

Earthworks Submission on the UNEA-4 Mineral Resource Governance Resolution

August, 2020

About Earthworks

Earthworks is a nonprofit organization dedicated to protecting communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions. We fulfill our mission by working with communities and grassroots groups to reform government policies, improve corporate practices, influence investment decisions and encourage responsible materials sourcing and consumption. We expose the health, environmental, economic, social and cultural impacts of mining and energy extraction through work informed by sound science.

The current moment

The flux of commodities markets and increase in some mineral demand is fueling a move away from responsible mining standards at a time when mining is getting dirtier and riskier. The mining industry is one of the most polluting, deadly, and destructive industries in the world. Yet to date, mining company responses to the COVID-19 pandemic have received little scrutiny compared to other industries seeking to profit from this crisis. After analyzing hundreds of complaints, articles and statement alongside civil society allies, [Earthworks and our allied organizations have observed four trends in mining company actions during the pandemic:](#)

- a. Mining companies are ignoring the threat of the pandemic and continuing to operate, putting communities and workers at grave risk of infection;
- b. Governments and mining companies are using the pretext of a lockdown to exacerbate violence against defenders and repress community protests, in order to make way for more mining;
- c. Mining companies have been donating money, sanitary supplies and test-kits in an attempt to distract from their track record of harm and portray themselves as public saviours; and
- d. Governments and politicians are securing regulatory changes to eliminate public oversight for existing mines and expedite permits for new operations.

Mineral Resource Governance

Earthworks welcomes this consultation process and broadly agrees with the findings and recommendations regarding mineral resource governance on page 10 of the discussion paper. However, we would like to highlight and expand upon several of the issues raised.

Mineral demand for low carbon technology - challenges and opportunities

The transition to 100 percent renewable energy is necessary to keep global temperature rise below 1.5 degrees and avert the most disastrous impacts of climate change. But the life cycle of these low carbon technologies begins with mining for minerals. Metals mining is one of the world's dirtiest industries, responsible for 10% of anthropogenic greenhouse gas emissions, according to the UN Environment Programme. In the United States, metals mining is the leading industrial polluter of air, land and water. We must dramatically accelerate the transition to clean, renewable energy sources while ensuring that people and the environment are not put at risk through destructive mining.

Best practice mineral resource governance standards

While we agree that there is an overwhelming landscape of standards, initiatives, guidelines and norms, we strongly believe that not all standards are equal, and only a few - in particular, the multi-stakeholder Initiative for Responsible Mining Assurance (IRMA), hold true value. The [IRMA Standard](#) is the most rigorous set of environmental, labor and social targets amongst its peers, and this is largely due to its innovative governance

structure driven by the vision of mining impacted communities, NGOs and labor unions to bring about sector-wide change. IRMA is governed by five bodies, three of which are civil society-based, two of which are made up of industry actors; this unique civil society-led governance structure helps ensure its integrity.

For this reason, we strongly encourage the incorporation of the IRMA Standard for Responsible Mining into a global mineral resource governance framework.

Community consent

While the SDLO points to a need for greater respect for communities impacted by mining, or proposed mining projects, and upholds the right to FPIC, we believe that as tensions, disputes and conflicts between communities and mining companies only continue to grow - a robust right to say no to mining, the right to be meaningfully consulted and provide or deny consent, must be enshrined in future mineral resource governance efforts.

The opportunity for responsible mineral sourcing presented by the transition to low-carbon technology

The clean energy transition is an opportunity to reduce our dependence on dirty mining. We are in the midst of an urgent transition to renewable energy--a transition necessary to avert climate catastrophe. Yet renewable energy and electric vehicle production have a fast-growing mineral footprint. By demanding responsibly-sourced minerals, clean tech companies and new governance frameworks can accelerate the renewable energy transition and push the mining industry to clean up its act. In order to ensure that our clean energy economy is truly clean--as well as just and sustainable--we must develop a shared commitment to responsible mineral sourcing, recycling, substitution and materials efficiency, coupled with a reduction in overall energy and mineral demand.

Deep Sea Mining

As terrestrial ore grades continue to decline, some contractors and states have looked towards deep sea mining as a source of new deposits and revenue streams. Leading experts have said, "deep sea mining would potentially cause severe and irreversible damage to our oceans and marine life and further threaten the global climate."¹ Potential dangers include disruptions of seafloor ecosystems that could release toxic metals and minerals and create plumes of sediment that would affect aquatic life.

The absence of a coherent, effective international policy to safeguard the marine environment, along with scientific uncertainty around impacts, underscore the need for a moratorium on deep sea mining. Governments do not currently have the technical capacity or necessary resources to fully understand the impacts, benefits or serious consequences of mining activity in the seabed. We must exercise the precautionary principle and suspend all deep sea mining activity before irreversible harm has been done. This [moratorium call](#) is supported by more than 80 organizations who are members of the Deep Sea Conservation Coalition, including Earthworks, and is attached here in its full text.

Mineral resource governance must embrace a circular economy

In order to realize truly sustainable minerals resource governance, secondary minerals sourcing must be actively promoted as a means of reducing demand for primary minerals and metals. This is particularly true

¹ Eidgenössische Technische Hochschule Zürich, Prof. Gretchen L. Früh-Green, 2019. [Statement of concern from the international scientific community](#).

with regards to what are often referred to as “critical minerals”.

There is significant untapped potential to reuse and recycle minerals from batteries and other technologies that have reached the end of their useful life, substitute for other more abundant minerals, and seek ways to reduce overall demand by changing the transportation and energy mix. The renewable energy transition gives clean tech companies the opportunity to demand we explore recycling and reuse options first, before considering any new mines. Over the next decade, huge numbers of batteries, solar arrays and other clean energy infrastructure will begin hitting the waste stream. Now is the time to invest in recycling and reuse systems to deal with it.

We cannot realize our sustainable minerals vision unless manufacturers of electric vehicles, renewable energy (RE) and battery technologies dramatically scale up their use of recycled minerals. Policymakers must create incentives for minerals recycling and requirements for companies to take back their products at the end of their useful lives. R&D innovators must design batteries and RE technologies for disassembly and efficient recycling of all the minerals they contain.

Tailings Management

As tailings facilities fail with increased frequency and severity across the globe, it has become apparent that neither current industry practices nor current regulations and standards have led to significantly improved tailings management systems that protect people, ecosystems and livelihoods from catastrophic failures.

In June 2020, over 150 scientists, community organizations and NGOs from 24 countries published “[Safety First: Guidelines for Responsible Mine Tailings Management](#),” a set of 16 guidelines for the safer storage of mine waste. Earthworks was one of the lead authors on this report, and while the entirety of the *Safety First* guidelines (attached as part of this submission) speaks to the questions posed in this consultation process, we would like to highlight the following **seven** areas in direct response to specific questions.

1. Safety First

The *Safety First Guidelines* affirm the first recommendation made in *Safety Is No Accident: A UNEP Rapid Response Assessment* stating, “the ultimate goal of tailings management must be zero harm to people and the environment and zero tolerance for human fatalities...Operating companies must commit to and document that they have made safety the primary consideration in tailings facilities and dam design, construction, operation, closure and post-closure” (p.11). This means tailings management must move away from risky practices and towards embracing Best Available Technology (BAT).

2. Best Available Technology

According to the Mount Polley Independent Expert Engineering Investigation and Review Panel, “The goal of BAT for tailings management is to assure physical stability of the tailings deposit.”² Reducing the water content in tailings reduces the probability and consequences of tailings failures. Filtered tailings have the lowest water content of the common tailings storage techniques and therefore the lowest probability and consequence of failure. Additionally, BAT includes reducing the amount of tailings stored above ground as much as possible.

² Independent Expert Engineering Investigation and Review Panel, 2015. [Report on Mount Polley Tailings Storage Facility Breach](#). 121p.

However, even though technology to dewater and filter tailings has been available for decades, filtered tailing storage is one of the least common storage methods (only 13 dry stack facilities were constructed in the last decade) according to data from 727 companies surveyed by investors in 2019.³ As one expert points out in an analysis of innovative tailings management technologies, “A fundamental barrier to the implementation of innovative tailings management at those sites that would benefit from these technologies is people’s resistance to change, which is often disguised as unsubstantiated claims about perceived high costs, technical obstacles and uncertainty.”⁴ Voluntary regulation from the mining industry alone is not enough to ensure BAT is actually put into practice. Policymakers and regulators should move towards mandating the use of BAT in order to reduce risks associated with catastrophic mine failures.

3. Safe Closure

The *Safety First Guidelines* state that “Tailings facilities must be reviewed, inspected, monitored, and maintained until they reach a permanent state where the potential for failure is essentially impossible”(p. 19). This means that a tailings facility must be monitored and maintained until it is able to withstand the Probable Maximum Flood and Maximum Credible Earthquake for its specific location. Policymakers must require mining companies to maintain and monitor a site until they are able to prove the site is safe.

4. Financial Assurance and Insurance

Mining companies must not be allowed to walk away from tailings facilities once operations are over until they are able to prove those facilities don’t pose an ongoing threat to communities and ecosystems. Governments must not be left holding the bill for closed or abandoned mine sites. This can be achieved by ensuring mining companies have the necessary financial assurance to cover the full cost of closure and post-closure plans. It must be independently guaranteed, reliable, and readily liquid and undergo review by third-party analysts at least every three years or when there is a significant change to the mine plan (p. 24).

Additionally, mining companies must be able to adequately respond to both chronic and acute tailings releases. To do this companies must acquire appropriate public liability insurance. The *Safety First Guidelines* stipulate that, “the amount must be sufficient to financially compensate for harm to people, property, and natural resources that may occur, on or off the mine, including after closure of the tailings facility. The insurance must remain in force for as long as the operating company, or any successor, has legal responsibility for the property”(p. 24). Companies must not be allowed to self-insure, self-bond or use corporate guarantees to meet insurance and financial assurance requirements. Policymakers and regulators must require appropriate financial assurance and insurance.

5. There must be international oversight of tailings facilities

In their conclusion, the *Safety First Guidelines* call for the creation of an independent, multi-stakeholder agency to provide accurate publicly available information on tailings management worldwide. The guidelines state, “It is crucial that United Nations agencies and international partners, including States, industry, labor representatives, civil society organizations, and independent experts, establish or endorse a credible, transparent, and independent international agency capable of certifying safe tailings facilities. This must be a well-resourced agency capable of efficiently updating global standards, certifying their implementation, investigating failures and making publicly available recommendations. This agency must not rely solely on industry experts, must include broad State or civil society engagement and must be accountable to the public

³ Franks, Daniel et al, 2020. “Chapter VII: Lessons from Tailings Facility Data Disclosures” in [Toward Zero Harm-A Compendium of Papers Prepared for the Global Tailings Review](#). 103p.

⁴ Williams, David John, 2020. “Chapter VI: The Role of Technology and Innovation in Improving Tailings Management” in [Toward Zero Harm-A Compendium of Papers Prepared for the Global Tailings Review](#). 81p.

and affected communities”(p. 26). This agency should be tasked with oversight of active and closed facilities, as well as working with governments and industry to address the thousands of abandoned tailings dams throughout the world. It should be a resource that is able to support governments lacking the technical expertise to adequately oversee tailings facilities.

6. Reducing tailings must be at the center of change

The *Safety First Guidelines* acknowledge that the safest tailings facility is the one that isn't built. Mining companies must be designing operations that reduce the amount of tailings they produce as much as possible. Investment and research into recycling and repurposing tailings should be a priority supported by industry, regulators and international oversight agencies. Additionally, as we move towards a green transition, we must think beyond the traditional resource extraction model and, as noted in our submission above, there is significant untapped potential to reuse and recycle minerals.

7. It is time to ban aqueous tailings dumping

Finally, each year, mining companies dump over 220 million tonnes of tailings, or hazardous mine waste directly into oceans, rivers and lakes. This puts communities, fisheries and ecosystems at risk and has repeatedly proven to devastate the environment. While new projects that would dispose of tailings directly into rivers and lakes are increasingly uncommon, the practice of ocean tailings dumping is growing as companies and governments seek cheap alternatives or terrain that cannot safely support land-based tailings facilities.

Ocean and marine habitats are of critical importance in order to mitigate the impacts of climate change and provide sustainable livelihoods and food sources to families and communities around the world. The ocean is also facing major stress factors as a result of climate change, causing warmer water, threats to biodiversity, acidification, less ice near the poles and the spreading of invasive species. Given this situation it is necessary to remove other negative impacts, including the disposal of mine waste.

Academic research and recent fieldwork by a team of international experts at the Ramu mine ocean tailings facility (Papua New Guinea) points to significant problems with deep sea tailings disposal.⁵ In particular, the industry-driven practice of placing outfall pipes near marine canyons and therefore achieving 'deep' disposal of mine waste is ineffective in preventing contamination from suspended particles due to upwelling, and damages to critical ecosystems. Marine canyons are biodiversity hotspots that provide essential habitat and food webs for fish, sharks and mammals, including commercially important species. In short, mine waste dumping in the ocean is irresponsible and outdated. The ocean is not a sacrifice zone.

Conclusions

As the world embraces the technologies necessary to move us toward a low-carbon future, mineral governance is critically important in ensuring that this transition occurs in a sustainable, just and equitable manner. Risky and destructive mining practices must be replaced by more responsible ones that greatly reduce the ecological and human footprint of mining. This shift to improved practices, accountability and innovations must be accelerated, and must not come at the expense of community rights, ecosystems and sustainability. The United Nations Environment Assembly has an important role to play in shaping how we take this step forward and we hope that our comments will be taken into account in this vital process.

⁵ Lindsay L. Vare & al, 2018. [Scientific Considerations for the Assessment and Management of Mine Tailings Disposal in the Deep Sea](#). *Frontiers in Marine Science*