



Issue 31 | January 2024

Environmental crime caused by illegal mining in Central Africa

ENACT

Summary

The illicit exploitation of mineral resources has long-term impacts on the environment, including formation of sinkholes, and contamination of the soil, groundwater and surface water. It also results in soil erosion, loss of biodiversity, health risks and even deaths. However, it is not regarded as environmental crime in Central Africa. This Policy Brief draws attention to the environmental harms caused by illegal mining in the region and explores how national and regional responses to the challenge can address the environmental fallouts.

Key points

- The environmental impacts of illegal mining in Central Africa negatively affect human and animal habitats, as well as the lives of indigenous communities.
- Illegal mining in the region is not regarded as environmental crime.
- Various obstacles impede attempts to address illegal mining, including gaps in the criminalisation of such mining and non-stringent penalties.
- Both state and non-state actors are involved in illegal mining, undermining state authority and regulatory capabilities.
- There are no regional mechanisms to counter illegal mining.

Introduction

The Central African region has vast reserves of solid mineral deposits. Chad, Cameroon, Central African Republic (CAR) and the Democratic Republic of Congo (DRC) are among the leading producers of cobalt, diamonds, gold and uranium in Africa.

However, the mineral reserves have remained largely untapped, and the sector underdeveloped, due to infrastructural constraints, a lack of investment drive and limited internally available critical skills and technological capabilities across the region. As a result, the mining sector has been a major target for organised criminal actors, including militias, warlords, criminal groups and, in some cases, terrorist organisations, seeking to exploit illegally mined mineral resources as an important source of revenue for their operations.¹ Limited state capacity to enforce the law in mineral-endowed territories and the involvement of embedded state actors in the illicit exploitation enable organised crime in the region's extractive sector to continue unabated.

Among other harms, illegal mining constitutes an environmental crime with long-term impacts. In general, the negative impact of illegal mining on the environment includes formation of sinkholes and contamination of the soil, groundwater and surface water, which result in soil erosion and loss of biodiversity.² Pollution from mercury and cyanide destroys natural flora and fauna, while the semi-mechanised exploitation of minerals devastates arable lands and rivers, negatively impacting rural habitats and livelihoods. All of these harms can result in health risks and even death, both for the illegal miners and local communities.



The mining sector
has been a major
target for organised
criminal actors

This Policy Brief explores the environmental harms caused by illegal mining in three Central African countries – Cameroon, CAR and the DRC – and identifies the extent to which national and regional responses to illegal mining address the environmental fallouts. It complements the Central African Police Chiefs Committee (CAPCCO) Organised Crime Threat and Resilience Assessment

(OCTRA) Report, which seeks to fill information gaps in understanding organised crime in Central Africa. This is with a view to assisting CAPCCO member states to design evidence-based national and regional strategies, policy programmes and interventions to effectively address the threat posed by environmental crime from illegal mining.

Methodology

This Policy Brief draws from an extensive literature review. It also leverages the qualitative interviews on illegal mining in Central Africa, conducted in all eight CAPCCO member states, which informed the OCTRA report. Interviewees included miners, experts in mining and environmental crime, security and law enforcement officers, as well as members of civil society organisations.

Definition of terms used

Although the definition of illegal mining is not universally accepted, the United Nations Office on Drugs and Crime (UNODC) refers to it as: (a) mining activities carried out by a person, natural or legal, or a group of people without complying with the requirements of applicable laws or administrative regulations that govern the activities; or (b) mining activities carried out in areas where the exercise of such activities is prohibited, including use of prohibited equipment, devices or chemicals.³ Illegal mining can also take the form of a subsistence activity, such as artisanal mining, or it can manifest as a large-scale organised crime operation spearheaded by illegal mining consortia and groups.⁴

The Environmental Investigation Agency broadly defines environmental crime as illegal acts that directly harm the environment (e.g. wildlife, biodiversity and natural resources).⁵ Forms of environmental crime include: illegal mining; illegal trade in wildlife and hazardous waste, as well as smuggling of ozone-depleting substances; illegal logging and trade in illegally logged timber; as well as illegal, unregulated and unreported fishing.

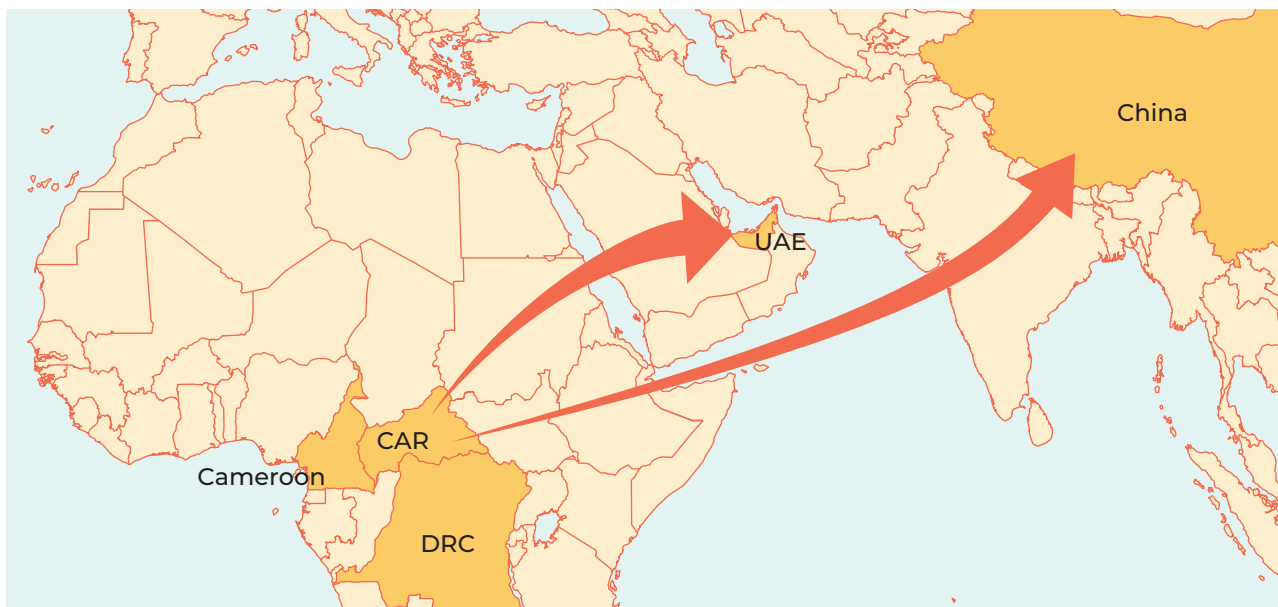
Context

For several decades, and in some cases since independence, many countries in the Central African region have faced complex security and governance challenges, including intractable violent conflicts, recurrent coups, terrorism, violent extremism, transnational organised crime (TOC), banditry, kidnapping for ransom and extortion, as well as cattle rustling or livestock theft, and growing conflicts between pastoralists and sedentary farmers. The fragility of the region is further compounded by rising levels of extreme poverty and unemployment, with over half of the population living below the poverty line.⁶

In this context, illegal mining is highly lucrative. It generates revenue for a number of actors, including violent non-state actors, especially terrorist and rebel groups, warlords, state-embedded actors and syndicates with political connections, at the expense of national development.

Across Central Africa, illegal miners have focussed on gold and diamonds because the alluvial nature of these minerals makes them easy to mine, and they are highly fungible and easy to smuggle. Besides its economic value, gold also has strategic importance. Following the global rise in the price of gold since 2009,⁷ illegal mining activities have spread across Central Africa and beyond, with miners in Cameroon, CAR, Chad and the DRC trafficking products to the United Arab Emirates (UAE), China and other Asian countries.⁸

Chart 1: Flow of gold from CAR, Cameroon and the DRC to the UAE and China



Source: Created using information provided by author

Illegal mining and its associated transactions are often shrouded in secrecy and do not feature in official economic statistics. For instance, research findings indicate that, in CAR, 97.5% of the gold output is undocumented and illegally exported out of the country.⁹ In the DRC, while small-scale and artisanal miners are encouraged under the country's Mining Code, most of their activities are not regulated and



Readily available arms on mining sites pose serious security threats to law enforcement

occur on mining sites where the state has very little presence, authority or control. In Cameroon, more than 400 illegal gold mining sites operate along its eastern borders with CAR, including about 33 owned by Chinese companies.¹⁰

Across Central Africa, criminal networks involved in illegal mining use prohibited equipment, devices or chemicals, including explosives, explosive substances and ozone-depleting substances, all of which impact negatively on the environment.¹¹ Over time, these devices and substances cause soil erosion, resulting in mining-related landslides,¹² as well as contaminate the soil and water. Deforesting land for mining sites results in the loss of biodiversity, threatening local flora and fauna. Fundamentally, illegal mining damages the ecological system that humans depend on to survive.

Other consequences of the illegal exploration and mining of solid minerals in Central Africa include conflicts over resources, arms and human trafficking, as well as financial crime, including money laundering. For instance, diamonds have funded brutal wars in Angola, CAR and the DRC, resulting in the death and displacement of millions.¹³ In Cameroon, the 2023 ENACT Organised Crime Index (OCI) found that banks, forestry and wildlife operators, mining companies, currency exchange offices, dealers in prized stones and metals, as well as notaries, are some of the private sector actors engaged in money laundering schemes and financing of terrorism.¹⁴

An ENACT study found that criminal actors in Central Africa are involved in the illicit flow of explosives and explosive substances for illegal mining activities.¹⁵ Readily available arms on mining sites pose serious security threats to law enforcement. In 2014, the Eco guards of Minkebe National Park in Gabon were reportedly overpowered by over 5 000 armed illegal miners, wildlife and drug traffickers operating in the area.¹⁶

Illegal mining as environmental crime in Cameroon, CAR and the DRC

Cameroon

Cameroon possesses an abundance of solid mineral resources, including aluminium, bauxite, cobalt, diamonds, gold and iron ore. The country's bauxite reserves, the main source of aluminium, are estimated at over one billion tons.¹⁷ Large deposits of kyanite and bauxite are found in Minim-Martap and Ngaoundéré, on the Adamawa Plateau. Importantly, significant deposits of cobalt also make Cameroon a major producer of the mineral in the world.¹⁸ Limestone deposits are also found near Garoua, gold in the eastern parts of the country, while cassiterite is deposited in the Darlé River valley in the northeast.

As meaningful exploitation of these resources remains slow due to limited industrial capacity, the sector adds less than 1% to the country's Gross Domestic Product (GDP).¹⁹ Cameroon's poor transport infrastructure accounts for the delay of several mining projects in the country, as well as subdued investor interest in the mining sector.

According to the 2023 ENACT OCI, high levels of corruption in Cameroon's state institutions provide a safe haven for criminal actors.²⁰ A complex criminal network is involved in illegal mining in the country. The network ranges from state and local administrative officials and political elites as well as unlicensed miners and exporters, to local residents and community members.²¹

The illicit transnational supply chain for illegally mined products involves Chinese companies and is aided by porous borders, regional conflicts, widespread poverty and entrenched corruption. Illegally extracted mineral resources are trafficked to China, the UAE and Vietnam through Douala and neighbouring countries.

The nexus between illegal mining and environmental crime in Cameroon is well established. In a recent publication, the Global Initiative against Transnational Organized Crime (GI-TOC) stated that illegal mining and associated activities contribute up to 22% of environmental crimes in the Yabassi forest region, which is part of the Congo Basin forest ecosystem.²² GI-TOC further showed that the forest ecosystem has shaped the indigenous identities of the multi-ethnic Bantu-speaking Bassa, Bandem, Botia, Bona Ba'a and Beti people, providing them with food, medicine and arable land for farming. However, this area is plagued by illegal mining, which has polluted rivers and reduced the territorial land of the local people. This has limited the supply of traditional protein sources (usually sourced from river fish) and led to violent disputes over resources.²³

Illegal artisanal gold mining methods in a number of districts in the East Region of the country, including Betare-Oya, Batouri, Garoua-Boulai, Boden Colomines, Yokadouma and Kette, involve open pit mining using basic, simple or semi-mechanised methods that have detrimental environmental impacts. These include widespread land degradation, deforestation and loss of vegetation.²⁴

These environmental harms lead to irreversible negative consequences for indigenous lands and ethnic identities, resulting in human displacement, socio-economic dislocation and human rights violations. For instance, about 150 people are said to have died in abandoned hazardous pits created by illegal gold miners, which are decimating the forests of Bétaré Oya.²⁵ The 2023 OCI also found evidence of child labour and sexual exploitation at Cameroon's mining sites and gravel quarries.²⁶

Since 2001, Cameroon has implemented a series of reforms in the mining sector which seek to attract foreign investors and to raise government revenue streams that contribute to development. The Cameroon Mining Law of 2016 seeks to regulate and curtail the harmful effects of mining on the environment and residents in local communities.²⁷ Despite this law, little ecological remediation has been carried out by the authorities on abandoned mining sites, resulting in erosion of waste rock piles and tailings into stream and river systems.²⁸

There are also several environmental protection laws and community forest management systems in the country, including Decree 2011/408 of 9 December 2011, which empowers the Ministry of Mines, Industry and Technological Development to monitor and control mining activities within the limits of the prerogatives granted by government.

However, these laws are rarely enforced. Where they are enforced, perpetrators seldom receive more than a fine.²⁹ Cameroon's legal framework on illegal mining also lacks regional application to deal with the cross-border dimensions of the crime.



High levels of corruption in Cameroon's state institutions provide a safe haven for criminal actors

The Central African Republic

Although CAR has large deposits of copper, diamonds, limestone and uranium, only diamonds and gold are produced. Mired in violent conflicts over the last two decades, the country remains one of the poorest and most fragile in the world despite its abundant natural resources.

Illicit exploitation of the country's natural resources remains a major challenge. Illegal exploitation of diamonds and gold, the country's second biggest export, is largely perpetrated by rebel groups that control numerous mineral extraction zones. The proceeds from these illicit sales are used to finance their combat operations.³⁰ According to the 2023 OCI, there is also evidence that some local businessmen are financing armed groups with the proceeds of illegal mining.³¹ CAR's porous borders, significant informal sector and illegal mining operations make the country prone to money laundering.

Foreign actors are also involved in illegal mining. Russian mining companies such as Lobaye Invest have exclusive mineral rights to ore deposits throughout the country and are active in the illicit trade of non-renewable resources.³² They also cooperate with criminal groups and engage in corrupt activities. Similarly, the Russian mercenaries of the African Corps also play a significant role in the illicit gold and diamond market.³³



Illegal mining negatively impacts local communities, causing health problems and human displacement

The link between illegal mining and environmental crime in the CAR is profound, especially because illicit gold and diamond mining occurs in areas of high biodiversity. Waste water from unlawful mining activities has contaminated many of the country's water bodies and resulted in the loss of flora and fauna. Illegal mining has also been responsible for deforestation and habitat loss. Harmful chemicals such as mercury and cyanide have caused water, soil and air pollution.³⁴ This environmental harm results in ecocide, according to the Institute for Strategic Studies.³⁵

Illegal mining also negatively impacts local communities, causing health problems and human displacement. This means that the harms of illegal mining extend beyond environmental crimes into the realm of human rights violations.

In CAR, a 2010 environment and ecology regulation that seeks to protect local water sources requires a 200-metre buffer zone near streams, within which vegetation must be left intact and mining is not allowed. However, the regulation is not well known and is hardly ever enforced. Even licensed miners do not adhere to this regulation, resulting in significant environmental damage.³⁶

The Democratic Republic of Congo

Within the Central African region, DRC is the most endowed in solid minerals. Limestone deposits found throughout the country are considered to be among the richest in Africa. Gold and lithium can be found in the western part of Lake Kivu as well as in the northeast and Coastal regions. About 70% of the world's cobalt reserves are deposited in Katanga, while gem-quality industrial diamonds are mined in the south-central region.³⁷

However, the sector is controlled by over 100 different armed groups, including warlords, rebel movements, ethnic militias and even terrorist organisations. For instance, as far back as 2012, reports documented the links between the M23 rebel group and gold smuggling in the eastern part of the country. The Institute for Peace Information Services notes that the M23 sought financing for its rebellion through the sale of illegally mined gold in Kampala.³⁸ The gold, valued at between US\$8.1 million and US\$10.8 million, was smuggled through border posts controlled by fighters of the rebel group. Rwanda and Uganda also serve as main routes for the smuggling of illegally mined gold from the DRC.

The DRC is also the most biologically diverse country in Africa and one of the most important biodiversity centres in the world, ranking fifth for animal and plant diversity.³⁹ But data from the Global Forest Watch platform indicates that the country has lost 8.6% of its tree cover since 2000 to illegal mineral exploration, which is one of the leading causes of deforestation in the country.⁴⁰

Environmental activists in Bukavu told ENACT that illegal mineral exploitation destroys ecosystems, which in turn decreases carbon stock and disrupts the process of photosynthesis, affecting air quality.⁴¹ They noted that the process also damages animal habitats. The chemicals used in washing coltan pollute water bodies and are also harmful to people and animals. Many animals have been displaced from their natural habitats, leaving them exposed to poachers.⁴²

Although several reports have documented the challenges of illegal mining in the DRC, they focus primarily on the violent competition over natural resources.⁴³ In the eastern DRC, struggle for the control over coltan mines has been central to the conflict, a situation that has led to the death of over four million people in the past decade. The Democratic Forces for the Liberation of Rwanda, various militias and the Congolese army all play criminal roles in the money-spinning coltan trade.⁴⁴ As a result, not enough is known about the environmental impact of illegal mining in the DRC. Collecting data on the environmental implications of this illegal trade is imperative for providing much-needed information to the authorities to enable appropriate response to the challenge.

The mining sector in the DRC has undergone several structural reforms, including the promulgation of the Mining Code of 2002,⁴⁵ which was revised in 2018 to formalise the country's mining sector.⁴⁶ However, legal mining in the DRC still results in serious environmental crimes. ENACT was informed by sources in the DRC that environmental impact assessments are rarely carried out before legal mining activities and that both local and foreign mining companies exploit the mineral resources in historical heritage sites, including the Kahuzi Biega National Park.⁴⁷

Sources also disclosed that most artisanal miners work on sites where there is no state control, extracting as much of the mineral as they can without any regulations being enforced. For instance, while the Ministry of Mining recommends that miners should dig no deeper than 30 metres below the surface, they sometimes dig as deep as 200 metres – this has implications for soil stability, drainage and reforestation.⁴⁸

Discussion

Although it has the potential to increase prosperity and enhance development, when carried out in an illegal and unregulated manner, the exploitation of mineral resources presents intense and fundamental risks to local communities and environments across Central Africa. Pollution, deforestation and soil erosion caused by illegal mining damage the region's biodiversity. In most countries across Central Africa, the demand for minerals and their illegal extraction by criminal groups exerts tremendous stress on local communities, causes environmental damage, stokes violent conflict and contributes to protracted humanitarian crises across the region.

National governments in the Central African region have initiated mining reforms that have seen the promulgation of regulatory frameworks and the establishment of law enforcement and oversight institutions. However, some national laws have gaps in the criminalisation of illegal mining, contain inadequate and less stringent penalties for the crimes and do not reflect universal recommendations and international standards.⁴⁹



The DRC is the most biologically diverse country in Africa and an important biodiversity centre

Despite illegal mining's threat to the environment, including the wellbeing of populations and livelihoods, it is not yet treated as an environmental crime by state institutions in Central Africa. Existing environmental regulations and codes have neither criminalised illegal mining as environmental crime, nor have they provided stringent penalties for criminal actors. This makes enforcement difficult.

Fighting illegal mining as environmental crime requires building the capacity of law enforcement, including reforms in the police, courts and prisons, to ensure a functional criminal justice system to deal with perpetrators of the crime.



Understanding the nexus between illegal mining and environmental crime is vital

State departments in Cameroon, Congo Brazzaville and Gabon collaborate with non-profit groups such as Global Forest Watch (which focusses on forestry conservation) and the EAGLE Network (an international coalition of eco-activists that fights wildlife crime) to strengthen community and law enforcement responses to environmental crime. However, these collaborations do not address illegal mining as a factor in environmental crime. Yet understanding the nexus between illegal mining and environmental crime is vital for shaping appropriate state responses.

The transnational nature of the crime, which involves cross-border criminal syndicates, has not attracted the expected response from relevant authorities, including law enforcement agencies policing porous national frontiers. This underscores the need to strengthen regional collaborations among regulatory and policing agencies, particularly partnerships between national police organisations and CAPCCO, to adequately address the challenge. Although CAPCCO provides a platform for regional cooperation over police and criminal matters, the non-inclusion of other security or law enforcement agencies – such as coastguards, gendarmerie, customs, forest guards, and national or republican guards – means there is no single mechanism for coordinating security responses to environmental crime from illegal mining.

Conclusion

Although mining activities have the potential for increasing prosperity and contributing to development, illegal mining causes significant environmental damage and presents significant risks to local communities and environments. The challenge, however, is that illegal mining is not treated as environmental crime across Central Africa, making the enforcement of codes to comply with environmental standards difficult. State approaches to countering illegal mining must recognise it as an environmental crime and incorporate illegal mining into environmental regulatory frameworks. This will enable individual countries and the region as a whole to address the harms posed by illegal mining to humans, animals and the environment.

Policy options for strengthening state responses

- National governments in Central Africa should review and amend existing environmental regulations and mining codes to criminalise illegal mining as environmental crime, provide stringent penalties for criminal actors, and strengthen the capacity of law enforcement agencies and regulatory institutions, including CAPCCO, to enforce the laws.
- The establishment of regional strategies and platforms for multilateral collaborations and partnerships between and among countries in Central Africa would facilitate a regional response to the cross-border dimensions of illegal mining. This includes the importation of hazardous substances used for illegal mining, as well as the smuggling and trafficking of illegally mined minerals from the region.

- CAPCCO should establish a regional platform for national policing organisations, including coastguards, gendarmerie, customs, forest guards, and national or republican guards, to coordinate security sector responses to environmental crime from illegal mining across the region. The platform should also design strategies for policing, as well as judicial and prison reforms, to ensure appropriate administration of criminal justice for perpetrators of environmental crime.
- Establishing an environmental crime unit would enable CAPCCO to build the capacity of officers within the unit to prevent illegal mining and enforce environmental safeguards. This includes the enforcement of environmental impact assessments and management plans by local and foreign mining companies prior to the commencement of mining operations across the region. The unit would also support national authorities across the region, particularly in Cameroon, to undertake environmental remediation activities in abandoned mining sites.
- Beyond institutional and legal reforms, national governments and regional organisations in Central Africa need to put in place political measures to deal with the involvement of state-embedded actors in illegal mining that threatens the environment.

Notes

- 1 United Nations Office on Drugs and Crime (UNODC), Responding to illegal mining and trafficking in metals and minerals: A guide to good legislative practices, 2023, https://sherloc.unodc.org/cld/uploads/pdf/Illegal_Mining_and_Trafficking_in_Metals_and_Minerals_E.pdf.
- 2 Maurice Ogbonnaya, Illegal mining and rural banditry in north west Nigeria: Responses, successes and challenges, ENACT Policy Brief, Issue 19, November 2020, <https://enact-africa.s3.amazonaws.com/site/uploads/2020-11-19-illegal-mining-policy-brief.pdf>.
- 3 UNODC, Responding to illegal mining and trafficking in metals and minerals: A guide to good legislative practices, 2023, https://sherloc.unodc.org/cld/uploads/pdf/Illegal_Mining_and_Trafficking_in_Metals_and_Minerals_E.pdf, p. 43.
- 4 Maurice Ogbonnaya, Illegal mining and rural banditry in north west Nigeria: Responses, successes and challenges, ENACT Policy Brief, Issue 19, November 2020, <https://enact-africa.s3.amazonaws.com/site/uploads/2020-11-19-illegal-mining-policy-brief.pdf>, p. 3.
- 5 Environmental Investigation Agency, Environmental crime: A threat to our future, EIA Ecocrime Report 0908, October 2008, www.unodc.org/documents/NGO/EIA_Ecocrime_report_0908_final_draft_low.pdf.
- 6 Oluwole Ojewale, Mining and illicit trading of coltan in the Democratic Republic of Congo, ENACT Research Paper, Issue 29, March 2022, <https://enact-africa.s3.amazonaws.com/site/uploads/2022-05-03-research-paper-29-rev.pdf>; see also Lael Brainard and Derek Chollet, *The tangled web: The poverty-insecurity nexus*, Brookings Global Economy and Development Report, 2007, www.brookings.edu/wp-content/uploads/2016/07/toopoorforpeace_chapter.pdf.
- 7 International Crisis Group, Violence in Nigeria's north west: Rolling back the mayhem, Africa Report No. 288, 18 May 2020; see also International Crisis Group, Managing trafficking in northern Niger, Africa Report No. 285, 6 January 2020.
- 8 INTERPOL, Illegal gold mining in Central Africa, Analytical Report, May 2021, <https://enact-africa.s3.amazonaws.com/site/uploads/interpol-report-30-06-2021-english-final.pdf>, p. 4.
- 9 Inayah Issa, How illegal gold mining in Central African Republic is stunting economic development, International Institute for Strategic Studies, 31 October 2022, <https://horninstitute.org/how-illegal-gold-mining-in-central-african-republic-is-stunting-economic-development/>.
- 10 Moki Edwin Kindzeka, Cameroon seals mining sites to prevent deaths, *VOANews*, 22 August 2022, www.voanews.com/a/cameroon-seals-mining-sites-to-prevent-deaths-/6711510.html#:~:text=Cameroon%20says%20more%20400%20mining,operating%20illegally%20or%20recruiting%20children.
- 11 INTERPOL, Illicit flows of explosives in Central Africa, Analytical Report, May 2023, <https://enact-africa.s3.amazonaws.com/site/uploads/2023-05-03-interpol-analytical-explosives.pdf>.
- 12 For example, in May 2021, Cameroonian authorities reported that 27 illegal gold miners died in a mining-related landslide in Kambele village, Batouri administrative unit, near the country's eastern border with CAR. See, Moki Edwin Kindzeka, Cameroon seals mining sites to prevent deaths, *VOANews*, 22 August 2022, www.voanews.com/a/cameroon-seals-mining-sites-to-prevent-deaths-/6711510.html#:~:text=Cameroon%20says%20more%20400%20mining,operating%20illegally%20or%20recruiting%20children.
- 13 Global Witness, A rough trade: The role of companies and governments in the Angolan conflict, 1 December 1998, www.globalwitness.org/en/campaigns/conflict-diamonds/rough-trade/.
- 14 Organised Crime Index, Cameroon, 2023, <https://africa.ocindex.net/country/cameroon>, p. 14.
- 15 INTERPOL, Illicit flows of explosives in Central Africa, May 2023, <https://enact-africa.s3.amazonaws.com/site/uploads/2023-05-03-interpol-analytical-explosives.pdf>.
- 16 INTERPOL, Illegal gold mining in Central Africa, March 2021, <https://enact-africa.s3.amazonaws.com/site/uploads/interpol-report-30-06-2021-english-final.pdf>.
- 17 KPMG Global Mining Institute, Cameroon: Country mining guide, 2014, <https://assets.kpmg.com/content/dam/kpmg/pdf/2014/06/cameroon-mining-guide.pdf>.
- 18 Brice Mbodiam, Cameroon: Canyon resources identifies 250mln tons of 'very high grade' bauxite at Minim-Martap, *Business in Cameroon*, 14 March 2019, www.businessincameroon.com/mining/1403-8940-cameroon-canyon-resources-identifies-250mln-tons-of-very-high-grade-bauxite-at-minim-martap.
- 19 Patrick Lemougna et al., Materials engineering and local mineral resources for development in Cameroon, *Journal of Materials and Environmental Science*, 14:2, 2023, 184–209.
- 20 Organised Crime Index, Cameroon, 2023, <https://africa.ocindex.net/country/cameroon>.
- 21 Faith Ngum and Radha Barooah, Impact of biodiversity loss and environmental crime on women from rural and indigenous communities: Evidence from Ecuador, Mexico, Cameroon and Indonesia, Global Initiative Against Transnational Organised Crime, October 2023, <https://reliefweb.int/report/ecuador/impact-biodiversity-loss-and-environmental-crime-women-rural-and-indigenous-communities-evidence-ecuador-mexico-cameroon-and-indonesia>.
- 22 *Ibid.*, pp. 17–18.
- 23 *Ibid.*, p. 17.
- 24 ME Mimba, PUT Mbafor, SCA Fils and NT Nforba, Environmental impact of artisanal and small scale gold mining in east Cameroon: An overview, 2023, www.sciencedirect.com/science/article/abs/pii/S2666261223000135.
- 25 Francesca D'Annunzio, Waste, fraud, abuse: Covering the environmental crime beat, Global Investigative Journalism Network, 9 November 2023, <https://gijn.org/stories/covering-environmental-crime-beat/>.
- 26 Organised Crime Index, Cameroon, 2023, <https://africa.ocindex.net/country/cameroon>, p. 5.
- 27 See Law No. 2016/017 of 14 December 2016.
- 28 Mumbfu Ernestine Mimba et al., Environmental impact of artisanal and small-scale gold mining in east Cameroon, sub-Saharan Africa: An overview, *Ore and Energy Resource Geology*, Volume 15, September 2023, www.sciencedirect.com/science/article/abs/pii/S2666261223000135.

- 29 Madeleine Ngeunga, In the Congo rainforest, gold mining is killing forests and communities, *infoCONGO*, 10 May 2021, <https://infocongo.org/en/in-the-congo-rainforest-gold-mining-is-killing-forests-and-communities/>.
- 30 Inayah Issa, How illegal gold mining in Central African Republic is stunting economic development, International Institute for Strategic Studies, 31 October 2022, <https://horninstitute.org/how-illegal-gold-mining-in-central-african-republic-is-stunting-economic-development/>.
- 31 Organised Crime Index, Central African Republic, 2023, https://ocindex.net/country/central_african_republic.
- 32 Caroline Morin et al., The environmental impact of Russian mining in the Central African Republic, *Tearline*, 16 December 2021, www.tearline.mil/public_page/car-mines.
- 33 Organised Crime Index, Central African Republic, 2023, https://ocindex.net/country/central_african_republic, p. 4.
- 34 European Union (EU), Pollution, <https://dicf.unepgrid.ch/central-african-republic/pollution#:~:text=Agricultural%20and%20mining%20activities%2C%20as,also%20causes%20significant%20environmental%20pollution>.
- 35 Inayah Issa, How illegal gold mining in Central African Republic is stunting economic development, International Institute for Strategic Studies, 31 October 2022, <https://horninstitute.org/how-illegal-gold-mining-in-central-african-republic-is-stunting-economic-development/>.
- 36 Caroline Morin et al., The environmental impact of Russian mining in the Central African Republic, *Tearline*, 16 December 2021, www.tearline.mil/public_page/car-mines.
- 37 UNEP, Can the Democratic Republic of the Congo's mineral resources provide a pathway to peace? *UNEP News*, 20 September 2022, www.unep.org/news-and-stories/story/can-democratic-republic-congos-mineral-resources-provide-pathway-peace.
- 38 Institute for Peace Information Services (IPIS), Why M23 is not your average rebel group, IPIS Briefing, January 2023, <https://ipisresearch.be/weekly-briefing/why-m23-is-not-your-average-rebel-group/>.
- 39 UNEP, Democratic Republic of Congo: Biodiversity, 2023, <https://dicf.unepgrid.ch/democratic-republic-congo/biodiversity>.
- 40 Global Forest Watch, Democratic Republic of Congo, 2022, www.globalforestwatch.org/dashboards/country/COD/?category=forest-change; see also Oluwole Ojewale, What coltan mining in the DRC costs people and the environment, *The Conversation*, 29 May 2022, <https://theconversation.com/what-coltan-mining-in-the-drc-costs-people-and-the-environment-183159>.
- 41 Interview with environmental activists, Bukavu, 29 November 2023.
- 42 Oluwole Ojewale, What coltan mining in the DRC costs people and the environment, *The Conversation*, 29 May 2022, <https://theconversation.com/what-coltan-mining-in-the-drc-costs-people-and-the-environment-183159>.
- 43 See, for instance, Ken Matthysen and Erik Gobbers, Armed conflict, insecurity, and mining in eastern DRC: Reflections on the nexus between natural resources and armed conflict, IPIS, Antwerp, December 2022, https://ipisresearch.be/wp-content/uploads/2022/12/20221208_ILRG_IPIS_Armed-conflict-insecurity-and-mining-in-eastern-DRC.pdf; and Oluwole Ojewale, Mining and illicit trading of coltan in the Democratic Republic of Congo, ENACT Research Paper, Issue 29, March 2022, <https://enact-africa.s3.amazonaws.com/site/uploads/2022-05-03-research-paper-29-rev.pdf>, p. 1.
- 44 Oluwole Ojewale, Mining and illicit trading of coltan in the Democratic Republic of Congo, ENACT Research Paper, Issue 29, March 2022].
- 45 Under Congolese law, mining is governed by Law No. 007/2002 of 11 July 2002.
- 46 See Law No. 18/001 of 9 March 2018.
- 47 Interview with ACE (Congolese Environment Agency), Goma, 28 April 2021, by Oluwole Ojewale during the study on mining and illicit trading of coltan in the DRC.
- 48 Ibid.
- 49 UNODC, Responding to illegal mining and trafficking in metals and minerals: A guide to good legislative practices, 2023, https://sherloc.unodc.org/cld/uploads/pdf/Illegal_Mining_and_Trafficking_in_Metals_and_Minerals_E.pdf, p. 4.



This project is funded by the European Union

About ENACT

ENACT builds knowledge and skills to enhance Africa's response to transnational organised crime. ENACT analyses how organised crime affects stability, governance, the rule of law and development in Africa, and works to mitigate its impact. ENACT is implemented by the ISS and INTERPOL, in affiliation with the Global Initiative Against Transnational Organized Crime.

Acknowledgements

ENACT is funded by the European Union (EU). This publication has been produced with the assistance of the EU.



Cover image: Adobestock

The contents of this publication are the sole responsibility of the author and can in no way be taken to reflect the views or position of the European Union, or the ENACT partnership. Authors contribute to ENACT publications in their personal capacity.

© 2024, ENACT. Copyright in the volume as a whole is vested in ENACT, its partners, the EU and the author, and no part may be reproduced in whole or in part without the express permission, in writing, of the author and the ENACT partnership.