and intellectual resources, particularly to administer and audit the country's tax system and obtain maximum benefit from its tax regime.
- The integration of fiscal instruments and policy objectives.
- Increasing revenue transparency and knowledge regarding the distribution of benefits from mining.



KEY LAWS AND POLICIES

- The Minerals (Vesting) Act, 1947
- The Mining Act, 1947
- The Mining Regulation
- The Quarries Control Act, 1983
- The Quarries General Regulations
- The Bauxite and Alumina Industries (Special Provisions) Act, 1977 (1982)
- The Bauxite (Production Levy) Act (1974) (1998)
- The Bauxite and Alumina Industries (Encouragement) Act (1950) (1997)

TAXATION, ROYALTIES, AND OTHER REVENUE SOURCES

The Government of Jamaica generates revenue from the mining sector using a variety of mechanisms, including taxation, royalties, dividends, fees, and local content policies. Combined, these mechanisms account for a significant portion of government revenues. The generation of mining revenues is governed by legislation (specifically the Mining Act, Bauxite and Alumina Industries (Encouragement) Act, and Income Tax Act).

One of the primary sources of revenue from the mining sector to the government is the Bauxite Production Levy, established in 1974 to generate increased revenues from the sector. The bauxite and alumina companies initially contested the levy, which led to a curtailment in further large-scale investment by them in the industry. Nevertheless, by December 2017 the levy had generated over USD 2.8 billion for the government.

The bauxite levy is applied to crude bauxite exports and on the bauxite equivalent of exported alumina. It is indexed to the London Metal Exchange (LME) 3-month aluminum price; a provisional price is set early in the year. It is set at a base rate of USD 5/Mt of bauxite or bauxite equivalent of alumina exported, which is linked to an LME base price of USD 1,325/tonne, and moves up in direct proportion to the LME 3-month price. The levy is payable on the 15th day of the month following shipment. Monthly payments are based on provisional price set early in the year, and the final price is calculated on the LME annual average price published in January. If the final price is greater than the provisional price, companies are expected to pay the outstanding amounts to the government. The reverse is expected if the final price is below the provisional price.

Other key sources of government revenue are:

- Payroll taxes, including employer and employee NHT/EDT/NIS and HEART.
- Corporate income tax of 25%, which is calculated based on profits arising in a calendar year.
- The General Consumption Tax (GCT), which is a value added tax applied to goods and services at each stage of the production and distribution chain. It is applied to imported goods and services as well, unless the goods or services are specifically exempted from GCT.
- The Contractors Levy, which is set at 2% of the gross payment made to a contractor (including a sub-contractor) for construction, tillage, or haulage operations.
- Withholding Tax, which is deducted from certain categories of payments made to non-residents by Jamaican residents as well as Jamaican branches of non-resident companies.
- Royalties, which are imposed on all minerals obtained in the course of prospecting or during mining operations. In addition, minerals cannot be exported until payment or securing of



the royalty, under such conditions as may be prescribed by the Commissioner of Mines. The Mining Act provides for a royalty of USD 0.5 per tonne of bauxite mined.

- The Quarry Tax, which is calculated at a rate of 3.5% for construction materials and 5% for minerals, based on the “quarry gate” price of the material produced by the quarry. Production cost varies between quarries. Consequently, the MGD uses the average production cost in each administrative region or zone to determine the quarry tax that will be levied on each quarry in the particular administrative region or zone.
- Fees for prospecting, exploration and quarry licences, and mining leases.

The government also generates revenues through direct ownership and profit-sharing arrangements with some bauxite mining companies. Through JBM, it owns 51% of the Noranda Jamaica Bauxite Partners II, in a joint venture with New Day Aluminium. By surrendering the traditional bauxite levy, the government, via JBM, earns 17.33% of combined EBITDA from the bauxite mining operation at Discovery Bay, St. Ann parish, and the alumina refinery at Gramercy, Louisiana, United States. All contributions to operating costs and capital expenditures are financed by this profit-sharing arrangement. The government also owns a 45% stake in Jamalco.

STRENGTHS

- Revenues are generated through a mix of taxes, royalties, fees and dividends, and together these revenues make up a significant portion of the government’s operating budget. Revenue-generation mechanisms are largely seen as fair and transparent. For large-scale mines, Tax Administration Jamaica (TAJ), MGD and JBI partner in supervising and assessing revenues on a quarterly basis through inspections and audits.
- In making a significant contribution to the national budget, mining is well integrated into Jamaica’s social and economic development. In addition, a portion of revenues from the bauxite levy fund the BCDP, which is designed to support local community development programs in bauxite-adjacent communities. The BCDP is managed by the government via the JBI.
- Through the structuring of the bauxite levy, there is a mechanism in place to ensure that revenues from large-scale mining adjust according to commodity price volatility. This minimizes the need for entities to reduce or end production in low price periods while generating higher returns for the government in times of higher pricing. In addition, companies can request relief from the bauxite levy if required, and the government can grant full or partial relief if it is in the interest of the country, with sign off from the Ministry of Finance.
- The corporate income and general consumption (sales) taxes applied to the mining sector are similar to those applied to non-mining entities operating in the same jurisdiction, unless otherwise agreed upon in mineral agreements or exempted under the Bauxite and Alumina Industries (Encouragement) Act (1950). Corporate income taxes are based on net profits. All exemptions on tax are included in the legislation, with the minister or commissioner having no discretion to make special exemptions.
- There is a unit within the Ministry of Finance devoted to monitoring the mining sector.
- Adoption of the draft minerals policy will trigger the process of Jamaica submitting its application to become a member of the EITI. This signals the government’s commitment to increasing revenue transparency for the sector.



GAPS

- There are multiple tax regimes for the mineral industry, which makes it more challenging for collection and compliance by the government.
- Revenues generated from the mining sector are largely integrated into the national budget through the Consolidated Fund. There is, however, a perception—especially among those living in mining areas—that there is a lack of open or transparent data on how revenues from the sector are being distributed at the local, regional, and national levels.
- Quarry taxes are collected from licensed quarry operators based on the quantity of material produced on a quarterly basis. Consequently, the continued presence of informal, non-registered, and illegal quarry operations represents a source of lost revenues for the government. Similarly, the lack of transparency and record-keeping by some quarry operators means that mining revenues are largely generated from a limited number of licensed quarries that operate. Efforts must be expanded to formalize the unlicensed operations and enforce penalties for non-compliance.
- The government's resources and staff capacities to administer the tax system, deal with transfer and other pricing issues, and audit results are stretched due to a high level of tax avoidance and non-compliance by many operators. This reduces the revenues generated from most of Jamaica's extracted minerals. In general, tax collection and compliance across the economy continue to be a challenge for the government.
- Revenue generation from the mining industry is limited by the lack of domestic value addition in the bauxite and quarry sectors. The quarry sector, in particular, operates primarily at the raw material stage of production, due to a range of factors, including limited market intelligence, poor infrastructure, high operating costs, poorly defined resources and reserves across many commodity groups, a poor road network, an under-capitalized railway network, and inadequate access to suitable ports with loading, unloading, and bulk handling facilities for aggregates. Value addition is also hindered by the tax exemptions contained within the Bauxite and Alumina Industries (Encouragement) Act, which incentivize the purchase of imported rather than domestically-produced lime for processing.
- Many small operators do not have quantified estimates of their resources and reserves, thus do not have the capacity to produce sound business plans linked to their mineral resource production scheduling. This means that bankers, along with both private and development banks, categorize quarrying as medium-high risk and therefore historically minimized their provision of loan capital to the sector. There will need to be a sensitization program for lenders concerning the needs of the non-bauxite producing sector, which remains capital intensive for larger-scale quarries; increased alignment of lending timelines with quarrying timelines; and general improvements in communications between the financial industry and the quarrying industry.



SOCIOECONOMIC BENEFIT OPTIMIZATION

The third pillar of the MPF examines how domestic laws and policies promote the conversion of extracted natural capital into human capital so that the socioeconomic benefits of mining are optimized for local, regional, and national stakeholders. The policy recommendations under this theme include:

- Integration of the mining sector into community, regional, and national fabrics and strategies, for example, by making socioeconomic planning a part of the permitting process and by ensuring consultations with affected stakeholders take place at various stages of the mining cycle.
- Working collaboratively with governments to ensure that mining activities consider and support education and community health services.
- Ensuring high standards of occupational health and safety.
- Optimizing employment and business opportunities at and around the mine site with the objective of ensuring economic growth beyond the life of the mine.
- Addressing potential security issues.
- Considering the respect of human rights, Indigenous People, and cultural heritage through norms that are aligned with international laws and standards.

KEY LAWS AND POLICIES

- Factories Act, 1947
- The Mining Act, 1947
- The Quarries Control Act, 1983
- The Bauxite and Alumina Industries (Encouragement) Act (1950) (1997)

STRENGTHS

- Mining is integrated into the country's socioeconomic fabric and is a significant source of both formal and informal employment and livelihoods, making a considerable contribution to the national budget and development. It is integrated into national development plans, including Vision 2030 Jamaica, in which both mining and quarrying are included under Goal 3, which focuses on ensuring that Jamaica's economy is prosperous. The draft National Minerals Policy takes as its starting point that mining will be a primary contributor to sustainability in Jamaica going forward.
- The JBI has established a formal structure and mechanism to consult with residents living adjacent to bauxite and alumina facilities, and any concerns and issues can be raised via community councils. These multistakeholder councils consist of representatives from citizen and community groups, mining industry personnel, the JBI and other relevant government agencies, and meet on a monthly basis. Beginning in 2018, the MPPDD has started to expand these community consultation structures to non-bauxite mining areas.
- The social impacts of mining are considered part of the EIA process, and funding for local development projects is meant to be generated from the bauxite levy through the BCDP.
- The Ministry of Labour and Social Security and MGD are responsible for protecting and enforcing occupational health and safety standards, depending on the type of operations.



- As part of the permit application process, applicants must submit accident prevention and emergency response plans.
- In order for a mining company to obtain a work permit for a foreign worker, they must prove that a Jamaican national cannot adequately do the job, and must provide a plan by which they will move toward Jamaican representation through training pathways.

GAPS

- Public participation and consultation is limited in mine-adjacent communities despite the presence of community councils, and there are low levels of active participation and understanding in the EIA feedback process for bauxite operations. Stakeholders report that while some of the councils function effectively, others do not. In addition, quarry operators often focus mostly on social investments, rather than expanding these to include environmental and health concerns.
- Community consultations are not usually required by MGD in the permitting process for quarry licences. Community councils are not in place for large-scale quarries, hindering continuous engagement with the public.
- Legislation on occupation safety and health (OSH) is segmented. The Mining (Safety and Health) Regulations (1977) governs OSH activities within the mining sector. Legislation relating to factories, ports and other non-mining or non-quarrying specific operations dates back to 1943, and the regulations relating to those activities were adopted in the 1960s. Current law holds the operator solely responsible for OSH, as opposed to all employees. There are also overlapping mandates for governing OSH; inspections are either carried out by MLSS, MGD, or both MLSS and MGD, depending on the operation and the state of processing; MGD is responsible for inspection of all mines and quarries, while MLSS inspects the factory aspects of quarries—including crushers, block-making facilities, and equipment repair areas. This can create confusion for the operators. An updated bill on OSH is in the process of being adopted but is not yet law.
- The land titling process is often slow and challenging for people who have been resettled due to the expansion of bauxite mining. This is particularly the case for those community members who had previously been occupying lands without a formal title.
- For many mine- or quarry-adjacent communities, there is a dependence on mining that leaves these communities vulnerable to boom and bust cycles in commodity prices and the consequent impacts on production levels and employment. There is also no policy in place on local content and the promotion and support of local goods and services providers who can support a mine site. Similarly, there is no legislated need for companies to plan for and invest in the post-mining transition to ensure that skills and infrastructure developed during the mine's life can be applied and used sustainability once the mine has closed.



ENVIRONMENTAL MANAGEMENT

The environmental management section of the Mining Policy Framework recognizes the importance of ecosystem management to any society seeking to become more sustainable. The themes covered under this pillar include:

- Management of water resources, surface and groundwater, guaranteeing the quality and quantity of public water supply not being negatively impacted by mining effluents discharged to the environment.
- Avoiding and minimizing potential adverse effects on biodiversity through different actions and measures.
- Managing mine wastes by creating facilities, commissioning reviews by experts and preparing reports to submit to the government.
- The development and implementation of an emergency preparedness program prior to the commencement of operations, updating this program during the life of the mine to meet best practice standards.

KEY LAWS AND POLICIES

- Minerals (Vesting) Act, 1947
- The Mining Act, 1947
- The Petroleum Act, 2006
- The Quarries Control Act, 1983
- The Bauxite and Alumina Industries (Encouragement) Act, 1950
- Executive Agencies Act

ENVIRONMENTAL LEGISLATION

- The Natural Resources Conservation Authority Act, 1991
 - National Ambient Air Quality Standards Regulations, 2006
 - Permits and Licences Regulations (1996, Amended 2015)
 - NRCA Wastewater and Sludge Regulations (2013)
- The Beach Control Act, 2004
- The Watersheds Protection Act, 1963
- The Wildlife Protection Act, 1945
- Endangered Species (Protection, Conservation and Regulation of Trade) Act, 2000
- National Solid Waste Management Authority Act, 2001
- Public Health Act, 1985
- Clean Air Act, 1964
- Forestry Act, 1937
- Jamaica National Heritage Trust Act, 1985
- Water Resources Act, 1995
- Underground Water Control Act, 1959
- Disaster Preparedness & Emergency Management Act, 1993



LAND USE LEGISLATION

- The Town and Country Planning Act, 1958
- The Land Development and Utilization Act, 1966
- Crown Property (Vesting) Act, 1960
- Land Acquisition Act, 1947
- Land Development and Utilization Act, 1966
- Local Improvement Act, 1914
- Town & Country Planning Act, 1987

KEY POLICIES, GUIDANCE, DRAFT LEGISLATION, AND OTHER GOVERNANCE DOCUMENTS

- Draft Jamaica National Minerals Policy Framework, submitted to Cabinet December 2018
- MOU between NRCA (NEPA) and JBI, April 1994, renewed 2013
- Draft Jamaica National Ambient Water Quality Standards – Freshwater, 2009
- The NRCA National Sewage Effluent Standards, 1996
- NRCA Jamaican National Trade Effluent Standards, 1995

The NEPA–JBI Memorandum of Understanding, recently reaffirmed by the parties, acknowledges the authority JBI has for the environmental management of the bauxite/alumina industry and for monitoring the impacts that industry has on the environment.

STRENGTHS

- There are rigorous processes in place for the permitting and monitoring of environmental performance within Jamaica’s bauxite/alumina subsector. Key issues such as air quality protection and dust pollution are jointly managed by NEPA and JBI; JBI focuses much of its attention on related regulatory, monitoring, and reporting matters.
- The water quality standards used for surface and groundwater are mostly consistent with good international industry practice, particularly the draft Jamaica National Ambient Water



Photo: Shanti Persaud



Quality Standards – Freshwater, 2009. While not yet officially adopted, these standards are effectively being used by those operating in the sector. Operators are required to ensure that quality and quantity of mine effluent streams discharged into the environment, including stormwater, pad drainage, process effluents, and mine works drainage, are managed and treated to meet established effluent discharge limit values. Ongoing monitoring is mandated through the Water Resources and Natural Resources Conservation Acts and is regulated by NEPA and JBI for bauxite/alumina, and by MGD and NEPA for quarries.

- Those operating in the bauxite/alumina subsector are required to ensure that water and waste-leaching or percolating waste dumps, tailings storage areas, and leach pads have equivalent protection. If problems emerge or are identified, they must be addressed with strategic action plans; this can be primarily with JBI /NEPA and WRA support.
- Biodiversity and ecosystem health are included in NEPA's environmental permit application screening process. Activities—including mining—are prohibited within protected areas unless permission is granted by the NRCA. The Prime Minister's Office has recently taken steps to protect the forest ecosystem and groundwater resources of the area to be declared as the "Cockpit Country Protected Area," in the northwest of the country—despite the fact that fairly significant quantities of high-quality bauxite and much larger quantities of limestone resources are known to exist within the ecosystem's boundaries.
- Consistent with NEPA's environmental review, environmental permitting, and impact assessment process, mining entities are required to submit environmental management plans as part of the permitting process. These must be updated when there are significant changes during the operating life of the mine.
- With the support of JBI, operators in the bauxite/alumina subsector must ensure their structures, including waste dumps and tailings storage facilities, are planned, designed, and operated with appropriate consideration for geotechnical risks and environmental impacts through the entire mine cycle and after mine closure.
- The government consistently and comprehensively requires all mining operations to have an emergency preparedness and response program in place prior to commencing operations. The government and mine operators consult one another on the elements of emergency preparedness programs, and the government reviews the plans in cooperation with communities and all relevant levels of government. These must be reviewed, tested, and updated regularly.

GAPS

- The approvals and management processes for environmental issues, including EIAs, are guided by a screening process and a series of committees, which, while comprehensive, is thought to be overly complicated and difficult to track and enforce. NEPA, for example, works with at least 18 agencies as part of its environmental permitting, review, and approval process. An exploration company identified 22 agencies that it works with to maintain its permits. The high number of implicated agencies and limited guidance means that it is often unclear to what standard environmental management and mine closure are planned, costed, financially assured, and designed.
- Although there are environmental management standards in place for the use of surface and groundwater, they are not always strictly monitored and enforced at quarries, which would include appropriate penalties given out for non-compliance. It is also unclear when and by what process the draft Jamaica National Ambient Water Quality Standards – Freshwater will be adopted.



- The NRCA National Sewage Effluent Standards have chemical oxygen demand, faecal coliform, and residual chlorine effluent limits that are less stringent than other international mining jurisdictions. For example, nitrogen, phosphorous, and faecal coliform limits for pre-1997 built facilities are higher than those set by the IFC, while phosphate limits for post-1997 facilities are high relative to the International Finance Corporation (IFC) EHS Environmental, Health, and Safety Guidelines chapter on Wastewater and Water Quality (IFC, 2007). Similarly, the NRCA's National Trade Effluent Standards do not include an aluminum limit, and include limits on total dissolved solids, total suspended solids, biochemical oxygen demand, and zinc that are less stringent than other internationally competitive mining jurisdictions. In addition, bacteriology limits on total and faecal coliform are also higher than in several other internationally competitive mining jurisdictions.
- Although operators in the bauxite and alumina subsector are consistently monitored and regulated, the legislative framework regarding processing wastes (BRDA's or red mud ponds) and related facilities such as dams does not presently adhere to international best practices, such as the Mining Association of Canada (MAC) *Guide to the Management of Tailings Facilities* [2017]).
- Although a robust gold exploration subsector has been working in Jamaica for over 25 years, it is unclear how NEPA and MGD will review, approve, and enforce related mining permits. Foreign and domestic investors are unsure about whether the government's approach to quarrying, alumina production, or bauxite mining will be used to govern the evolving gold (and other metals) subsector(s).
- Jamaica's legislation and guidance do not clearly and consistently require that water-leaching or percolating waste dumps, tailings storage areas, and leach pads are designed, built, operated, or maintained in alignment with international best practice or with external expert review throughout the mine life cycle. This has historically been a problem, and operators are now required to mitigate seepage impacts (BRDA's for example). The government also does not require operators to commission independent expert reviews of waste facilities at regular intervals during operations (using, for example, guidance such as the MAC *Guide to the Management of Tailings Facilities*, the ICMM *Preventing Catastrophic Failure of Tailings Facilities Position Paper* [2016], and the IFC's EHS Guidelines).
- Although biodiversity and ecosystem health are part of NEPA's environmental permit application screening process, there is no clear guidance on how operators are required to consistently manage biodiversity or how Jamaica consistently and effectively governs biodiversity protection and management.
- Jamaica's emergency preparedness programs are not consistently based on ongoing consultation and cooperation with local and other stakeholders and government. Similarly, the government does not consistently and comprehensively ensure the monitoring or testing of emergency preparedness programs by companies in cooperation with communities and all levels of government.



POST-MINING TRANSITION

This pillar of the Mining Policy Framework establishes the need to ensure an organized and planned post-operation transition. Adequate measures and plans required to guarantee this transition need to be considered and developed throughout the life cycle of the mining operation. Specifically, the aspects of this section of the MPF relate to:

- Ensuring that closure plans prepared by mining companies are of a high standard and are updated on a regular basis.
- Developing financial assurance mechanisms for mine closure.
- Taking a leading role in exploring options for orphaned and abandoned mines within the state's jurisdiction.

KEY LAWS AND POLICIES

In addition to the mining and environmental legislation noted above, post-mining transition governance is further legislated and guided by:

- NRCA Natural Resources Conservation (Wastewater and Sludge) Regulations, 2013
- NRCA Draft Guidelines for Closure Plans for Red Mud Ponds and Other Waste Areas in the Bauxite/Alumina Industry, 2005
- NRCA Guidelines for the Preparation of a Closure Plan for Industrial Type Projects, 2006
- NRCA Guidelines for a Site Contamination Assessment Report/ Remedial Action Plan, 2006
- National Restoration Committee Guidelines for the Rehabilitation of Lands Disturbed for Mining Bauxite, 2012

STRENGTHS

- Mine closure and rehabilitation are included in the legal and regulatory frameworks governing the mining sector. This includes requirements that any excavations—including those from prospecting—be permanently secured and filled to prevent access by people and livestock going forward. Rehabilitation includes replacing topsoil after mining and restoring the land for agricultural, pastoral or afforestation purposes, or any such other use as may be approved by the Commissioner of Mines or the Town and Country Planning Authority. The land must be returned to a productive state within three years of an ore body having been deemed mined and certified as satisfactorily rehabilitated. Closure and rehabilitation are also included in most regular reporting requirements, as per the conditions attached to a mining licence. Once an ore body has been mined out, the licensee is required to obtain a reclamation permit in order to begin rehabilitation (closure).
- NEPA has developed a closure plan template and expects that licensees make costing and technology revisions to closure plans throughout the mining cycle as conditions change. Closure plans are presently reviewed by a multi-agency committee as part of the permitting process and included as a specific condition in environmental permits.
- Progressive rehabilitation is encouraged for all mining operations, particularly bauxite mining owing to the comparatively large areas occupied by these operations. Bauxite mining companies must rehabilitate each ore body no longer than three years after they would have stopped mining it, unless an exemption has been obtained from the Commissioner of Mines. The penalty for non-compliance (USD 25,000.00 per hectare, plus a further USD 2,500.00



per hectare for each year that the ore body remains un-rehabilitated) has pushed the companies to clear their backlog and remain current with their rehabilitation burden.

- Quarry operators, as per the Quarries Control Act, must restore the quarried lands to their “previous condition or set up again in good condition” (for those quarried lands that were in poor condition prior to quarrying).

Quarry operators are required by law to provide a financial assurance or bond to cover the costs of site rehabilitation. For quarries, every licensee must maintain on deposit with the Commissioner of Mines a bond in such amount and form and subject to such conditions as are prescribed to cover the costs of rehabilitation. If rehabilitation is not carried out, the licensee forfeits the security, and the work is carried out by the state using the funding.

GAPS

- While mine closure is included in the legislation, the law is outdated and does not comprehensively cover current best practice, failing to address many of the environmental, social, and economic elements of mine closure. The mine closure and rehabilitation guidelines applicable primarily to the bauxite/alumina subsector are not sufficiently detailed. Internationally accepted guidelines and best practices, such as those developed by APEC, ICMM, and the IFC, are not referred to in government guidelines for mine closure planning, post-mining socioeconomic transition, and related costing and assurance. While new guidelines have been drafted by a committee operating under the Commissioner of Mines, they have not been adopted or authorized via existing environmental or mining legislation. The government can also exempt a company from the duty to restore lands, or extend the time period during which restoration must happen.
- The government does not provide comprehensive requirements for stakeholders to be consulted in the development of mine closure objectives and plans. Closure and rehabilitation plans are not required to consider the post-mining transition and how affected communities will transition—economically, socially, and environmentally—once a mine has closed down.
- Mine operators are not legally required to use external experts for risk assessment, the design of bauxite residue disposal areas, and related closure planning (though most of them do).
- Financial assurances to cover the costs of rehabilitation and closure are not required by the Mining Act, though a closure bond requirement is included in the new draft minerals policy, and NEPA can require an environmental bond. For large-scale mining companies, namely the bauxite mining companies, bonds that they maintain to cover the costs of rehabilitation are held within the corporate accounts, rather than with the government or in escrow. Bonds are maintained by the Commissioner of Mines for all quarries. Environmental bonds for incomplete or insufficient closure activities are not a standard operating requirement.
- The fines and penalties associated with incomplete restoration and rehabilitation, or not adhering to the required timeline for certification of mined-out lands, are lower than the costs of restoration.



ARTISANAL AND SMALL-SCALE MINING

Artisanal and small-scale mining (ASM) is the sixth thematic area of the MPF. With regards to ASM, the MPF aims to enhance the health, safety, and quality of life of those miners working in the sector informally and outside the legal framework. It also seeks to enhance the contribution of the ASM sector to sustainable development. Policy recommendations within the ASM pillar focus on the following:

- Integrating ASM into the formal legal system through appropriate legal frameworks, technical support, and formalization strategies.
- Integrating ASM into the formal economic system through the promotion of savings and investment in the sector, appropriate and transparent revenue policies, certification programs, and collaboration with larger mines.
- A reduction in the social and environmental impacts of ASM operations through the provision of technical training, the adherence to minimal health and safety standards, the elimination of child labour, the promotion of the role and security of women in ASM, and the implementation of rural development and job creation policies to promote alternative livelihoods.

For Jamaica, the majority of small-scale mining and quarry operations—which primarily focus on river-based sand and gravel operations and limestone—produce materials for use in the domestic construction industry and for export. The country is not home to artisanal mining as it is traditionally framed; the island does not have a history of non- or semi-mechanized mining for precious or semi-precious metals or gemstones, for example. As a result, this section will focus on governance of Jamaica's quarries.

There are approximately 220 quarries on the island, of which around 30% are active. The employment benefits of quarrying in rural areas are very significant, and local economies benefit significantly from having a quarry located near a community, due to jobs and local spending by workers and other stakeholders.

KEY LAWS AND POLICIES

- The Mining Act, 1947
- The Quarries Control Act, 1984 (amended 2015)
- The Quarries Control (Quarry Tax) Resolution, 1990
- Quarries (General) Regulations, 1958
- Natural Resources Conservation Authority (NRCA) Act, 1993
- Natural Resources Conservation (Permits and Licences) Regulations, 1996 (amended 2004)
- The Factories Act, 1943 (amended 2009)
- The National Minerals Policy 2017-2030 (draft)

STRENGTHS

- Small-scale quarries are largely integrated into formal economic and legal systems. There are formal laws (the Quarries Control Act; the Factories Act), regulations (the Quarries (General) Regulations), licences (Quarry Licence), taxes (the Quarry Tax), and institutions (the Quarries Advisory Committee) in place to govern the subsector. There are clear procedures in place for establishing small-scale quarries, most quarry operators have titles and permits, and work within the formal economy.



- There is an association of quarry operators at the national level, though stakeholders note that this association is not as active as it could be, and that it is mainly made up of the largest players in the subsector and could be more representative by including smaller operators.
- Efforts are underway across the island to improve land titling (through the Land Administration Management Program [LAMP]), including around quarries.
- There is no child labour in Jamaica's quarry sector, and effective regulations and enforcement are in place to ensure this continues going forward.
- All large-scale quarries require an environmental permit, and operators must submit a Quarry Plan to the government with a bond to cover closure and the costs of rehabilitation. Quarry operators have also established an environmental code of conduct, which is voluntarily implemented by association members.

GAPS

- Compliance with regulations on occupational health and safety and environmental management is poor among small-scale quarry operations. The remoteness of sites also complicates the delivery of training programs on improved techniques, worker safety, and compliance with environmental regulations. Particularly urgent is the need to halt the environmentally harmful quarrying of sand in active river courses.
- Competition exists between the bauxite/alumina, quarrying, and tourism industries over access to and use of transportation infrastructure—specifically the country's ports. Export opportunities are limited for the country's quarry operators due to the fact that ports are often prioritized and/or designed for tourism and bauxite/alumina exports; key loading infrastructure required for limestone exports, for example, is often insufficient. This has the unintended but positive implication that these operators, instead of exporting raw materials, undertake some value addition on their products to sell to the domestic market (i.e., converting raw limestone into lime).
- Tax exemptions for mining companies on key inputs outlined in the Bauxite and Alumina Industries (Encouragement) Act against the promotion of domestic value addition. For example, mining companies can import lime for processing alumina duty free. Eliminating such exemptions would make the domestic sourcing and production of these inputs more competitive.
- The government relies on quarry operators' volume reports for taxation, though most operators do not have scales to accurately measure these production volumes.
- Smaller-scale quarries are not well organized, neither are they well represented within the quarry association.
- Quarries have limited access to domestic financing, hindering their potential. This is in part a function of the fact that many quarries do not have audited financial records and also that they lack links with domestic commercial banks. Potential is similarly held back among operators due to limited capacities on business management, accounting, and marketing.
- Women are not well represented in the quarry sector, either as employees or owners. There are no regulatory barriers to their participation, but the structures in place discourage women from taking a more active role in employment in quarrying. For example, quarries typically do not provide staff facilities that are adequately designed to meet the needs of women. This is particularly problematic in smaller and less organized quarries; encouragingly, larger and better capitalized quarries have started to take concrete actions to resolve this problem.



Photo: Shanti Persaud

5.0 RECOMMENDATIONS

Jamaica's draft minerals policy is designed to foster sustainability within the country's mining sector. Its core objectives include increasing the sector's competitiveness; achieving diversification and expanding value addition; improving land and mineral resource management; strengthening legal and policy frameworks; improving sustainability performance; integrating the sector more broadly with the wider economy; investing in skills and capacity development; and expanding Jamaican representation in ownership and management of minerals sector. This vision for mining, coupled with the country's long history of resource extraction and the sector's central role in its economy, ensures that there is a good foundation in place for optimizing the contribution of mining to Jamaica's continued development.

Achieving these aims will require a strengthening of the mining laws, policies, and regulations currently governing the sector in Jamaica. The government recognizes this, and its participation in this assessment process reflects a willingness and openness to moving toward this goal. Challenges remain, chief among them Jamaica's dependence on bauxite and the resource constraints—both technical and financial—that limit both the design and adoption of new laws and policies and the implementation and enforcement of existing ones. Thankfully, there is support for improved governance across stakeholder groups, making now an opportune time to update legislation and policies in a participative way to ensure mining continues to be a central pillar of the Jamaican economy.

Improvements can be made to existing laws and policies across all six pillars of the MPF; however, it is recommended that the government prioritize change in the legal and policy context; socioeconomic benefit optimization; and mine closure and the post-mining transition.

PRIORITY AREA 1: LEGAL AND POLICY FRAMEWORK

A mature, modern legislative regime and policy for the mining sector provides clear lines of responsibility and accountability for both governments and companies, and a vision of how the sector will contribute to a country's continued development. Such a framework should provide a foundation for good governance and will contribute to sustainable development in all aspects of a population's social and economic life.

The Government of Jamaica is in the process of adopting its first minerals policy, and actions are underway to consolidate and update the laws and regulations currently governing the sector. This includes reorganizing the institutional structures and arrangements that oversee mining governance



and management. The policy's adoption will provide the policy platform for more targeted attention and reinforce the government's commitment to reform. Throughout this process, the government should work to ensure:

- All aspects of mining, from prospecting and exploration to closure and the post-mining transition, are adequately integrated into revised mining laws and standards.
- The country's geological information base is expanded, improved, and made publicly accessible.
- Permit applications include the provision of adequate financial assurances to cover the costs of closure, rehabilitation, and the ongoing monitoring of closed mining sites.
- The timeliness, transparency and consistency of the mine permitting process is improved to ensure that the process is easily understood by all stakeholders.
- Governance of the sector is streamlined to increase its efficiency and simplicity.
- The quality of public consultation throughout the mine life cycle, from planning through operation, closure, and the post-mining transition, is greatly improved.

PRIORITY AREA 2: SOCIOECONOMIC BENEFIT OPTIMIZATION

The legal and policy frameworks for mining should promote sustainability to ensure that the benefits of mining contribute to long-term social and economic development in Jamaica, particularly in those communities located near mining projects and quarries. Key areas of focus under this pillar include:

- Strengthening local content provisions within mining laws and agreements to ensure that mining supports increasing domestic employment, local procurement, links into non-mining sectors, domestic processing and value addition, and the growth in national expertise in the sector.
- Improving the public consultation process around mine management and decision making, as well as around the design of mining policy and laws. This includes strengthening community councils to increase their effectiveness and expanding them to the quarry sector.

PRIORITY AREA 3: POST-MINING TRANSITION

The key institutions governing the mining sector—including NEPA, MTM, MGD, and JBI—have a surfeit of experience within their organizations and committees on mine closure, but there remains limited guidance on how to plan for mine closure and ensure the post-mining transition leads to productive and safe alternate land use. As part of its mining-related legislative reforms, the government can consider the following:

- Large quarries are currently required to provide reclamation plans; however, it is suggested that mining laws and regulations be refined to include smaller quarries and all aspects of current international good practice in mine closure planning. Legislation and related guidance need to include closure and post-mining transition as an integral part of the permit approval process and reflect early and regular community engagement. Closure and post-mining transition planning need also be part of the mine life and related management cycles as part of mine life planning with stakeholder engagement and regular monitoring. Closure plan revisions, as required in updated legislation and related guidance, needs to reflect changes in the mine plan and related inspector, regulator, and stakeholder inputs. For example, Jamaica can update its legislation and related guidance to require mine closure planning consistent



with the *APEC Mine Closure Checklist for Governments* (2018) and the *ICMM Integrated Mine Closure Toolkit and Financial Assurance Brief* (2019); mine closure costing that includes progressive rehabilitation; full rehabilitation to post-mining land use; a social and economic transition aligned with stakeholder needs and Jamaica's development vision; periodic updates and external independent audits of plans; and the provision of financial assurances to cover the costs.

- Leveraging experience within the bauxite/alumina subsector as well as among quarry and limestone operators to establish a leadership group to address orphaned, abandoned, and legacy sites. The group can engage with other countries that have addressed related issues and can request support from the international development and donor community, as required for capacity building and technical support.



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ANNEX 1. LIST OF LAWS AND POLICIES REVIEWED

LAWS

- Property Tax Act, 1903
- Wharfage Act, 1895
- Local Improvement Act, 1914
- Harbour Fee Act, 1927
- Forestry Act, 1937
- Stamp Duty Act, 1937
- The Customs Act, 1941
- The Factories Act, 1943 (amended 2009)
- Wildlife Protection Act, 1945
- Land Acquisition Act, 1947
- The Mining Act, 1947
- The Minerals (Vesting) Act, 1947
- The Cement Industry (Encouragement and Control) Act, 1948
- The Bauxite and Alumina Industries (Encouragement) Act, 1950
- Income Tax Act, 1955
- The Export Industry (Encouragement) Act, 1956
- Land Valuation Act, 1957
- Land Taxation (Relief) Act, 1959
- Underground Water Control Act, 1959
- Crown Property (Vesting) Act, 1960
- Watershed Protection Act, 1963
- Foreign Nationals and Commonwealth Citizens (Employment) Act, 1964
- Land Development and Utilization Act, 1966
- Standards Act, 1969
- Transfer Tax Act, 1971
- The Bauxite (Production Levy) Act, 1974
- Labour Relations and Industrial Disputes Act, 1975
- The Bauxite and Alumina Industries (Special Provisions) Act, 1977
- The Cargo Preference Act, 1979
- The Quarries Control Act, 1983
- The Free Zone Act, 1985
- Jamaica National Heritage Trust Act, 1985
- Public Health Act, 1985
- Town and Country Planning Act, 1987
- General Consumption Act, 1991
- Natural Resources Conservation Authority Act, 1991
- Disaster Preparedness & Emergency Management Act, 1993
- Water Resources Act, 1995
- Shipping Act, 1999
- Endangered Species Act, 2000
- Endangered Species (Protection, Conservation and Regulation of Trade) Act, 2000
- National Solid Waste Management Authority Act, 2001
- The Beach Control Act, 2004
- The Petroleum Act, 2006
- Executive Agencies Act, 2010



REGULATIONS

- Quarries (General) Regulations, 1958
- Natural Resources Conservation (Permits and Licences) Regulations, 1996 (amended 2015)
- NRCA National Ambient Air Quality Standards Regulations, 2006
- NRCA Natural Resources Conservation (Wastewater and Sludge) Regulations, 2013

POLICIES

- The National Minerals Policy 2017-2030 (draft)
- Vision 2030 Jamaica

DECREES/ORDERS

- The Quarries Control (Quarry Tax) Resolution, 1990

GUIDELINES

- NRCA Draft Guidelines for Closure Plans for Red Mud Ponds and Other Waste Areas in the Bauxite/Alumina Industry, 2005
- NRCA Guidelines for the preparation of a Closure Plan for Industrial Type Projects, 2006
- NRCA Guidelines for a Site Contamination Assessment Report/ Remedial Action Plan, 2006
- National Restoration Committee Guidelines for the Rehabilitation of Lands Disturbed for Mining Bauxite, 2012



ANNEX 2. LIST OF CONSULTED STAKEHOLDERS

GOVERNMENT

- Ministry of Transport and Mining
 - Mines and Geology Division
 - Minerals Policy Planning and Development Division
 - Jamaica Bauxite Institute
- Ministry of Finance
- National Environment and Planning Agency
- Quarries Advisory Committee
- Ministry of Labour and Social Services
- Development Bank of Jamaica
- HEART Trust (Human Employment and Resource Training Trust)

CIVIL SOCIETY

- Jamaica Environment Trust

PRIVATE SECTOR

- JISCO ALPART
- JAMALCO
- Carube Copper Corp.
- Lydford Mining Co.
- Geophysx Ltd.
- Enbar Consulting

ACADEMIA

- Caribbean Maritime University

INTERNATIONAL ORGANIZATIONS

- Inter-American Development Bank



IGF

INTERGOVERNMENTAL FORUM
on Mining, Minerals, Metals and
Sustainable Development