

CRITICAL MINERAL SECURITY AND THE SOCIAL LICENSE TO OPERATE

SUMMARY

As the US and other Western countries rush to secure access to critical minerals, companies face pressure to move quickly and dispense with environmental and social protections. **This briefing note argues that such an approach will backfire.**

Earning and maintaining a social license to operate from local communities is essential for project sustainability, reliability, and supply security. Without it, social conflict and litigation brought by affected communities can halt mineral extraction or force project abandonment, disrupting critical mineral supply chains.

Social conflict and litigation are risks to mining projects worldwide. The Business & Human Rights Resource Centre, Global Witness, and the Center for Strategic and International Studies (CSIS) have documented (all related to the social and environmental harms of critical and strategic mineral mining):

- 334 incidents of violence or protest from 2021 to 2023.¹
- 71 protests in Peru alone during a single month in 2023.²
- 67 lawsuits, including seven new cases in 2024, most seeking to stop projects.³
- 156 new allegations of abuse associated with the mining of eight minerals in 2024 alone.⁴

Critical mineral projects recently stalled due to local resistance include:

- *The Balama graphite mine in Mozambique: Operated by a subsidiary of Syrah Resources, with a loan from the US International Development Finance Corporation (DFC).* In 2023, the mine produced approximately 10% of global graphite production, and 45% of non-Chinese production.⁵
- *The Cobre Panama copper mine in Panama: Operated by First Quantum Minerals.* The mine had been producing 1.5% of the world's supply. Now many see Panama as "uninvestable."⁶
- *The Jadar Lithium Project in Serbia: Operated by Rio Tinto.* One of the European Commission's 13 strategic new critical minerals projects.⁷
- Many additional projects, several of which are documented in the full briefing note.

WHAT IS THE SOCIAL LICENSE TO OPERATE?

The "social license to operate is a concept used to describe the informal and ongoing approval of a mining company's operations by the surrounding community and stakeholders. Unlike legal permits issued by governments, social licenses are granted by communities and based on trust, legitimacy, and consent."⁸

The social license to operate is among the top five risks and opportunities for mining and metals companies in 2025, according to Ernst & Young's annual survey.⁹

To ensure a sustained, predictable flow of critical minerals, the US government should:

- 1) Work with mineral-rich governments to improve policies and regulations related to the social license to operate.
- 2) Support and incentivize US companies to start meaningful community engagement early.
- 3) Tie financial and technical support for companies to adherence to the International Finance Corporation's Performance Standards on Environmental and Social Sustainability and encourage mining companies to join the Initiative for Responsible Mining Assurance (IRMA).
- 4) Avoid investing in projects that are likely to face disruptions because of social license risks.



OXFAM

CRITICAL MINERAL SECURITY AND RELIABILITY DEPEND ON COMPANIES EARNING AND MAINTAINING THE SOCIAL LICENSE TO OPERATE

IN BRIEF

- Mining companies that fail to secure the social license to operate may face social conflict and litigation, which lead to costly delays, project shutdowns, or lengthy legal proceedings that prevent companies from extracting minerals.
- Such disruptions threaten critical mineral security and reliability; mines can only contribute to national security goals if they are operational and provide a sustained, predictable flow of critical minerals.
- Companies and governments both have a role to play in securing the social license to operate; this briefing note provides recommendations.

Nearly half of global mining and metals executives identified the social license to operate as the single greatest threat to their business in recent years.¹⁰ It is among the top five risks and opportunities for mining and metals companies in 2025 according to Ernst & Young's annual survey.¹¹ Yet as the US and other Western countries rush to secure access to critical minerals, companies face internal and external pressure to move quickly and dispense with environmental and social protections to get mines online as soon as possible. **This briefing note argues that such an approach will backfire and that companies and the US government alike need to prioritize social license risk mitigation to secure critical mineral supply chains.**

THE SOCIAL LICENSE TO OPERATE

The social license to operate is a concept used to describe the informal and ongoing approval of a mining company's operations by the surrounding community and stakeholders. Unlike legal permits issued by governments, social licenses are granted by communities and based on trust, legitimacy, and consent.¹² Central to the social license to operate is **community approval**—not as a one-time checkbox, but as a continuous, rights-based partnership. It's earned when companies prevent and address adverse impacts on communities, workers, and the environment, and when affected communities benefit from a company's operations over the long term.

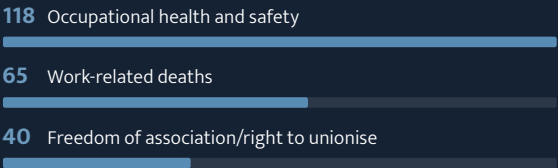
Mining is a high-risk sector for the people living on or around concessions. In 2024 alone there were 156 new allegations of abuse associated with the mining of eight key minerals recorded in the Business & Human Rights Resource Centre's Transition Minerals Tracker. This brings the total to 835 recorded cases between 2010 and 2024. To the right are the top recorded impacts.¹³

"A legal license tells you that you can mine; a social license tells you if you should." —Rohitash Dhawan, CEO, International Council on Mining and Metals (ICMM)¹⁴

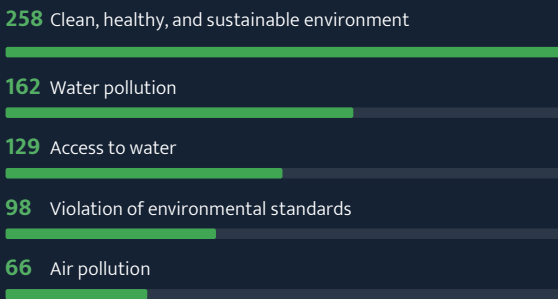
Top impacts on local communities



Top impacts on workers



Top environmental impacts



Graphic courtesy of Business & Human Rights Resource Centre's Transition Minerals Tracker: 2025 Global Analysis

THE LINK BETWEEN THE SOCIAL LICENSE TO OPERATE AND CRITICAL MINERAL SUPPLY CHAIN SECURITY AND RELIABILITY

Lack of community approval has triggered protests, court orders, and shutdowns that have delayed critical and strategic mineral projects worldwide. Below are several examples of projects disrupted in recent years.

- In December 2024, Syrah Resources declared force majeure and suspended operations at its Balama graphite operation in Mozambique. This declaration followed protest actions at Balama that were originally linked to historical land resettlement grievances.¹⁵ Just a month earlier, Syrah Resources had received the first disbursement of a US\$150,000 loan from the US International Development Finance Corporation (DFC).¹⁶ In 2023, Balama produced around 10% of global graphite production and 45% of non-Chinese production.¹⁷
- Courts in Central America have ordered the suspension of major mines following social unrest sparked by allegations of violations of environmental, health, and Indigenous peoples' rights. These suspensions include Cobre Panama copper mine in Panama, which had been producing 1.5% of the world's supply in 2023;¹⁸ Guatemala's largest nickel mine, Solway Group's Fenix project (El Estor) in 2019;¹⁹ and Guatemala's Escobal silver mine, which suspended operations in 2018 following a ruling by the country's Constitutional Court. In the case of Escobal, the ruling followed several years of protests.²⁰ In the days after the court decision, the mine's operator, Tahoe Resources, lost close to 40% of its stock market value.²¹ To date the mine has not reopened.²²
- In 2022, the government of Serbia revoked Rio Tinto's license for the Jadar lithium mine after widespread protests over concerns about potential environmental pollution.²³ Serbia's Constitutional Court reinstated Rio Tinto's license in 2024, which was met by revived mass protests.²⁴ In June 2025 Rio Tinto announced that it was revising the costs and timeline of the project. It had been slated to begin production in 2027.²⁵
- In 2025, a local court in Bolivia ordered the suspension of two lithium extraction deals involving Chinese and Russian mining companies following legal action by Indigenous groups. The Indigenous groups alleged environmental violations and lack of consultation. The deals are worth more than US\$2 billion.²⁶
- Other mines that have faced suspensions in recent years include a nickel mine in Brazil, a bauxite mine in Jamaica, a copper mine in the US, and the Chinese-funded Rio Blanco mine in Ecuador.²⁷



PANAMA

"It is hard to see an outcome in which mining companies would want to undertake new projects in Panama."²⁸

Cobre Panama copper mine in Panama, a US\$10 billion mine owned by First Quantum, had been **producing 1.5% of the world's copper** supply since 2019. In 2023, protests broke out across the country, including blockades of the port and mine access road, forcing the mine to stop production. The case went to Panama's supreme court, which ruled the contract unconstitutional.²⁹

Communities complained of adverse impacts on the environment, their health, and their property. Their allegations included mass deaths of fish, soil contamination, gastrointestinal illness, kidney complaints, skin lesions, and restricted movement in the area.³⁰ First Quantum denies these allegations.³¹ These concerns were coupled with high unemployment and corruption across the country, and a sentiment that the mine should belong to the Panamanian people.³²

When mining faces social conflict or legal challenges, the fallout is not just disrupted supply from a particular mine, it also contributes to:

Decreased mineral exploration, reducing opportunities to identify new deposits.

Analysis by CSIS links a 12.6% decline in mineral exploration in Peru—the world’s second largest exporter of copper³³—from 2019 to 2024 to growing social unrest.³⁴ In just a single month in 2023 there were 71 mining-related protests in Peru.³⁵

New mining projects being delayed.

Environmental Resources Management’s (ERM’s) 2018 analysis of 72 mining projects revealed that 46% of major capital projects missed delivery dates between 2008 and 2016, the majority due to community opposition (42%) and environmental concerns (35%).³⁶ More recent ERM research found that 62% of projects delayed by permitting issues were due to stakeholder opposition or concerns around environmental impacts.³⁷

Increased cost to companies.

Groundbreaking research from Harvard Kennedy School, the University of Queensland, and Shift a decade ago found that social conflict can cost major mining projects up to US\$20 million per week of delayed production, largely due to lost sales. The same study found that companies often overlook the costs of staff time diverted to manage conflicts, particularly that of senior management and the CEO.³⁸ Companies can also face higher insurance premiums and increased legal fees.³⁹

Potential loss of investors.

In 2024, *The Wall Street Journal* reported that Norway’s sovereign wealth fund, managed by Norges Bank Investment Management, was reviewing a potential divestment from Rio Tinto over deforestation linked to Mineração Rio do Norte (MRN), a bauxite mine in the Brazilian Amazon co-owned by Rio Tinto and other companies.⁴⁰ As of 2025, Norges continues to engage with Rio Tinto (2.5% stake) over the issue.⁴¹ *The Wall Street Journal* also noted that Norges had previously sold its Rio Tinto stake in 2008 over environmental damage at the Grasberg mine in Indonesia. After Rio Tinto exited Grasberg in 2018, Norges reinstated the company in 2019.⁴²

Global Witness documented **334 incidents of violence or protest over mining** of strategic minerals between 2021 to 2023.⁴³ Over a longer time frame, the Latin American Observatory of Mining Conflicts has documented 58 mining conflicts in Mexico alone.⁴⁴

The Business & Human Rights Resource Centre has tracked **67 lawsuits, including seven new cases in 2024**, over adverse impacts of mining on communities and the environment. Most of the cases sought or seek to halt the project permanently or temporarily.⁴⁵

DO COMPANIES NEED TO LEARN THE HARD WAY?

In 2020, Rio Tinto legally destroyed a 46,000-year-old Aboriginal site at Juukan Gorge in Western Australia to expand an iron ore mine. Despite the action being legal, it sparked widespread public outcry and led to a parliamentary inquiry.⁴⁶ In response, Rio Tinto’s board and executive committee undertook a joint exercise to review the incident, the company’s response, and lessons learned.⁴⁷

The company’s website now states: “Following the tragic destruction of the rock shelters at Juukan Gorge ... we have changed the way we work with communities and Indigenous Peoples. ... We are moving to a model of co-management, working in partnership with Indigenous Peoples across our operations.”⁴⁸

This example highlights two important points: First, incidents involving community harm can quickly escalate to require significant executive-level attention; and second, companies that cause, contribute to, or are linked to such crises often come to recognize the need for deeper, more collaborative approaches to community and Indigenous engagement.

HOW TO EARN AND MAINTAIN THE SOCIAL LICENSE TO OPERATE

Securing a social license to operate—and with it, critical mineral supply chain security and reliability—requires action from both companies and governments.

MINING COMPANIES

Companies should operate only when they have:

- Assessed and addressed human rights and environmental risks and impacts.
- Negotiated fair community benefit-sharing or co-ownership models.
- Established accessible grievance mechanisms that communities use and trust.
- Have the free, prior, and informed consent (FPIC) of Indigenous peoples. FPIC is also a best practice to secure local communities' approval for a project.

Leading companies start meaningful and inclusive community engagement at the very early stages of a project, so that while they're advancing through the technical phases of exploration, permitting, and development, they are also earning their social license.

Oxfam has developed more [specific recommendations for companies](#) that, if followed, would significantly decrease social license-related risks.⁴⁹

4 INGREDIENTS TO MEANINGFUL RIGHTS-HOLDER ENGAGEMENT⁵⁰

1. Start early and engage continuously.
2. Ensure informed participation.
3. Facilitate the commitment appropriately (create a safe space and address barriers to participation).
4. Engage inclusively (including both women and men, youth, and marginalized voices).

Community consultations that fail to effectively consider the voices of women risk overlooking significant potential project impacts. For example, as Rio Tinto illustrates in its *Why Gender Matters* guide, insufficient engagement with women early in the development of the Argyle Diamond Mine in Australia resulted in inadequate recognition of women's sacred sites in the initial community agreement. This contributed to tensions that ultimately resulted in a renegotiation of the agreement.⁵¹

THE ROLE OF COMMUNITY AGREEMENTS AND CO-OWNERSHIP MODELS IN THE SOCIAL LICENSE TO OPERATE

When Indigenous peoples and local communities choose to engage, negotiated agreements⁵²—often called community benefit agreements or collaboration agreements—can provide a framework to help companies earn communities' consent and can help both parties build mutually beneficial relationships. Such agreements typically cover topics including land access, financial benefits, and local employment.⁵³ Interesting cases are emerging in contexts including Canada, where Indigenous communities make agreements with companies to become equity partners in mining operations.⁵⁴

THE US GOVERNMENT

Many mineral deposits are located in remote areas of the world, including in countries characterized by high levels of poverty, conflict, and/or corruption, and that have limited infrastructure or economic opportunities for local communities. These are not issues American businesses can address on their own.

To ensure a sustained, predictable flow of critical minerals and to better support American companies operating abroad, the US government should:

- **Help strengthen the enabling environment for stable mining.** The US government should work with mineral-rich governments to improve laws and regulations related to the social license to operate and ensure that legal and regulatory reforms vital to social license risk mitigation are central to US minerals diplomacy.
- **Support US companies.** The US government should support and incentivize American exploration and junior mining companies to invest early in community engagement (many of these companies state that they lack the resources to invest in community engagement) and encourage all American mining companies to build in adequate time for social license processes.
- **Avoid investing in projects that face high risk of disruption.** The US government should tie all US government financial and technical support to companies adhering to the IFC Performance Standards on Environmental and Social Sustainability at the project site, as is already standard practice within some departments and agencies; identify “no-go” zones where social license risks are too high for US support or investment; and encourage mining companies to join the Initiative for Responsible Mining Assurance (IRMA).

LAND & PROPERTY RIGHTS: A MAJOR SOCIAL LICENSE TO OPERATE RISK THAT COMPANIES AND THE US GOVERNMENT SHOULD BE ADDRESSING.

Extraction of raw materials is expected to increase by 60% by 2060;⁵⁵ the world needs 61 new copper mines and 52 new lithium mines by the end of this decade to meet global demand for batteries alone.⁵⁶ Over half of the world’s known critical mineral reserves lie on or near Indigenous lands—territories governed by distinct political, social, and cultural systems.⁵⁷ However, national laws in mineral-wealthy countries often fail to formally recognize or protect Indigenous peoples’ land and property rights. In addition, women often face more legal and social barriers to land rights than men in some customary systems.⁵⁸

The difference between what communities customarily hold and use (at least 50% of the world’s land) and what governments recognize as land that they “own” (~11%) should be a major red flag alert for companies seeking new exploration and mining permits.⁵⁹ It’s a root cause of companies losing the social license to operate and a risk that they can better manage through meaningful human rights due diligence and community engagement. The US government can help companies navigate property right risk through foreign policy efforts, though it’s also a risk that demands attention in the US around domestic mining projects.

CONCLUSION

Experience has shown—and many companies have learned the hard way—the importance of early, sustained community engagement and of obtaining the social license to operate. Many communities aren’t inherently anti-mining; however, they simply want to know how a project will affect their land, health, and economic prospects, and they want to have assurances that they won’t be harmed.

Companies and the US government will find a smoother path to mining if they understand and address the interests of those most likely to be harmed by companies’ operations from the earliest stage of a mining project. The security and reliability of the US critical mineral supply chain depends on it.

NOTES

1. Center for Strategic and International Studies (CSIS), *Critical Minerals and the Future of the US Economy* (Bloomsbury, 2025), 94, https://csis-website-prod.s3.amazonaws.com/s3fs-public/2025-02/250210_Baskaran_Critical_Minerals.pdf?VersionId=Tfu2TnNrQGIN7ol8HSCakMUT8HTwYukd.
2. Paul Mitchell, "Top 10 Risks and Opportunities for Mining and Metals Companies in 2025," EY.com, October 1, 2025, https://www.ey.com/en_us/insights/energy-resources/risks-opportunities.
3. Global Witness, "Clean Energy, Dirty Consequences: Mining for Renewable Technologies Linked to Global Social Unrest," November 7, 2024, <https://globalwitness.org/en/press-releases/clean-energy-dirty-consequences-mining-for-renewable-technologies-linked-to-global-social-unrest/>.
4. As cited in CSIS, *Critical Minerals*, 94. Original source: Andres Schipani, "Protests Threaten to Dent the Outlook for Peruvian Copper," *Financial Times*, October 19, 2023, <https://www.ft.com/content/a9f3e962-9465-45ea-94a6-ccc245ba0ad9>.
5. Business & Human Rights Resource Centre, *Justice in the Transition: Litigating Corporate Abuse in the Shift to Clean Energy for All* (July 2025), executive summary, https://media.business-humanrights.org/media/documents/2025_JT_litigation_-_Executive_summary_EN.pdf; and Business & Human Rights Resource Centre, *Transition Minerals Tracker: 2025 Global Analysis* (May 2025), 24, https://media.business-humanrights.org/media/documents/2025_Transition_Minerals_Tracker_EN.pdf.
6. Business & Human Rights Resource Centre, *Transition Minerals Tracker*, 14.
7. Natural Resources Canada/Government of Canada, "Graphite Facts," accessed July 11, 2025, <https://natural-resources.canada.ca/minerals-mining/mining-data-statistics-analysis/minerals-metals-facts/graphite-facts>; and US Geological Survey (USGS), "Graphite (Natural)," Mineral Commodity Summaries, January 2024, <https://pubs.usgs.gov/periodicals/mcs2024/mcs2024-graphite.pdf>.
8. CSIS, *Critical Minerals*, 94.
9. Reuters, "Rio Tinto Revising Cost of Serbia Lithium Project," June 4, 2025, <https://www.reuters.com/sustainability/rio-tinto-revising-cost-serbia-lithium-project-2025-06-04/>.
10. Cecilia Jamasmie, "Rise of Ethical Investing, Social License the Top Risks to Miners," *Mining.com*, October 2, 2019, <https://www.mining.com/stakeholder-pressure-ethical-investing-make-losing-licence-to-operate-biggest-threat-to-miners/>.
11. Mitchell, "Top 10 Risks and Opportunities."
12. CSIS, *Critical Minerals*, 94. Oxfam emphasis.
13. Rohitesh Dhawan, "The Fundamentals of Creating Social Value and Environmental Resilience That Supports Shared Prosperity," keynote speech at IMARC, as written rather than as delivered, International Council on Mining and Metals (ICMM), October 31, 2023, <https://www.icmm.com/en-gb/presentations/2023/creating-social-value-and-environmental-resilience#:~:text=First%2C%20mining%20for%20shared%20prosperity,in%20that%20process%2C%20everyone%20loses>.
14. Business & Human Rights Resource Centre, *Transition Minerals Tracker*, 14.
15. Global Witness, "Clean Energy, Dirty Consequences."
16. Observatorio de Conflictos Mineros de América Latina (Latin American Observatory of Mining Conflicts), database of mining conflicts in Latin America, accessed July 7, 2025, https://mapa.conflictosmineros.net/ocma_db-v2/.
17. Business & Human Rights Resource Centre, *Justice in the Transition*, executive summary; and Business & Human Rights Resource Centre, *Transition Minerals Tracker*, 24.
18. Syrah regained access to the mine in May 2025. See *Mining Technology*, "Syrah Resources to Restart Balama Graphite Operation in Mozambique," May 16, 2025, <https://www.mining-technology.com/news/syrah-resources-balama-graphite/?cf-view>.

19. Syrah Resources, "Syrah Receives First Disbursement from DFC Loan," ASX Announcement/Media Release, November 11, 2024, <https://www.syrahresources.com.au/investors/asx-announcements>.
20. Natural Resources Canada/Government of Canada, "Graphite Facts"; and USGS, "Graphite (Natural)."
21. Christine Murray and Harry Dempsey, "Protesters vs. Critical Minerals: Panama Copper Fiasco Shows Risks to Green Transition," *Financial Times*, December 18, 2023, <https://www.ft.com/content/1d3e72fb-9c6d-48da-963d-31afd456850f>.
22. The Fenix mine has since reopened. See Juliette Garside, "Guatemala Court Upholds Request to Suspend Work at Huge Nickel Mine," *Guardian*, July 19, 2019, <https://www.theguardian.com/world/2019/jul/19/guatemala-fenix-nickel-mine-consultation-solway-group>; and Solway Group, "Solway Investment Group's Official Statement Regarding Suspension of the Fénix Project's License," press release, June 20, 2020, <https://solwaygroup.com/2020/06/20/solway-investment-groups-official-statement-regarding-delimitation-of-the-fenix-projects-license/>.
23. Emily Greenspan, "Will Renewed Political Support for Mining in Central America Override Indigenous Rights Protections in Guatemala?," *Oxfam America*, May 28, 2025, <https://politicsofpoverty.oxfamamerica.org/political-support-for-mining/>.
24. Carl Surran, "Tahoe Resources –39% in Two Days After Escobal Mining License Suspended," *Seeking Alpha*, July 7, 2017, <https://seekingalpha.com/symbol/TAHO-DEFUNCT-32591/news>.
25. Silver is not a critical mineral, though it has various industrial and technological applications, and demand has increased in recent years, according to Bruno Venditti, "Top Producers Push for Silver's Inclusion as a Critical Mineral in Canada and US," *Mining.com*, January 31, 2024, <https://www.mining.com/top-producers-push-for-silvers-inclusion-as-a-critical-mineral-in-canada-and-the-u-s/>.
26. CSIS, *Critical Minerals*, 94.
27. Chris Taylor, "Panama's Vast Cobre Mine Is Closed. So Why Is Their Security Still Restricting Access to Local Villages?," *Guardian*, January 21, 2025, <https://www.theguardian.com/global-development/2025/jan/21/panama-cobre-mine-first-quantum-minerals>.
28. Taylor, "Panama's Vast Cobre Mine Is Closed."
29. In an email to Oxfam dated August 28, 2025, First Quantum claims that its regular water quality tests evidence compliance with local standards required by law, that the company has not seen any evidence of alleged health impacts related to the mine, and that the company does not restrict free movement of community members.
30. CSIS, *Critical Minerals*, 94.
31. Cathleen O'Grady, "Proposed Lithium Mine in Serbia Triggers Publication Dispute," *Science* 385, no. 6713 (August 30, 2024), <https://www.science.org/content/article/proposed-lithium-mine-serbia-triggers-publication-dispute>.
32. Rob Schmitz, "A Lithium Mine in Serbia Could Rev Up Europe's E-Vehicles, But Opposition Is Fierce," *NPR*, August 23, 2024, <https://www.npr.org/2024/08/23/nx-s1-5081517/rio-tinto-lithium-serbia-europe-ev-vehicles-battery-supply-chain>.
33. Reuters, "Rio Tinto Revising Cost of Serbia Lithium Project."
34. Note that "the Bolivian government has maintained that it has yet to be formally notified of the court ruling, and it insists that until official communication is received, the legislative process surrounding the contracts will continue." See *Mining.com*, "Bolivian Court Pauses Chinese, Russian Lithium Deals," June 2, 2025, <https://www.mining.com/bolivian-court-pauses-chinese-russian-lithium-deals/>.
35. Business & Human Rights Resource Centre, *Transition Minerals Tracker*, 24; and Dialogue Earth, "How Local Communities Halted a Chinese-Owned Gold Mine in Ecuador," July 5, 2019, <https://dialogue.earth/en/business/11358-how-locals-halted-a-chinese-owned-gold-mine-in-ecuador/>.
36. Will Owen, "Peru's Critical Minerals: A Key to Sustainable Growth and US Partnership," *Global Mining Review*, November 12, 2024, <https://www.globalminingreview.com/mining/12112024/perus-critical-minerals-a-key-to-sustainable-growth-and-us-partnership/>.
37. CSIS, *Critical Minerals*, 94.

38. As cited in CSIS, Critical Minerals, 94. Original source: Schipani, “Protests Threaten to Dent the Outlook for Peruvian Copper.”
39. Environmental Resources Management (ERM), *New Realities Facing the Mining and Metals Industry* (2018), <https://www.erm.com/globalassets/documents/presentations/2018/new-realities-facing-the-mining-industry.pdf>.
40. Toby Whincup, Charles Pembroke, Alvaro Acosta, and Rodrigo Castillo, “Critical Minerals: How the Mining Sector Can Accelerate to Meet Energy Security Needs,” ERM, November 30, 2023, <https://www.erm.com/insights/critical-minerals-how-the-mining-sector-can-accelerate-to-meet-energy-security-needs/>.
41. Rachel Davis and Daniel Franks, *Cost of Company-Community Conflict in the Extractive Sector* (Shift/Corporate Social Responsibility Initiative [CRS] at Harvard Kennedy School, 2014), <https://shiftproject.org/resource/costs-of-company-community-conflict-in-the-extractive-sector/>.
42. TMP Systems, “IAN: Managing Tenure Risk,” Rights and Resources and UK Aid, 2016, https://rightsandresources.org/wp-content/uploads/RRI_IAN_Managing-Tenure-Risk.pdf.
43. Deanna Kemp, Kathryn Kochan, and John Burton, “Critical Reflections on the Juukan Gorge Parliamentary Inquiry and Prospects for Industry Change,” *Journal of Energy & Natural Resources Law* 41, no. 4 (2022), 379–402, <https://doi.org/10.1080/02646811.2022.2156202>; and Mietta Adams and Alistair Bates, “Traditional Owners Still Angry Five Years After Juukan Gorge Destruction,” ABC.net.au., May 23, 2025, <https://www.abc.net.au/news/2025-05-24/five-years-since-juukan-gorge-destruction-pilbara-heritage-laws/105295474>.
44. Rio Tinto, “Juukan Gorge,” accessed June 13, 2025, <https://www.riotinto.com/en/news/trending-topics/juukan-gorge>.
45. Rio Tinto, “Communities Agreements,” accessed June 13, 2025, <https://www.riotinto.com/en/sustainability/communities/community-agreements>.
46. Bauxite is essential to produce aluminum, a critical mineral. Julie Steinberg, “Rio Tinto Faces Possible Norway Fund Divestment Over Alleged Deforestation Links,” *Wall Street Journal*, April 3, 2024, https://www.wsj.com/articles/rio-tinto-faces-possible-norway-fund-divestment-over-alleged-deforestation-links-de34bec2?reflink=desktopwebshare_permalink.
47. Reuters, “Norway’s Wealth Fund to Engage Rio Tinto, South32 Over Environmental Concerns,” May 12, 2025, <https://www.reuters.com/sustainability/norways-wealth-fund-engage-rio-tinto-south32-over-environmental-concerns-2025-05-11/>. This article also appeared on Mining.com, May 11, 2025, <https://www.mining.com/web/norways-wealth-fund-to-engage-rio-tinto-south32-over-environmental-concerns/>.
48. Steinberg, “Rio Tinto Faces Possible Norway Fund Divestment”; and Rio Tinto, “Rio Tinto Completes Sale of Grasberg Interest,” news release, December 21, 2018, <https://www.riotinto.com/en/news/releases/2018/grasberg-interest-sale-completed>.
49. Scott A. Sellwood, Chelsea Hodgkins, and Tim Hirschel-Burns, *Recharging Community Consent: Mining Companies, Battery Minerals, and the Battle to Break from the Past* (Oxfam, 2023), 32–33, <https://www.oxfamamerica.org/explore/research-publications/recharging-community-consent/>.
50. Caroline Brodeur, *Meaningful Rights Holder Engagement: An Introduction* (Oxfam, 2023), <https://www.oxfamamerica.org/explore/research-publications/meaningful-rights-holder-engagement-an-introduction/>.
51. Rio Tinto, *Why Gender Matters: A Resource Guide for Integrating Gender Considerations into Communities Work at Rio Tinto* (2009), https://www.csrmining.com.au/media/docs/171/Why_Gender_Matters.pdf.
52. Mining Association of Canada, “Mining-Indigenous Relationship Agreements,” accessed June 16, 2025, <https://mining.ca/our-focus/indigenous-affairs/mining-indigenous-relationship-agreements/>.
53. Cameron Gunton and Sean Markey, “The Role of Community Benefit Agreements in Natural Resource Governance and Community Development: Issues and Prospects,” *Resources Policy* 73 (2021), 102152, <https://doi.org/10.1016/j.resourpol.2021.102152>.
54. Anthony Kung, Sarah Holcombe, Joel Hamago, and Deanna Kemp, “Indigenous Co-Ownership of Mining Projects: A Preliminary Framework for the Critical Examination of Equity Participation,” *Journal of Energy & Natural Resources Law* 40, no. 4 (2022), 413–35, <https://doi.org/10.1080/02646811.2022.2029184>.

55. Arthur Nelson, "Extraction of Raw Materials to Rise by 60% by 2060, Says UN Report," *Guardian*, January 31, 2024, <https://www.theguardian.com/environment/2024/jan/31/raw-materials-extraction-2060-un-report#:~:text=The%20global%20extraction%20of%20raw,analysis%20seen%20by%20the%20Guardian>. The original UN analysis is unpublished, according to the article.
56. Benchmark Source, "How Many Mines Are Needed for the Energy Transition?," January 30, 2025, <https://source.benchmarkminerals.com/article/how-many-mines-are-needed-for-the-energy-transition>.
57. John R. Owen, Deanna Kemp, Alex M. Lechner, et al., "Energy Transition Minerals and Their Intersection with Land-Connected Peoples," *Nature Sustainability* 6 (2023), 203–11, <https://doi.org/10.1038/s41893-022-00994-6>.
58. Elizabeth Duncan, "Women's Land Rights: A Powerful Tool for Development," *GW Law*, October 12, 2022, <https://studentbriefs.law.gwu.edu/ilpb/2022/10/12/womens-land-rights-a-powerful-tool-for-development/#:~:text=Women%20are%20disadvantaged%20in%20both,the%20sole%20owners%20of%20property>.
59. Rights and Resources Initiative, *Who Owns the World's Land?*, 2nd ed. (2023), <https://rightsandresources.org/publication/who-owns-the-worlds-land-2nd-ed/>. Also see Rights and Resources Initiative, *Who Owns the World's Land? A Global Baseline of Formally Recognized Indigenous and Community Land Rights* (2015), https://www.rightsandresources.org/wp-content/uploads/GlobalBaseline_web1.pdf.