

A Journalist's Guide to Reporting on the Impact of Critical Mineral Mining on Biodiversity in Latin America

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[https://commons.wikimedia.org/wiki/File:Salar de Olaroz Lithium Mine, Argentina by Planet Labs.jpg](https://commons.wikimedia.org/wiki/File:Salar_de_Olaroz_Lithium_Mine,_Argentina_by_Planet_Labs.jpg)

Introduction

The energy sector is the largest producer of greenhouse gas emissions, [accounting for 75.7% of global emissions](#). That is why the rapid adoption of renewable energy technologies, from wind turbines and solar panels to electric vehicles, is essential to combat climate change. Their development is growing rapidly. Global renewable energy capacity grew [by 15.1% in 2024](#), a historic record, while electric car sales [grew by 25%](#) in the same year, reaching 20% of the market for the first time.

Producing these technologies requires large quantities of a specific group of minerals, known as critical minerals, including copper, cobalt, lithium, nickel and rare earths. A wind power plant [requires nine times more](#) minerals than a gas plant, while an electric car needs six times more minerals than an internal combustion car. Global demand for lithium for clean energy could grow 17.1 times, cobalt 5 times, nickel 6.5 times, rare earths 4.6 times and copper 3.1 times if [net zero emissions are achieved by 2050](#).

This tipsheet focuses on terrestrial mining, which supplies the majority of these minerals today. While some Latin American countries have carried out exploratory activity offshore, opposition to deep-sea mining is growing in the region, with several governments calling for a moratorium. Later in the tipsheet we also touch on minerals not used directly in renewable energy, since they are part of the broader extractive context that reporters must navigate.

For environmental and energy reporters, this creates both a challenge and an opportunity. Covering critical minerals means navigating a complex landscape where the promise of

renewable energy must be weighed against the risks of new extractive frontiers. Journalists have to look beyond the headlines of “green growth” and examine what sustainability really looks like in practice — who benefits, who bears the costs, and how ecosystems and communities are affected. The task is not to pit renewables against fossil fuels, but to recognize that a transition away from oil, coal, and gas is urgent, while still scrutinizing whether the pathways chosen truly deliver a just and sustainable future.

[Suggested graph, page 5

https://desapublications.un.org/sites/default/files/publications/2025-01/WESP%202025_Harnessing%20the%20Potential%20of%20Critical%20Minerals%20for%20Sustainable%20Development_WEB.pdf]

Mining, the process of extracting minerals from the earth, is, by definition, an extractive industry that can pose a threat to the environment and nearby communities. If not managed carefully, mineral extraction for the energy transition could contribute to biodiversity loss. If the increased demand for just five of the minerals needed for the energy transition (copper, nickel, lithium, cobalt and graphite) were to be met by new mines, [the world would need](#) between 145 and 245 additional mines by 2030.

Approximately [7%](#) of all critical mineral mines, 980 out of 14,024, are located within key biodiversity areas, sites identified as the most important places in the world for species and their habitats. Copper accounts for the majority of mines that overlap with key biodiversity areas. [Almost half](#) of these overlaps are in Central and South America.

[Suggested map page 12

https://files.worldwildlife.org/wwfcmprod/files/Publication/file/2252zt9wej_Critical_Minerals_Report_FINAL_May_2025_1_.pdf]

"The appetite for critical minerals is pushing the extraction frontier into key biodiversity areas. It makes no sense to change Europe's energy mix to have electric cars if, at the same time, we are cutting down forests and destroying ecosystems in Latin America," said Ana Carolina Rodríguez, senior programme director at the Natural Resource Governance Institute (NRGI).

Critical minerals are geographically concentrated in a few regions, with Latin America being particularly important. Chile, Argentina, Peru, Bolivia and Brazil, among other countries, are of great relevance [due to their reserves and current levels of](#) mineral [production](#). Chile and Peru

account [for around 40%](#) of global copper production, while Chile, Argentina and Brazil account [for around 37%](#) of global lithium production. The region also has significant potential for the production of graphite, nickel, manganese and rare earths, among other minerals.

In brief, this tipsheet is designed to help energy, environment, and climate reporters sharpen their coverage of critical minerals in Latin America. It highlights the main trends shaping the sector, suggests concrete story angles, and provides practical reporting tips to navigate its political, social, and ecological dimensions. Journalists will also find curated sources of data, expert voices, and tools to investigate the supply chains that link local extraction with global clean energy demand. The goal is to equip reporters with the context and resources they need to tell deeper, more nuanced stories — ones that capture both the opportunities of the energy transition and the risks of repeating old extractive patterns.

Biodiversity in Latin America

Latin America has an extraordinary diversity of ecosystems and unique biological wealth. For journalists covering mining, this biodiversity is not just context — it is what's at stake. Framing stories in ways that connect mineral extraction to the loss of species, forests, or water supplies can help audiences grasp why conservation matters and how it relates to their own lives. The region's territory spans arid deserts, where rainfall is almost non-existent, to lush forests with the highest rainfall on the planet, as well as extensive grasslands, savannahs and vast wetlands. It also hosts [a large share](#) of the world's known species: 33% of mammals, 35% of reptiles, 41% of birds and 50% of amphibians.

Six countries in the region—Brazil, Colombia, Ecuador, Mexico, Peru, and Venezuela—are [megadiverse](#). In addition, the region has seven of the 36 biodiversity hotspots identified worldwide, including the Tropical Andes, the Atlantic Forest, and the Cerrado. The [marine ecosystems](#) of Latin America and the Caribbean also have great biological diversity. The region has 47 of the world's 258 marine ecoregions, more than any other region, and a marine area of 16 million square kilometres.

"Compared to other regions, South America is a biodiversity superpower. Its geographical configuration, with the Andes mountain range and the Amazon, creates highly diverse biomes and habitats. This diversity has allowed not only the evolution of thousands of species, but also the development of crops that are now central to global food production, such as potatoes, quinoa, corn and cocoa," said Gabriel Quijandría, regional director for South America at the International Union for Conservation of Nature (IUCN).

[Suggested image <https://commons.wikimedia.org/wiki/File:Amazonia.jpg>]

In Latin America, forests cover [47%](#) of the total land area. The region is home to 57% of the world's primary forests, considered the most valuable for biodiversity conservation. Among them is the Amazon, which contains the world's largest tropical rainforest and is part of the Amazon River basin, the longest and most voluminous river on the planet. This region is home to one in five species of mammals, fish, birds and trees worldwide. Other important ecosystems include the forests of the Chocó biogeographic region and the Andean-Amazonian forests.

[Grasslands and prairies](#) also play an important role in the region. The pastures of the Río de la Plata cover [nearly 750,000](#) square [kilometres](#), including the pampas of Argentina, Brazil and Uruguay. The Brazilian Cerrado, the largest savannah in South America, is also recognised as the most biodiverse in the world. The Andes, the longest mountain range on the planet, stretches over more than 2.5 million square kilometres and generates a wide range of habitats, such as the páramo and puna systems from Venezuela to Peru.

Latin America is facing a serious biodiversity crisis, as the average population size of more than 1,000 species of wild fauna and flora has plummeted by 95% in just 50 years. The region has experienced the fastest rate of wildlife decline in the world during this period, exceeding the global average of 73%. Some of the most notable are the vaquita (*Phocoena sinus*), the world's smallest and most endangered porpoise, and the jaguar (*Panthera onca*) of South America, the largest wild cat in the Western Hemisphere.

[Suggested image

https://commons.wikimedia.org/wiki/File:Panthera_onca_palustris_%281%29.JPG]

"Latin America is the most biologically diverse region in the world per square kilometre, something that is particularly evident in the Amazon but also in other valuable ecosystems such as the Pantanal and the Chaco. However, the populations of various species are in sharp decline. The region is also very rich in water, but both resources are being depleted by human activity and climate change," said Manuel Rodríguez Becerra, former Colombian Minister of the Environment.

Ana María Hernández, former president of the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), agrees: "Latin America makes a difference globally in terms of biodiversity richness, but that means we have a great responsibility to conserve it and use it sustainably. Our countries are developing and depend on more intensive exploitation of natural resources than other parts of the world."

Beyond counts of species and ecosystems in crisis, biodiversity is a foundational economic asset. Globally, [more than half of all GDP](#)—or roughly \$44 trillion—is moderately or highly dependent on nature and the ecosystem services it delivers, such as pollination, water

purification, and climate regulation. If ecosystem services were to collapse, global GDP would fall as much as 2.3% annually by 2030 – a figure that would reach 3.3% in Latin America and the Caribbean. In the region, sectors like agriculture, forestry, fishing, and tourism—intimately tied to healthy ecosystems—currently employ around 17% of the regional workforce and contribute approximately 15% of its GDP.

Incorporating these figures into your reporting can make the trade-offs more tangible: how do the immediate financial gains from mineral extraction compare with the long-term social, environmental, and economic value of preserving biodiversity?

Impacts on biodiversity

Historically, mining has accounted for between 13% and 19% of foreign direct investment in Latin America. While the sector has potential for expansion in the context of critical minerals, it also carries a high risk of impacts on biodiversity and local communities. The region has experienced a number of mining disasters that illustrate these risks. In Mexico, the 2014 sulphuric acid spill into the Sonora River contaminated 40 kilometers of waterways, affecting drinking water supplies, aquatic life, and agriculture.

More recently, in 2019, the Brumadinho tailings dam collapse in Minas Gerais, Brazil, killed over 270 people and buried homes, farmland, and parts of the surrounding environment under a torrent of toxic sludge. The dam, owned by mining giant Vale, released nearly 12 million cubic meters of mining waste into the Paraopeba River, contaminating over 300 kilometers of waterways with heavy metals and industrial residues. Communities downstream lost access to clean water and fisheries, while wildlife habitats were devastated, with long-term impacts still being documented. Beyond the human and ecological tragedy, the disaster exposed systemic weaknesses in dam safety regulation and corporate accountability in Brazil's mining sector. It also reignited debates about the risks of tailings dams globally, since thousands of similar structures exist in Latin America, many in vulnerable ecosystems.

[Suggested graph page 14

https://wedocs.unep.org/bitstream/handle/20.500.11822/46623/critical_transitions.pdf?sequence=3&isAllowed=y]

"Mineral reserves in Latin America overlap with territories of extremely high biodiversity value and with lands of Indigenous peoples who depend directly on these ecosystems for their livelihoods. Mining expansion not only threatens species and habitats, but also increases socio-environmental conflict and threats against environmental defenders," said Yenny

Rodríguez, senior lawyer with the Ecosystems Programme of the Interamerican Association for Environmental Defence (AIDA).

Building a mine and the associated infrastructure can have serious effects on habitats. [Up to a third](#) of the world's forest ecosystems are affected by mining activities. Large-scale excavation removes vegetation, alters soil structure, and can permanently transform landscapes. Roads, railways, and pipelines built to serve mines fragment habitats, disrupt migration corridors, and create barriers for wildlife. Noise, light, and dust pollution from mining operations further stress local fauna and flora, altering breeding, feeding, and nesting patterns. Mining can also exacerbate soil erosion, degrade land, and increase vulnerability to landslides and flooding.

Mining waste poses another major threat to biodiversity. Tailings and waste rock contain toxic substances such as heavy metals, acids, and chemical reagents used in mineral processing. Improper storage behind dams or in open piles can leach contaminants into soil and waterways, harming aquatic life and terrestrial ecosystems. [Six of the twelve](#) incidents related to mining waste recorded during 2018–19 occurred in Latin America and the Caribbean. In Chile, an [OECD investigation](#) documented contamination of soil, surface water, and groundwater from mining residues, highlighting the lasting environmental risks of inadequate waste management.

Water resources are particularly affected in regions of mining activity. Mining requires substantial water for mineral processing, dust control, and machinery cooling, yet many projects are located [in areas of water scarcity](#) or high water stress—such as parts of Chile, Mexico, and Peru—or in regions with critical water sources, including glaciers in the Andes and rivers in the Amazon. [Sixteen percent](#) of critical mineral mines and deposits are located in regions of high water stress. The depletion or contamination of water resources threatens both ecosystems and the communities that rely on them, while climate change may further exacerbate these pressures.

Chemical pollution is another major concern. Mercury, cyanide, and other reagents used in mineral extraction can enter rivers and wetlands, contaminating soil, groundwater, and food chains. Mercury use is particularly prevalent in illegal gold mining, which is widespread across the Amazon basin. In Peru's Madre de Dios region, illegal mining [has destroyed nearly 980 km²](#) of rainforest since 1985, and mercury contamination has caused long-term health risks for both wildlife and human populations.

Finally, mining can directly and indirectly drive the loss of species and ecosystem services. Habitat destruction, pollution, altered hydrology, and invasive species introduced through mining-related infrastructure all contribute to declines in biodiversity. Studies show that mining activities in tropical regions disproportionately affect species-rich areas, including endangered and endemic species, with cascading effects on ecosystem resilience and the livelihoods of communities dependent on natural resources.

[Suggested graph <https://www.wri.org/insights/critical-minerals-mining-water-impacts>]

Case studies that illustrate this biodiversity impact include illegal gold mining in the Amazon Basin, affecting areas such as the [Tapajós River](#), the [Mirador Copper mine](#) in Ecuador and the destruction of archaeological sites and the impacts of acid drainage, and the illegal gold mining in the [Atrato River in Colombia](#) and its pollution impacts.

Journalists covering mining for critical minerals should be aware that coverage of gold, copper, or lithium mining often differs in tone and framing. While fossil fuel or “traditional” mining is frequently depicted as environmentally harmful, critical minerals for renewable energy are sometimes framed as necessary and inherently “good” for climate goals. This framing can obscure the social and ecological costs in producing these minerals.

Tips for addressing inherent biases and gaps in reporting include: integrate voices of affected communities, scientists and environmental defenders to provide a balanced picture of risks and benefits; analyze trade-offs between climate goals and biodiversity protection; highlight issues of equity and environmental justice; and consider who benefits from mining and renewable energy expansion.

Minerals in focus

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https://desapublications.un.org/sites/default/files/publications/2025-01/WESP%202025_Harnessing%20the%20Potential%20of%20Critical%20Minerals%20for%20Sustainable%20Development_WEB.pdf (page 5) / Or

https://wedocs.unep.org/bitstream/handle/20.500.11822/46623/critical_transitions.pdf?sequence=3&isAllowed=y (page 7)]

Lithium extraction for battery production has increased rapidly in the last decade due to demand from electric vehicles and battery storage technology. Global production is concentrated in a few countries and can be extracted from salt flats or rocks. The so-called Lithium Triangle in South America, a region that includes Chile, Bolivia and Argentina, is estimated to hold [57%](#) of the world's lithium resources. The triangle is located in salt flats with an extremely arid climate and water scarcity and is home to critical areas for biodiversity in the context of mining expansion.

[Suggested graph page 46

<https://iea.blob.core.windows.net/assets/7771525c-856f-45ef-911d-43137025aac3/SustainableandResponsibleCriticalMineralSupplyChains.pdf>]

In Latin America's salt flats, miners pump brine into large pools on the surface, where the water evaporates, leaving behind lithium carbonate. To obtain one tonne, [nearly two million litres](#) of non-potable salt water are pumped and evaporated. Although the salt water is not suitable for human consumption or agriculture, studies have found that extraction in large quantities can cause fresh water to flow into saline aquifers, which can lead to water [salinisation](#). In Chile, the Salar de Atacama [is sinking](#) between one and two centimetres per year due to brine extraction, while in Argentina, lithium extraction [has dried up a river](#).

Researchers and companies are actively exploring alternatives to lithium-ion batteries to address environmental and supply chain concerns. [Sodium-ion batteries](#) use abundant sodium, offering safety benefits and cost-effectiveness. However, they currently have lower energy density compared to lithium-ion batteries. [Magnesium and aluminum batteries](#) and solid-state batteries are being researched as well, offering advantages in cost and safety. While these technologies show promise, they are not yet commercially viable at scale.

National strategies in the region also aim to reduce environmental impact: Argentina's state energy company [YPF and XtraLit](#) are piloting Direct Lithium Extraction technologies to minimize water use, [Chile is shifting](#) toward state-involved lithium projects with stricter sustainability standards, and Mexico has launched [the "Litio 2040" initiative](#) to balance resource development with environmental protection and community engagement.

"Mining is now presented as a tool to tackle the climate crisis, but this narrative often serves to justify deregulation and accelerated investment. In the case of lithium, there is no strategic environmental planning: exploitation is moving forward wherever there is investor interest, without assessing the sensitivity of ecosystems or water stress. This reproduces an extractive model that prioritises the market over biodiversity," said Pia Marchegiani, deputy director of the Environment and Natural Resources Foundation (FARN).

Journalists covering these minerals can draw on investigative and accountability reporting to strengthen their work. Notable stories include Centro Latinoamericano de Investigación Periodística (CLIP) coverage of lithium mining [in Argentina's rivers](#), NRDC's reporting on impacts to [Chilean indigenous communities](#), and [analysis of European company accountability](#) in Latin American lithium extraction.

By connecting environmental consequences to local communities, exploring alternative materials, and referencing national sustainability plans, journalists can highlight both the risks

and solutions associated with the energy transition in Latin America. This approach allows audiences to understand the trade-offs between meeting global clean energy demand and protecting water, biodiversity, and ecosystems in critical mining regions.

[Suggested image

https://es.wikipedia.org/wiki/Miner%C3%ADa_en_Chile#/media/Archivo:Chuquicamata-002_02.jpg]

Like lithium, copper also plays a central role in the energy transition, as it is needed to expand electricity grids and transmission lines that carry renewable energy to urban centres. Current mines and projects under development [are not sufficient](#) to meet growing demand. Chile and Peru produce 40% of the world's copper and have large untapped resources. Copper is typically extracted through open-pit mining, which can cause many of the environmental impacts common to mining processes. [These include](#) water and soil contamination from waste, intensive water use and habitat disruption.

"In Peru, open-pit copper mining involves removing huge volumes of earth that become 'dead soil' incapable of absorbing CO₂ or performing ecological functions. Tailings deposits are gigantic, and when not well constructed, they cause seepage or overflow that contaminates rivers and soil. We have around 7,000 mining environmental liabilities, and most of them have not been properly remediated: planting grass on the land does not solve water pollution," said Raquel Neyra, a researcher on socio-environmental conflicts.

Rare earths are a group of 17 chemical elements considered essential for the energy transition. To achieve carbon neutrality, their extraction should increase [tenfold](#) by 2030. Rare earths can generate [large amounts of waste](#) because they are found in low concentrations, meaning that large quantities of minerals must be processed. In addition, they are often mixed together, requiring energy and materials to separate them. Chile and Brazil are promoting the first projects in Latin America, which [are being questioned](#) by the communities where the projects would be developed due to their potential impacts.

Cobalt is a [key component](#) in lithium-ion batteries, used to stabilize energy density and extend battery life for electric vehicles and renewable energy storage. While production is concentrated in the Democratic Republic of Congo, Latin America also holds significant reserves, especially in Cuba. Extraction is linked to [environmental and social impacts](#), including soil and water contamination from mining waste, and heavy metal exposure that threatens ecosystems and communities. In many contexts, cobalt mining has also raised human rights concerns.

Nickel is essential for producing high-energy-density batteries, especially nickel-cobalt-manganese (NCM) batteries, which are critical for electric vehicles and large-scale

renewable energy storage. Latin America has growing nickel reserves, [with Brazil](#) emerging as a key supplier. [Nickel mining](#), often through open-pit operations, can lead to deforestation, heavy metal pollution, and acid mine drainage that degrades water systems. Smelting nickel ore also generates significant greenhouse gas emissions.

Key areas for coverage

The expansion of critical mineral projects in Latin America and their impact on biodiversity requires detailed coverage by journalists, who should pay close attention to the discourse of governments and companies, as well as warning signs from experts and communities in the region. Below are a number of key points to consider when researching and reporting on this issue.

-Environmental impact studies

Environmental impact studies should be a fundamental guarantee for the development of a critical minerals project in Latin America, as they assess potential damage and describe measures to prevent, reduce or mitigate it. However, in practice, they often have significant shortcomings. That is why journalists should consider analysing the documents.

Companies may limit the geographical scope of the assessment to the immediate impact of the project, ignoring broader impacts on the ecosystem, such as groundwater contamination or the alteration of migratory species. In addition, assessments often fail to take into account the combined effects of projects in the same river basin. In biodiversity hotspots, cumulative damage can be severe.

"Cumulative and synergistic environmental impact studies are strategic for defending territories, especially if there are many projects. The main shortcoming is the lack of hydrogeological studies; they are not carried out before the project," said Yenny Rodríguez.

Some studies are based on old biodiversity studies or conduct fieldwork over a limited period of time, which prevents the detection of key species or seasonal ecological patterns. In addition, consultants paid by the company conducting the study may be pressured to present favourable

conclusions. We must be alert to the repeated use of the same companies in several controversial projects.

In some countries, studies are not easily accessible, are published only in technical language, or are released too close to the deadline for the public to review them meaningfully.

It is advisable to compare studies with independent scientific studies or NGO monitoring reports. Journalists can ask specialists to review the methodology and quality of the data. Looking for discrepancies between the company's claims and the reality on the ground observed by local communities can be a good starting point.

"The current problem with mining is the scale of the projects: they are getting bigger and bigger, with the potential to affect entire watersheds and transform the landscape at the regional level. In several countries, there is a lag in the capacity of environmental authorities to manage this type of operation. Land-use planning is weak and there is no regulatory framework to ensure that ecosystems maintain their capacity to provide services," said Gabriel Quijandría.

[A study](#) by the University of Chile revealed that lithium brine extraction is causing the Atacama salt flat to sink by 1 to 2 centimeters annually, a clear sign of the stress that intensive pumping places on fragile desert ecosystems. To extract lithium, companies pump vast amounts of brine from underground aquifers into evaporation ponds. However, the rate of extraction far outpaces the natural recharge of these aquifers, leading to a long-term depletion of water reserves. Scientists warn that this process not only lowers the salt flat's surface but also alters the permeability of soils, disrupting the delicate balance that sustains wetlands, lagoons, and unique biodiversity, including flamingos that rely on these habitats. The Atacama case underscores the need for environmental impact assessments that go beyond short-term project viability, factoring in cumulative effects, irreversible ecological shifts, and the complex hydrological interconnections that underpin ecosystems in arid regions.

-Prior consultation with communities

Under international law, including International Labour Organisation Convention 169, Indigenous communities have the right to free, prior and informed consent before projects affecting their lands or resources are approved. However, in practice, consultations take place after key

decisions have been made, with companies or governments presenting projects as something already decided.

Communities often receive incomplete or overly technical information, often in a language they do not understand. Companies may seek to negotiate with individual community members or leaders rather than with the community as a whole, sowing division. In some cases, community members report intimidation, surveillance or even violence related to their opposition to projects in the territories where they live.

For example, in Espinar, Peru, [the Tintaya copper mine](#) has been at the center of community protests due to inadequate consultation processes. The local population, particularly Indigenous communities, reported health issues and environmental degradation linked to mining activities. These events highlight the necessity for genuine free, prior, and informed consent in mining projects.

It is advisable to speak directly with several community members, including women, young people and elders, not just with official representatives of companies or governments. Verify whether consent requirements have been respected and review official records of consultations. Be wary of testimonials provided by companies that appear scripted or overly uniform.

-Traceability and corporate responsibility

With the growing demand for "responsibly sourced" minerals, companies are increasingly making claims about traceability and ethical supply chains. However, minerals can pass through multiple intermediaries before reaching end users, making traceability difficult. In addition, many traceability systems are industry-driven and lack enforcement mechanisms.

Journalist Fabian Federl [emphasizes the challenges](#) in tracing the origins of minerals. He notes that even when companies claim responsible sourcing, the complexity of supply chains often obscures the true environmental and social impacts. Federl's investigations have highlighted how minerals can pass through numerous intermediaries before reaching end users, making traceability difficult and often unreliable.

Electric vehicle and battery manufacturers may not have full visibility into environmental conditions at the mine, even if they market their products as sustainable. Furthermore, communities harmed by mining often lack clear avenues for bringing claims to subsequent buyers or investors, who can be difficult to identify.

"In the new critical minerals boom, two conflicting trends coexist: greater demand for regulation driven by consumer countries and internal deregulation to facilitate investment. In Argentina, for example, lithium has attracted a flood of projects due to the opening up of investment, but without a strategic environmental framework that prioritises more fragile ecosystems or those under greater water stress," said Pia Marchegiani.

Ownership structures add another layer of opacity. Many mining projects in LAC are controlled by foreign companies—often through local subsidiaries that hold licenses and permits. This can allow corporations to benefit from regulatory loopholes, while channeling profits abroad. It is therefore worth tracing not only where minerals go, but also who ultimately owns and finances the companies involved. Following the ownership trail can reveal whether profits remain in the region or are extracted by international corporations.

In response, it is advisable to investigate the supply chain beyond the mine. Identify the main buyers, investors and financiers of the project. Check whether companies are part of international initiatives such as the Initiative for Responsible Mining Assurance (IRMA) or the Global Battery Alliance, and whether these affiliations translate into tangible practices. Track export data to see where the minerals are going.

There are also some efforts on the works worth checking out. [Minsur, a Peruvian mining company, partnered with Minespider](#) to implement full traceability for its San Rafael tin mine. This initiative, utilizing digital product passports, allows consumers to verify that the tin used in their products comes from a responsible source. Such efforts demonstrate the potential for transparency in mineral supply chains

-Permits and governance

Even the strictest environmental laws can be undermined by weak governance. Common problems include classifying mining projects as “strategic” or “in the national interest” to bypass environmental review processes, and a lack of follow-up inspections once projects are approved.

Environmental agencies may lack the resources, political backing or independence to enforce conditions associated with the processes. In areas of high biodiversity, mining concessions may overlap with protected areas due to inconsistent land use laws. In addition, the relationship between government and mining companies can limit oversight.

For example, the Inter-American Court of Human Rights [ruled that Guatemala](#) violated Indigenous rights by allowing a large nickel mine on tribal land without proper consultation. This landmark decision emphasizes the need for robust governance and adherence to environmental and social standards in mining permits.

Journalists can request copies of permits, licences and inspection reports. It is also advisable to compare the permit granting process with legal requirements and deadlines, and to interview former mining regulators and environmental organisations about political pressures and shortcomings in the enforcement of environmental standards.

Useful resources

To produce a solid article on critical minerals in Latin America, it is not enough to attend press conferences or read company or government press releases. To dig deeper, you need to turn to a variety of sources: regional non-governmental organisations and community organisations with first-hand knowledge, scientists who can interpret technical data, Indigenous leaders who can offer informed perspectives on territorial and cultural impacts, and databases that help verify companies' claims.

Civil society groups in Latin America often monitor mining projects at the local level, documenting environmental damage, legal battles, and community opposition. Many of them also have archives of reports and maps that journalists can draw on. These include [FARN](#), [AIDA](#), [NRGI](#), [Fundación Solón](#) (Bolivia), [Observatorio de Conflictos Mineros de América Latina](#) (OCMAL), [Coordinadora Andina de Organizaciones Indígenas](#) (CAOI) and [Instituto Socioambiental](#) (Brazil).

Having independent scientists review environmental impact assessments or explain environmental consequences can greatly strengthen articles. These include experts from universities in mining, environmental governance or ecology, such as the Autonomous University of Mexico, the Pontifical Catholic University of Peru and the University of Chile. It is particularly advisable to contact hydrologists and ecotoxicologists, who can analyse data on water use and contamination by mining. The Society of Environmental Toxicology and Chemistry ([SETAC](#)), with a regional branch dedicated to Latin America, and the [Latin American Network for Scientific Culture](#) are good places to start.

Reliable data can help decipher and counter corporate discourse. Some useful sources include: [the](#) IUCN Red List of Threatened Species, invaluable for verifying whether a mining site overlaps with habitats of endangered species; [Global Forest Watch](#) for tracking deforestation related to mining infrastructure; national mining registers, i.e. official maps of concessions; and the Extractive Industries Resource Monitoring (EIRM) network, which monitors the activities of 100 companies in 20 countries. and the Extractive Industries Transparency Initiative ([EITI](#)), which publishes financial and licensing data at the project level.

It is always advisable to verify information and compare it, as no source is completely comprehensive or impartial. In addition, checking publication dates is useful, as mining projects evolve rapidly and data from two years ago may already be out of date. Some government websites or NGO reports may be taken offline, so saving files as PDFs is good practice.

Ideas for articles

Covering critical minerals in Latin America is not just about tracking commodity prices or project announcements. It is about telling stories that reveal the human, environmental and governance dynamics shaping the future of biodiversity and communities in the region. Below are some article angles and case study ideas that can help uncover little-known aspects of this rapidly evolving sector.

-Communities resisting mining in biodiversity-rich areas

Some of the most compelling stories emerge from the field, where local communities, often Indigenous or rural, defend their territories against mining projects in ecologically sensitive

areas. These cases can shed light not only on environmental risks, but also on issues related to rights, governance and power.

Possible angles include profiling a community that has succeeded in stopping or delaying a mining project, exploring the strategies it used (such as legal resources, international advocacy, alliances with scientists); investigating how biodiversity conservation intersects with cultural survival, especially when mining threatens traditional livelihoods linked to forests, rivers or wetlands; and comparing community resistance movements in different countries.

Some examples of regions to explore are the [salt flats of Argentina, Bolivia, and Chile](#), where lithium mining threatens fragile wetlands and [endemic flamingo populations](#); the páramo ecosystems of Colombia and Ecuador, high-altitude wetlands that provide water to millions of people; but are subject to mining exploration, and the Amazon, where biodiversity loss is exacerbated [by road construction linked to mining](#).

-Research on mining regulations

Laws often appear stricter on paper than in practice. Many Latin American countries have environmental regulations that require impact assessments, monitoring, and penalties for violations, but these provisions are often undermined by political pressure, resource constraints, or corruption.

Possible angles include analysing inspection records to see how often environmental authorities visit mines and what the most common violations are; tracking fines imposed on mining companies and whether they are actually paid; investigating whether environmental mitigation measures promised in permits have ever been implemented; documenting cases where regulators ignored community complaints or failed to respond to documented harms.

Journalists can monitor the conditions of government permits with satellite images showing deforestation or water pollution, examine the budget allocations of environmental oversight agencies to assess whether they have the necessary resources, and look for patterns in political appointments: are former mining executives heading up environment ministries?

-Cross-border impacts

Ecosystems and watersheds do not respect political boundaries. Mining projects in one country can have consequences in another, creating opportunities for stories that go beyond national narratives and analyse shared ecological systems.

Possible angles include analysing the effects of lithium brine extraction in northern Chile on water availability across the border in Argentina and Bolivia; monitoring the impacts on animals such as flamingos, which migrate seasonally across several countries; heavy metal pollution from mines flowing from upstream into transboundary rivers; and conflicts over groundwater resources in transboundary mining regions.

Some examples of regions are the Pilcomayo River basin (Bolivia, Paraguay, Argentina), affected by upstream mining pollution; and the Amazon basin, where road and rail infrastructure for mining may open up remote areas to logging. To this end, collaboration with journalists from neighbouring countries can expand access to sources, data and observations on the ground.

-Corporate commitments

As pressure mounts for "responsible sourcing" of critical minerals, mining companies, especially those linked to the electric vehicle and renewable energy supply chains, are increasingly promoting themselves as sustainable and socially responsible. This is fertile ground for articles.

Possible angles include comparing a company's sustainability reports with independent monitoring data on biodiversity impact; tracking specific promises, such as the installation of renewable energy in mines or the creation of wildlife corridors, to see if they have been fulfilled; investigating whether companies claiming to have "carbon-neutral" operations are using offsets and whether these are credible; analysing participation in certification programmes.

Some potential sources include satellite imagery to verify land use changes, NGO reports documenting environmental violations, and interviews with intermediate buyers (electric vehicle manufacturers, battery manufacturers) about their due diligence.

-Nature-based solutions

The discourse around critical minerals often assumes that their extraction is inevitable to drive the green transition. However, alternatives exist, from reducing demand for virgin minerals through recycling to protecting ecosystems as a solution to climate change.

Possible angles include documenting efforts to restore degraded habitats rather than opening new mines; assessing whether battery recycling initiatives can realistically reduce the need for new mines; highlighting indigenous-led conservation initiatives that protect biodiversity while generating income through ecotourism; investigating whether governments are integrating biodiversity conservation into their national energy transition strategies.

Some examples to explore are community-managed conservation areas in Ecuador's páramos as a counterpoint to mining expansion, urban mining projects (recovery of metals from electronic waste) in Brazil and Chile, and payment for ecosystem services programmes in Costa Rica and Colombia.

Final tips

The rush for critical minerals is transforming landscapes, communities and economies across Latin America. For journalists, the challenge — and opportunity — lies in going beyond the headlines to uncover the whole story: the concessions, the power dynamics and the true environmental and social costs hidden behind the global green transition. By combining field reporting, data analysis and collaborative research, articles can be produced that not only inform, but also hold decision-makers accountable.

-Combining voices on the ground with data

Numbers alone do not move the public, and anecdotes alone can overlook the bigger picture. Combining the two creates a more complete and credible narrative.

Visit communities, ecosystems and project sites whenever possible. Even a brief field visit can reveal details that are not included in official reports. Include Indigenous leaders, local residents, company representatives, scientists and officials. Combine community testimonies about water shortages or species decline with hydrological data or biodiversity studies.

-Use geojournalism tools

Mining projects are often carried out in remote areas where regular monitoring is scarce. Satellite imagery, mapping, and geospatial analysis can help document changes over time.

Some tools include Global Forest Watch (detects deforestation and changes in land cover), RAISG (maps mining concessions, protected areas and indigenous territories in the Amazon) and Google Earth Engine (for more advanced analysis of time series of environmental changes).

These tools allow you to compare images before and after project approval to assess deforestation, map the proximity of concessions to protected areas or critical habitats, and track seasonal changes in wetlands or rivers to assess impacts on water.

If you're new to geojournalism, there are plenty of resources to get started. The Earth Journalism Network (EJN) [offers guides and online courses](#) on using geospatial data in reporting. [The GeoJournalism Handbook](#) provides step-by-step tutorials on mapping and data visualization for environmental stories. Google Earth Engine also offers [tutorials](#) for those looking to do more advanced analysis.

-Track funding sources

Following the money can reveal the underlying factors driving mining expansion and points of influence for accountability.

Key actors to follow include multilateral banks (such as the Inter-American Development Bank (IDB), CAF – Development Bank of Latin America, World Bank Group), Chinese policy banks (China Development Bank, China Export-Import Bank and the private sector) and large global mining companies, commodity traders and investment funds.

Financiers often have their own environmental and social safeguards that companies must comply with. Investors and lenders may be more sensitive to reputational pressure than local

regulators. To this end, project financing databases, documents submitted by companies and loan agreements can be reviewed.

-Collaborate across borders

Many impacts are regional: ecosystems, rivers and species do not stop at national borders. Cross-border collaboration can strengthen your reporting.

The advantages include access to sources and data in multiple jurisdictions, shared security protocols and logistical support, and greater impact through simultaneous publication in several countries. To get started, you can contact research networks such as Connectas, CLIP (Latin American Centre for Investigative Journalism) or the Earth Journalism Network.

-Be aware of the risks

Mining is a politically and economically sensitive issue, and journalists covering it have faced intimidation, harassment and even violence.

Risk factors include remote locations with limited communications, areas with strong business or political interests, and ongoing social conflicts or a militarised presence. It is therefore advisable to carry out a risk assessment before travelling, inform trusted colleagues or editors of your itinerary, and consider working with local guides who are familiar with the context and the actors involved.

For journalists looking for guidance on safety while reporting in high-risk areas, the Committee to Protect Journalists (CPJ) [offers field safety resources and tips](#) on minimizing risks in hostile environments. The International News Safety Institute (INSI) also provides [practical guidance](#) and training for reporters covering politically sensitive or remote locations.

This tipsheet was written by Fermin Koop, an experienced environmental journalist from Argentina. He's a frequent contributor to the Earth Journalism Network (EJN) and the Latin America Managing Editor for Dialogue Earth.