

Issue brief Chinese mining in West Africa

Responding to the environmental and social impacts

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Bottom lines up front

- Chinese individuals, corporations, and state actors are increasingly involved in both legal and illegal mineral mining operations across West Africa.
- The negative impacts of these operations on water resources, forests and biodiversity, livelihoods, health, and food security across West Africa have been profound.
- This brief proposes national and regional policy recommendations for addressing the detrimental social and environmental impacts of Chinese mining in West Africa.

Executive summary

Driven by growing global demand for minerals, West Africa has become a major hub for mining. Chinese entities—including individuals and private actors and corporations, some of them backed by state financing—are expanding legal and illegal mining for gold, diamonds, iron ore, bauxite, lead, zinc, stones, and critical minerals such as lithium, cobalt, and copper. These activities, which range from large-scale commercial ventures to small-scale artisanal mining, often cause serious environmental degradation. In many West African countries, Chinese nationals involved in illegal artisanal mining collaborate with local and transnational criminal actors. While some Chinese operations have created jobs and infrastructure in mining communities, their negative impacts on water resources, forests and biodiversity, livelihoods, health, and food security across West Africa have been profound. National or

regional policies and enforcement mechanisms have failed to adequately address the social and environmental impacts of mining in the region. This brief proposes policy recommendations responding to the detrimental social and environmental impacts of Chinese mining in West Africa.

Background

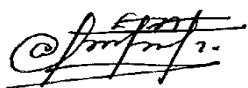
There is growing concern about the detrimental environmental effects of Chinese mining operations in West Africa. Chinese companies exploit policy gaps, weak institutions, and the lack of regulatory enforcement across mineral-rich West African countries. Their involvement in legal and illegal large-scale corporate mining, as well as the small-scale artisanal mining intended for locals, demands policy responses that strengthen governance and enforcement across the region.

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Editors' introduction

In May 2025, the China Global South Initiative (CGSi), a collaboration between the Keough School of Global Affairs and the Atlantic Council Global China Hub, convened a group of twenty-two African environmental experts at the Peduase Valley Resort in Ghana for a three-day workshop on China's environmental impact in West Africa. This policy workshop, hosted with the support of the Ford Foundation, included representatives from eleven West African countries—Benin, Burkina Faso, Cameroon, Cote d'Ivoire, Ghana, Liberia, Mali, Nigeria, Senegal, Sierra Leone, and Togo—and South Africa. Amid three days of comradery and collaboration, these experts worked together to draft policy memorandums on China's environmental impact across the region. In the months following the workshop, we worked closely with the authors to curate three briefs—on mining and resource extraction, timber and wildlife, and fisheries and water resources—that identify the challenges and offer actionable policy solutions. We would like to recognize the excellent work of the co-authors who contributed their time and expertise to creating these briefs. In particular we would like to thank the group leaders Abosede Omowumi Babatunde, Ebagnerin Jérôme Tondoh, and Ebimboere Seiyafa and Awa Niang Fall, respectively, for their diligent work.

First and foremost, we would like to thank Caroline Costello, assistant director of the Atlantic Council's Global China Hub, for her essential contributions to the workshop in Ghana and this collection of issue briefs. Her tireless efforts were truly essential to the success of the project. Ashley Bennett, events strategy program director of the University of Notre Dame's Keough School of Global Affairs, provided critical logistical support across a dozen countries. Alexandra Towns at the Keough School and Cate Hansberry, Beverly Larson, and Jeff Fleischer at the Atlantic Council provided expert editorial support. Guidance from Notre Dame's Pamoja Africa Initiative helped us identify contributors, and the Kellogg Institute helped support their participation. We would also like to thank the excellent staff of the Peduase Valley Resort for their hospitality during the May 2025 workshop. Last, but not least, we would like to thank our partner, the Ford Foundation, whose support made the workshop and these policy briefs possible. Ford is not responsible for the content of these policy briefs.



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The environmental impacts of Chinese mining activities in the region are complex, evolving, and difficult to fully identify due to the blurred lines between formal and informal mining operations. While industrial-scale mining tends to be confined to specific areas and is somewhat better regulated, illegal small-scale mining operations are poorly monitored despite their environmental and social harms. Chinese actors' deployment of heavy-duty machinery in small-scale mining has significantly damaged ecosystems, especially forests and watersheds. Ultimately, both large- and small-scale mining have become major sources of environmental degradation, enabled by non-compliance with mining regulations, weak regulatory enforcement, and a lack of accountability and prosecutions for legal violations in the mining sector.

The impacts of these activities are not only ecological but also social. The scale of Chinese mining operations with heavy machinery drive land dispossession and displacement across the region.¹ Chinese operators in illegal mining often convert farmland, forest, and rivers into mining sites—sometimes forcibly or through collusion with government, traditional leaders, and private landowners—eroding long-standing livelihoods rooted in agriculture and fishing.² The loss of land for farming bananas, rice, potatoes, and other traditional crops undermines food security, fuels social tension, and stokes conflicts between local communities and Chinese miners.³

Weak regulatory enforcement in the mining sector stems from both systemic and political failures. Monitoring and evaluation mechanisms are underdeveloped, and existing legal frameworks fail to address the complex challenges posed by the involvement of Chinese nationals throughout the formal and informal mining sectors. Critically, there is a lack of political will to enforce existing laws—due in large part to the com-

plicity of state and local authorities. High-level government officials, security personnel, and local leaders often benefit from illegal mining operations through bribery schemes, unlawful permits and licensing, and even ownership of mining equipment and operations.⁴ These activities undermine law enforcement, shielding both local and Chinese violators from prosecution. Compounding the problem is the widespread failure of Chinese mining companies to honor their corporate social responsibility (CSR) agreements. Although mining laws in many West African countries require community engagement and CSR implementation, Chinese company compliance is often absent or minimal, leading to public resentment and straining diplomatic relations between China and countries such as Ghana, Sierra Leone, Mali, and Nigeria.⁵ These problems, detailed in the following section, underscore the urgent need for national and regional policy responses that address regulatory gaps, strengthen enforcement mechanisms, and promote transparency and accountability in the mining sector.

Evidence

The environmental impacts of Chinese mining activities are broad and far reaching, encompassing land degradation, ecosystem destruction, landslides, pollution deforestation, biodiversity loss, desertification, and exacerbating climate change. Chinese miners' consistent flouting of environmental standards and safety measures has severely damaged forest reserves, farmlands, and water resources. Chinese mining in West Africa is commonly tied to illegal small-scale artisanal operations carried out in collusion with local and transnational actors, including criminal gangs.⁶ These activities have profound consequences across the region.

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Deforestation and soil erosion are commonplace across West African mining sites, and pollution of marine and freshwater bodies occurs at multiple stages of mining exploration. Small-scale gold mining causes extensive land degradation and harms water quality.⁷ In Nigeria, Liberia, Mali, and Ghana, Chinese financing has enabled local miners to excavate deeper with bulldozers and use harmful chemicals more extensively.⁸ Local mining workers and artisanal miners are exposed to hazardous mercury, cyanide, arsenic, and fluoride, often due to the lack of proper protective gear.⁹ Wastewater from mining containing these and other toxic heavy metals pollutes soil, groundwater, and rivers in Ghana, Burkina Faso, Nigeria, and Mali, where landslides at abandoned Chinese-owned artisanal mines have resulted in fatalities.¹⁰ In Nigeria, lead poisoning in mining sites in Zamfara State in 2010 resulted in

about four hundred children falling ill or dying.¹¹ Wastewater discharge onto farmlands from mining reduces crop yields and introduces toxins into the food chain, affecting human and animal health.¹² Many mining communities have reported disproportionate cases of cancer, respiratory infections, waterborne diseases, reproductive disorders, skin disorders, asthma, spontaneous abortions, and birth defects.¹³

In coastal communities where mining is widespread, dredging boats discharge oil, fuel, and chemicals, obstruct riverbeds, cause erosion, and deform watercourses. Chinese mining operations have also released ballast water containing invasive species and toxic waste into marine ecosystems.¹⁴ Harmful runoff in mining sites poisons fish and reduces the size and quality of local stocks. Meanwhile, loss of farmland

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worsens poverty and undermines food security. In Ghana, the majority of small-scale “*galamsey*” gold mining sites are run by Chinese nationals, with more than fifty thousand Chinese nationals entering the country between 2008 and 2013 to engage in illegal gold mining. According to the Mankurom Cocoa Cooperative Farmers Association, small-scale gold mining has destroyed more than 100,000 acres of cocoa farmland.¹⁵ In Nigeria, mining-related disruptions have intensified farmer-herder conflicts due to declining access to water and grazing land.¹⁶

Chinese artisanal and illegal mining has also accelerated deforestation.¹⁷ In Ghana, bauxite mining in the Atewa Forest has devastated 5,000 hectares.¹⁸ In Nigeria, mining in forest zones has resulted in significant habitat loss. From 1975 to 2005,

Bukuru, Plateau state, lost 63 percent of its forested area due to mining.¹⁹ These forests filter pollution and ensure a steady supply of water to important inland rivers such as the Falémé River (Senegal and Mali), Bagoé River (Côte d’Ivoire and Mali), Tano-Bia Basin (Ghana and Côte d’Ivoire), and the Volta Basin (Benin, Burkina Faso, Côte d’Ivoire, Ghana, Mali, and Togo).²⁰

Chinese involvement in mining across West Africa is linked to organized crime and the proliferation of weapons.²¹ Transnational criminal networks linked to Chinese mining have destabilized mining regions and eroded trust in both local and national governance.²² Illegal mining has also become a funding source for armed groups and terrorists, such as Boko Haram and bandits in the Nigerian state of Zamfara.²³ Illicit gold mining in the Central Sahel countries—Burkina Faso, Mali, and

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Niger—has been linked to transnational organized crime and instability. The illicit trade in Sierra Leonean diamonds and Malian gold has been tied to criminal syndicates and terrorism.²⁴

While Chinese involvement in mining has supported some job creation, infrastructure development, and technology transfer in mining communities, these benefits are typically accompanied by poor working conditions, low wages, environmental hazards, and labor-rights violations.²⁵ Even when communities negotiate infrastructure projects, the benefits rarely offset the environmental and social damage.²⁶ Numerous cases of inadequate compensation, unpaid royalties, and poor infrastructure have fueled community tensions and intra-community disputes.²⁷ In Niger, for example, top Chinese oil executives were expelled for failing to adhere to the mining

code requiring them to use local subcontractors and laborers for extraction.

Governance weaknesses exacerbate these challenges. Environmental and natural resource agencies across West Africa are underfunded, lack the independence needed to enforce regulations, and are plagued with corruption.²⁸ Overlapping mandates and poor interagency communication hinder enforcement, while lax licensing systems allow illegal Chinese operations to flourish. Weak coordination between federal, provincial, and local authorities further enables illegal mining to thrive.²⁹ Many countries also lack clear procedures governing the entire process from mineral exploration to mine decommissioning.³⁰ In Nigeria, Mali, Côte d'Ivoire, and Liberia, small-scale mining licenses are often misused for large-scale operations and many Chinese firms operate without proper registration

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or licenses.³¹ In Ghana, where artisanal mining is restricted to nationals, Chinese actors are heavily involved through local intermediaries.³² Governments frequently issue licenses without consulting or compensating local landowners.³³ In Nigeria and Ghana, vague and controversial land laws allow governments to appropriate land regardless of prior ownership, often keeping marginalized communities from receiving the economic benefits of mineral extraction.³⁴

Even in countries that require environmental impact assessment (EIA) laws—such as Ghana, Nigeria, Benin, and Côte d'Ivoire—implementation is politicized and inconsistent and rarely results in severe penalties for violators. Officials often exploit the EIA process for personal gain, circumventing pollution-mitigation and land-restoration requirements. In Ghana, EIAs are mandatory for small-scale mining, but enforcement is weak.³⁵ In Nigeria, the process remains opaque, and officials have misled local communities, particularly in areas with high illiteracy.³⁶

This evidence underscores the urgent need for national and regional policies to close regulatory gaps and strengthen enforcement to curb the socioenvironmental consequences of Chinese mining in West Africa.

■ Policy recommendations

Improve oversight and compliance

- **Establish a digital reporting system.** To empower reform-minded actors as a counterweight to corrupt elites, civil society organizations should develop a secure, accessible, and digitalized reporting system that includes strong whistleblower protections. Under the banner “See something, say something,” the system should allow for various channels—such as phone calls, WhatsApp, Telegram platforms, encrypted messaging, and dedicated call lines—to report violations and upload images. It should include a robust mechanism for data

protection to ensure the safety of whistleblowers and the integrity of reports. Simplicity, reliability, and accessibility should guide its design, and the system should be created in partnership with credible civil-society organizations and community groups that could help provide capacity to investigate the veracity of each report and guard against manipulation by corrupt actors. To demonstrate its effectiveness and have immediate impact, the system should be piloted in select mining regions in which civil society groups and community organizations have existing local relationships. The system could be expanded gradually, region-by-region, with the ultimate aim being the creation of an integrated reporting network throughout West Africa.

- **Update and enforce visa regulations for Chinese nationals and strengthen immigration and border controls.** To address the poorly regulated licensing regimes and the involvement of Chinese entities in illegal mining, visa requirements and regulations should be reviewed, strengthened, and strictly enforced for Chinese visitors entering the region. Extradition treaties must be updated and enforced to hold foreign violators, including Chinese citizens and entities, accountable for environmental crimes. Locals who help foreign mining firms violate visa laws should be strictly prosecuted under the law.
- **Clarify and improve mining license regimes and land tenure laws.** Clear, equitable land policies are essential to protect communities from dispossession and ensure fair access to the profits of mining. Governments should review their existing licensing structures to close loopholes and clearly distinguish between different categories of mining operations—both formal and informal. Land tenure laws should be updated and reformed to eliminate ambiguities—particularly around

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31. Nandom Abu, Suleiman Abba Tahir, and H. D. Ibrahim, “Minerals and Mining Policies in Nigeria: Implications on Sustainable Growth and National Development,” *International Journal of Research in Engineering and Science* 8, 9 (2020), 60–72, <https://www.ijres.org/papers/Volume-8/Issue-9/J08096072.pdf>; “Nigerian Mining—Progress, but Still a Long Way to Go,” PricewaterhouseCoopers, July 2023, <https://www.pwc.com/ng/en/publications/nigerian-mining-progress-but-still-a-long-way-to-go.html>; “Mining in Nigeria: Opportunities, Challenges, and Prospects,” *Mining Review Africa*, September 20, 2023, <https://www.miningreview.com/gold/mining-in-nigeria-challenges-opportunities-and-prospects/>.
 32. Emmanuel Debrah and Raphael Asante, “Sino-Ghana Bilateral Relations and Chinese Migrants’ Illegal Gold Mining in Ghana,” *Asian Journal of Political Science* 27, 3 (2019), 286–307, <https://www.tandfonline.com/doi/full/10.1080/02185377.2019.1669473>.
 33. Akinbami, et al., “Mining and Its Socio-Economic Impacts on Rural Communities in Nigeria.”
 34. Adekanmbi and Wolf, “Solid Mineral Resources Extraction and Processing Using Innovative Technology in Nigeria”; and Kohnert, “Prospects and Challenges for the Export of Rare Earths from Sub-Saharan Africa to the EU.”
 35. Boafo, et al., “Illicit Chinese Small-Scale Mining in Ghana”; Albert K. Mensah, et al., “Environmental Impacts of Mining: A Study of Mining Communities in Ghana,” *Applied Ecology and Environmental Sciences* 3, 3 (2015), 81–94, <https://pubs.sciepub.com/aees/3/3/3/>.
 36. Olayinka, et al., “Mining and Environmental Impact Assessment in Sub-Saharan Africa.”

the ownership and use of mineral-rich lands. This will ensure transparency, streamline oversight, and reduce regulatory loopholes for illegal mining.

- **Create a regional mining compliance database to monitor implementation of EIA and CSR and identify bad actors.** West African countries should establish an online monitoring and evaluation mechanism for all international mining companies operating in the region. The system would be overseen by a multinational committee comprising state and local stakeholders and civil-society organizations, which would conduct random biannual checks to verify compliance and enforcement. The Economic Community of West African States (ECOWAS) could develop the database in collaboration with member states.
- **Establish mining escrow accounts.** This mechanism would ensure that mining companies have set aside sufficient funds for land reclamation and environmental remediation. Firms would pay into an escrow account before they begin mining. If they clean up the environmental destruction associated with their activities, the funds would be returned to them with interest. But if mining companies fail to carry out proper land remediation, then the money in the escrow account would be used to support the cleanup and/or as compensation.

Raising public awareness

- **Strengthen public education.** Governments and civil society should establish national and sub-national level educational programs to inform the public—especially grassroots actors and traditional leaders—about the health risks and environmental impacts of illegal and artisanal mining. These efforts should include targeted publicity campaigns using radio broadcasts, pamphlet distribution, and social media platforms with language-accessible slogans. Mining communities should also be educated about the environmental, social, and health consequences of mining through community meetings and gatherings designed to raise public awareness. These educational initiatives can leverage regular community gatherings and forums, and should be conducted in local languages to reach a broader audience. They could be led by nonprofit and civil-society organizations in close partnership with local health authorities and relevant stakeholders. This collaborative approach would help to effectively communicate medical and environmental risks while fostering greater community awareness and engagement.
- **Train and protect journalists.** Journalists should receive specialized training by professionals from local and international media and other international com-

munity organizations to build capacity for professional and investigative reporting on mining issues involving Chinese actors.

Empower communities

- **Form community monitoring committees.** Local community groups should be formed in collaboration with security agencies, government bodies, local and international nonprofit organizations, civil-society groups, and the press to distinguish between legitimate (i.e., properly registered and escrow backed) and illegal mining activities. These groups would expose collusion between Chinese entities, local actors, and transnational criminal networks. To prevent corrupt actors from co-opting them, these committees should prioritize transparency and undergo regular reviews and oversight checks by a committee of experts from neighboring countries.
- **Register local miners and support cooperatives.** Begin a campaign to register local small-scale miners to enhance transparency. Registration could come with access to credit facilities to disincentivize them from relying on Chinese financing. Establish mining cooperatives, or support existing ones, that encourage small-scale artisanal miners to move from illegal to formal mining by helping them apply for appropriate licenses.

International engagement

- **Engage the Chinese government.** West African governments should establish regular channels for both formal and informal discussions between state institutions (e.g., environmental protection agencies, ministries of environment and natural resources, ministries of mines and energy, minerals commissions, and other such institutions with oversight over minerals and mining), the local Chinese embassy, and their counterparts in Beijing. West African leaders and officials should raise the issue of environmental degradation in discussions with senior Chinese leaders, and it should be placed on the agenda and prioritized at the Forum on China Africa Cooperation (FOCAC) and other multilateral meetings with Chinese counterparts.
- **Engagement among West African governments.** West African governments should establish regular channels for information sharing among their relevant ministries. These mechanisms can be formal or informal, bilateral or multilateral, but their objective should be to exchange timely information—for example, about cross-border bad actors and mining-induced environmental pollution—as well as to coordinate collective action among likeminded officials.

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