



RAW DEAL

Does the new EU development model mean more of the same destructive mining?

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About ICT and the mining-related work of CEE Bankwatch Network

CEE Bankwatch Network has been monitoring mining projects in Europe and abroad for years. Bankwatch cooperates with the Make ICT Fair consortium, which seeks to reform the information and communication technology (ICT) manufacture and minerals supply chains and to improve the lives of workers and those impacted along different stages of the ICT supply chain. Our long-term cooperation with groups monitoring the impact of mining on people and environment as well as with communities directly affected by mines or smelters strengthens our conviction that the many negative impacts of mining must finally come under the proper scrutiny.



This publication has been produced with the financial assistance of the European Union. The content of this publication is the sole responsibility of CEE Bankwatch Network and can under no circumstances be regarded as reflecting the position of the European Union.

Table of contents

Introduction	4
The European Green Deal: impossible without raw materials	5
The untraceable ICT supply chain	6
The Critical Raw Materials Resilience of the EU: at odds with sustainability	7
CASE 1: Strategic copper mine in Serbia violates property rights and environmental standards	9
CASE 2: Labour rights abuses in Bulgaria's mining and metallurgy sector	11
CASE 3: Transfer of toxic mining waste materials from Bulgaria to Namibia	13
EU Biodiversity Strategy for 2030: more new solutions won't be enough without less business as usual	15
CASE 4: A gold mine in Armenia threatens the habitat of the IUCN World Red List Persian leopard	16
CASE 5: The impact of the Ada Tepe gold mine on the ecological status of Krumovitsa River, Bulgaria	18
The EU Circular Economy Action Plan: reduced demand, not more resources	19
First reduce, always repair, eventually recycle	20
Multilateral development banks support mining projects with European taxpayers' money	22
CASE 6: European development finance supports mines in West Africa without transparent due diligence	24
The way forward	25

Introduction

The keyword for the 2020s is definitely transformation. All of the world's regions have started to experience the seriousness of the climate crisis, and there's no doubt that the economy, trade and societies need to become more resilient and less exploitative. The steps needed for this transformation have been set forth in **the 2030 UN Sustainable Development Goals** (SDGs). Governments are called on to improve economic productivity through sustainable practices, such as diversification and environmentally-sound technological upgrades, while seeking to decouple economic growth from environmental degradation (SDGs 8.2, 8.4, 9.4); protect natural resources through improved management and use, including in companies (SDGs 6.3, 7.2, 12.2, 12.6); protect human health from pollutants and hazardous contaminants (SDG 3.9); and halt habitat and biodiversity loss and species' extinction (SDGs 6.6, 15.5).

Europe wants to be the first continent to become climate neutral by 2050¹ and the leader in ensuring that all of the world's ecosystems are restored, resilient and adequately protected by 2050². The European Union has declared its ambition to halt, and as much as possible reverse, the pressure humans put on the planet's resources, ecosystems, climate and biodiversity. However, as the green agenda to reach these ambitions becomes more defined, it reveals that despite the long-term goal of reducing the demand for resources and fossil fuel consumption, Europe plans to continue its exploitative model of mining raw materials in the EU and around the world.

The European Commission introduced the European Green Deal in December 2019 as a way to turn the urgent climate challenge into a unique opportunity for the transformation of the economic and societal system. The sourcing and production of raw materials were included in the Green Deal:

Access to resources is also a strategic security question for Europe's ambition to deliver the Green Deal. Ensuring the supply of sustainable raw materials, in particular of critical raw materials necessary for clean technologies, digital, space and defence applications, by diversifying supply from both primary and secondary sources, is therefore one of the pre-requisites to make this transition happen.³

Although this excerpt from the Commission's communication on the Green Deal emphasises sustainability, it also introduces a key tension between that sustainability and security. Which will be prioritised? Will Europe try to solve the climate crisis by exacerbating the biodiversity, resource and poverty crises, or will the new EU policies stemming from the Green Deal manage to propose a holistic approach to all of these? Who will make use of this transition opportunity, and will it benefit only European citizens, or will other societies also benefit?

EU decision makers have advanced the furthest on reaching their climate neutrality target, and swiftly-implemented changes to infrastructure such as smart grids, energy storage systems and e-mobility have already increased the demand for raw materials. The Commission has given itself until 2025 to make a plan to clean up the industry's supply chains. We welcome the increasing confidence in the feasibility of Europe's decarbonisation, but we are greatly concerned about the lack of safeguards which would make this decarbonisation truly sustainable. Very little has been done so far to ensure that, to paraphrase the narrative of the Commission, no one will be left behind.

CEE Bankwatch Network, along with its members and partners, has been monitoring investments in raw materials mining backed by public funds in the EU and around the world for years. This work has shown that despite the EU's stated ambitions when it comes to changing the energy

¹ European Commission, [The European Green Deal](#), 11 December 2019.

² European Commission, [EU Biodiversity Strategy for 2030: Bringing nature back into our lives](#), 20 May 2020, p. 3.

³ European Commission, [The European Green Deal](#).

paradigm or reversing biodiversity loss, there's still a lot to be done to stop harmful practices in the mining sector, especially in cases where such practices are supported by the EU taxpayers.

This report summarises the proposed frameworks connected with the European Green Deal and exposes the problems related to environmental, social and human rights standards in the supply chains crucial for this new EU growth strategy. The European Commission's agenda is sound, but to be effective it has to counterbalance the procurement of the raw materials indispensable for the green and digital revolution with safeguards for the people affected by raw materials mining and for the nature destroyed by the overwhelming pressure for cheap and fast exploitation. Therefore, the Commission must be even more ambitious and incorporate policies that ensure the use of less-exploitative and toxic-safe technologies; the restoration of the old mining sites; strict environmental, social and human rights due diligence for mining projects; and finally, the right for the communities affected by the mines and surrounding facilities to have a say. The EU cannot attempt to overcome the climate crisis at the expense of local communities, workers' rights and biodiversity, especially in the face of the COVID-19-induced economic and social crisis. It would be a raw deal, one experienced too often in the past, which should finally be left far behind.

The European Green Deal: impossible without raw materials

Despite both the scientific consensus regarding the massive destruction to the planet caused by the current economic paradigm and the high-level attempts to address its effects, be it the SDGs agenda, the Paris Agreement or ambitions to reverse biodiversity loss, the global consumption of biomass, fossil fuels, metals and minerals is expected to double in the next 40 years⁴ and annual waste generation is projected to increase 70% by 2050⁵.

In 2019, the European Commission launched several strategic documents to align the European economy with the Paris climate agreement targets and the SDGs. One of them was **the European Green Deal** – the EU's growth strategy – which is aimed at positioning Europe to become the world's first climate-neutral continent by 2050 and to decouple economic growth from resource use. To ensure that the economy will actually give back to nature more than it takes away, the Green Deal requires a new policy framework.

The EU Industrial Strategy, presented in March 2020, identifies the main tool of the green agenda: digitalisation. Digital technologies such as artificial intelligence, 5G, cloud and edge computing and the Internet of things are indispensable for climate solutions – be it electric transport, smart houses or remote working. Digitalisation sounds like a clean, almost utopic, solution, but in reality, making the EU digital requires the rather dirty mining of gold, copper, lithium and other metals, as well as smelters for those metals and a complex, non-transparent information and communication technology (ICT) supply chain. One extreme example of the negative impact of gold extraction in the EU is described in Case 3 (page 13).

The EU's new Circular Economy Action Plan aims at accelerating the transformational change required by the European Green Deal. The Plan lists key products' supply chains, among them the supply chain for electronics and ICT. This industry is tackled in the Plan as waste-producing only; however, it has a very non-transparent and heavily impactful supply chain, starting with the raw material mines, and stretching to smelters and complicated manufacturing networks.

With an expected annual growth of 9.6% by 2022, the ICT sector is one of the fastest-growing industries. Currently, the sourcing of the raw materials used in ICT is almost impossible to trace, and it is increasingly obvious that raw materials mining is associated with human rights abuses, socio-ecological conflicts and violations of labour rights and standards.

⁴ European Commission, *Circular Economy Action Plan: For a cleaner and more competitive Europe*, 11 March 2020, p. 4.

⁵ *Ibid.*

The untraceable ICT supply chain

The official supply chain data published by global brands such as Apple, Dell, HP and Samsung⁶ shows the full lists of smelters and refineries used by these companies. But that's where the very limited transparency of the big brands' supply chains ends. They claim that they are not able to determine the sources of the raw materials refined in the smelters which are part of their supply chain.

In its Conflict Minerals Report, Apple claims:

Apple conducts robust due diligence on the source and chain of custody of 3TG in its global supply chain but does not directly purchase or procure raw minerals from mine sites... The challenges of tracking specific mineral quantities through the supply chain continue to impede the traceability of any specific mineral shipment through the entire product manufacturing process.⁷

Similarly, Dell in its Responsible Minerals Sourcing Report says:

Dell supports, respects and upholds the internationally-recognised human rights of all people, including all internal team members and those in our supply chain. Ensuring the responsible sourcing of minerals is also part of this global approach. Although we do not use minerals in their raw form or purchase them directly from mining companies or smelters, we engage our supply chain to perform due diligence.⁸

Among the smelters mentioned in the official lists published by the world's leading ICT brands⁹, there were four situated in Kazakhstan. CEE Bankwatch Network, in cooperation with a Kazakh journalist, attempted to trace the connections between the global brands and mines in Kazakhstan providing the raw materials for ICT. In the course of the investigation, connections between three mines and the smelters used by global ICT brands were uncovered and mapped, but it was ultimately not possible to provide proof of these connections. This exercise confirmed an open secret: this part of the supply chain is the blind spot of the whole industry. It is of utmost importance to make the ICT supply chain fully transparent, in part to ensure that the electronic products, one of the foundations of the new EU green and digital approach, are not connected with conflicts, human rights abuses or environmental destruction.

Global brands underline their financial support for different kinds of initiatives aimed at better understanding the impact of the industry on the lives of people working and living in mining communities. They also support whistle-blower initiatives to empower independent, local voices to raise issues and report incidents at the mine-site level. But until the ICT supply chain is fully traceable, this support will only be a corporate social responsibility exercise without the companies taking real responsibility for the impact of their business.

⁶ Dell Technologies, [Responsible Minerals Sourcing Report](#), June 2018; Apple Inc., [Smelter and Refiner List](#), 2020; Samsung, [Smelter and Refiner List in Samsung's supply chain](#), 2018.

⁷ Apple Inc., [Form SD: Specialized Disclosure Form: Conflict Minerals Report for the Period Ending 31 December 2019](#) (filed 6 February 2020).

⁸ Dell Technologies, [Responsible Minerals Sourcing Report](#).

⁹ Ulba Metallurgical Plant JSC (tantalum) – Dell (2018), Apple (2019), Samsung (2018); Kazakhmys Smelting LLC (gold) – Dell (2018); Kazzinc smelter (gold) – Dell (2018), Apple (2019), Samsung (2018); TOO Tau-Ken-Altyn (gold) – Dell (2018).

The Critical Raw Materials Resilience of the EU: at odds with sustainability

Raw materials mining is associated with risks concerning human rights abuses, socio-ecological conflicts and violations of labour conditions. Many rare metals are located in countries with risky political contexts: tin, tungsten, tantalum and gold are often referred to as conflict minerals, the extraction of which has been fuelling war in the Democratic Republic of the Congo for several years.

In September 2020, the Commission launched a communication¹⁰ regarding **the Critical Raw Materials Resilience of the EU**. It indicates that 'resilience' for the EU simply means securing raw materials' supply by negotiating trade agreements or seeking to eliminate trade distortions. EU demand for these minerals is projected to increase, but concrete measures to address the human rights and environmental concerns about mining and the mineral supply chain have not been addressed. **A foresight Study on Critical Raw Materials for Strategic Technologies and Sectors in the EU** published together with the communication gives the critical raw materials outlook for 2030 and 2050 for strategic technologies and sectors:

*For electric vehicle batteries and energy storage, the EU would need up to **18 times more lithium and 5 times more cobalt in 2030, and almost 60 times more lithium and 15 times more cobalt in 2050, compared to the current supply to the whole EU economy. If not addressed, this increase in demand may lead to supply issues.***¹¹

This is a direct translation of the EU's climate neutrality scenario into the estimated demand for selected raw materials. And it is clear that the EU is determined to secure this supply as well as the supply of other raw materials – not only light and heavy rare earth elements, but also more common ones, such as copper, nickel or lithium. The cost of the EU neutrality scenario is to be paid by the societies living outside the EU, an example of which is presented in Case 1 (page 9).

The foresight Study¹² contains a systematic analysis of supply chain dependencies conducted for lithium (Li-ion) batteries, fuel cells (FC), wind turbines, electric traction motors, photovoltaics (PV), robotics, drones (UAV), 3D printing (3DP, or additive manufacturing (AM)) and digital technologies.

For example, the leading technologies assessed as crucial for the development of a climate neutral economy are Li-ion cells, fuel cells, wind generators and photovoltaics.

Currently, the EU provides less than one per cent of its resources for all of these technologies.

¹⁰ European Commission, [Critical Raw Materials Resilience: Charting a Path towards greater Security and Sustainability](#), 3 September 2020, p. 1.

¹¹ European Commission, [Critical Raw Materials Resilience: Charting a Path towards greater Security and Sustainability](#), p. 6.

¹² *Ibid.*

If the EU economy is to prioritise the production of these in order to reach certain high level of self-sufficiency, it can choose either to deploy the available mature technologies, which are dependent on expensive, impactful and difficult to supply raw materials, or choose to boost the EU's scientific potential and deploy new innovative technologies which can create products that are not associated with conflicts and human rights abuses and are easier to recycle. In the medium- and long-term perspectives, this latter approach will create advantages for the EU's industry in ensuring that its products are cheaper, less harmful and have a smaller carbon footprint.

The Study's assumptions for 2050 consider the same technologies¹³, but it is obvious from the experience of the last 10 to 15 years that innovation will significantly change these technologies. One of the clear recommendations of the Study is 'significant investment in Research & Development' in order to reduce platinum use in fuel cell catalysts and ensure a more secure supply of rare earths via recycling. The same argument can be found in the 2020 Joint Research Centre report, *Raw materials demand for wind and solar PV technologies in the transition towards a decarbonised energy system*.¹⁴

Mines that are currently under exploration or already operating show the wide range of impacts mining can have on the environment and people, which cannot be neglected in the race to secure the supply of minerals. In response to the strategic directions proposed by the Commission at the Raw Materials Initiative, namely to 'accelerate and facilitate procedures' for the approval of mining projects in the EU and its neighbours, such as Norway, Ukraine and the Western Balkans, as well as in partnerships with countries in Africa and Latin America, it is crucial to underline why rapid approval for such projects is a dangerous idea.

¹³ European Commission, *Critical Raw Materials Resilience: Charting a Path towards greater Security and Sustainability*. 'There are several options for the baseline for comparison with current demand for raw materials. In this report we chose to use 22% of global demand for each material, reflecting the EU share of global GDP as the most consistent approach for all materials.'

¹⁴ Samuel Carrara, Patricia Alves Dias, Beatrice Plazzotta and Claudiu Pavel, *Raw materials demand for wind and solar PV technologies in the transition towards a decarbonised energy system*, Publications Office of the European Union, Luxembourg, 2020.

Photo: Weir ESCO, Pexels



CASE 1

Strategic copper mine in Serbia violates property rights and environmental standards

Zijin Mining Group's takeover of the Bor Mining Complex shows the dangers that pursuing mining projects in countries with weak rule of law poses for individuals' right to property and a clean, safe and healthy environment.

Located in eastern Serbia, Bor is home to one of the largest copper reserves in the country and in the world. The Chinese company Zijin Mining Group, as a strategic partner of the Serbian government, planned to produce 55,000 tonnes of copper concentrate and 90,000 of copper cathode in 2020¹⁵. One of the most contentious mines is Veliki Krivelj, an existing open cast mine located in a village of the same name, about 10 kilometres from Bor.

In the last decade, Serbian mining and spatial planning legislation has increasingly enabled the Government of Serbia to issue some of the necessary permits for 'preparatory works for opening of exploitation of mines' without requiring an environmental impact assessment (EIA) or the consent of local communities, both of which are required before issuing exploitation permits.¹⁶ **This has led to the direct and systemic violation of the rights of the population to say no to any mining operation.** As such, a temporary permit allows for serious exploitation works, and it has become very hard to stop the commissioning of the mine. At the Cerovo mine, near Veliki Krivelj, a Chinese company forcibly took the property of five inhabitants and opened the mine without a permit, a developed spatial plan or an EIA for that plan.

The expansion of Veliki Krivelj, even with its enormous future potential, is one of the most problematic mine expansions in Serbia. One of the most important questions is how to protect the Timok River, where inflows from the Kriveljska and Borska Rivers carry pollution from the mines, smelters, flotations and other polluting sources in the mining complex. Kriveljska and Borska are among the most polluted rivers in Europe.¹⁷ Serbian legislation requires that a special spatial plan for specific aims is developed prior to the expansion of any mine. Development of this plan for the mining complex in Bor and Majdanpek started in 2020. But in 2019 and 2020, Zijin had already started attempts to obtain the properties necessary for the extension of Veliki Krivelj. It has thus far only proposed buying those properties that are a few meters from the mine. **However, if the mine is expanded as proposed, more than 300 households will be located in the heart of the mining operations – surrounded by constant explosions, vibrations from mine equipment, large trucks and dust from mining and transport.** Houses and other structures in the village have already been damaged by mining operations in 2018 and 2019.

In 2020, villagers from Veliki Krivelj, Ostrelj and Slatina held several meetings with the representatives of Zijin, the Government of Serbia and the Serbian President's office. They repeatedly asked the same questions: who will protect them from the negative effects of mining, who will protect their properties, and why doesn't Zijin pay the regular market price for the properties?

¹⁵ ['Serbian copper mine highly increased production of ore with high copper concentrate'](#), Serbia Energy, 11 August 2020.

¹⁶ In her most recent speech, the newly elected minister of mining Zorana Mihajlović has expressed interest to change the mining law as soon as possible. Looking at the two recent changes to this law in the last 10 years, CEKOR and its partners have found that changes to this law have directly led to the degradation of the rights of citizens and the right of citizens and NGOs to participate in decision-making.

¹⁷ ['Najzagadenija evropska reka nalazi se u Srbiji – Borska Reka'](#), Solaris Media, 30 January 2017.

Residents of the village of Krivelj also held a protest where they demanded the relocation of all 400 households of their village. Speakers stated that it is already impossible to live in villages around the mines, and they cannot imagine what it will be like when new mines will open. A representative of the communal council of Krivelj, Mr Dalibor Stanković, stated: 'Many houses have cracks on the walls and foundations, and some roofs collapsed, dust covers the village on three sides, while the river is polluted with acidic mine waters.'¹⁸

In 2020, citizens of Bor also protested against excessive pollution,¹⁹ which they claim has intensified since Zijin became the mine's owner. In fall 2020, Bor's municipal administration filed a criminal complaint against the managers of the Zijin for causing excessive sulfur dioxide pollution that is harmful to the health of the population. The Environmental Protection Agency's (SEPA) measuring stations had recorded excessive sulfur dioxide pollution in Bor for three consecutive days, and there have been similar levels of pollution almost every day for nearly two years since Serbia sold Bor Smelting Company to Zijin. The level of sulphur dioxide in the air allowed by law is 350 micrograms per cubic metre, but on some days, average values in Bor reached 1,969 micrograms several times during the day. The conclusion was that the air is 'very polluted' and residents were advised against leaving their homes. The air is also 'heavily polluted' by PM10 particles.²⁰ In September 2020, Zijin's smelter temporarily halted operations due to the excessive air pollution.

The results of a pilot study conducted by the SEPA about the impact of industrial pollution on the health of the population in Bor, published by the Institute of Public Health of Serbia Dr Milan Jovanović Batut, show that the city's residents are at a significantly greater risk of disease and death from cancer, and there is a higher risk of premature death from other diseases. Arsenic pollution in Bor increased by 323 times in August 2020.

In October 2020, the Commercial Court in Zaječar ruled that the company Zijin Bor and one of its managers are responsible for the pollution in Bor in November 2019 and January 2020. The verdict is not final, because both parties have filed appeals – the last word will be given by the Commercial Court of Appeals in Belgrade.²¹ Despite this ruling, the fine that Zijin will need to pay (about EUR 4 000) will be so small that it is expected that the company will continue to pollute.

Thus, in Serbia, private and public mining companies are able to open mines without resolutions on property rights disputes, EIAs for mines or exploitation permits. Such cases have occurred and are ongoing not only at Bor's copper mines, but also at the Kolubara and Kostolac coal mines and Vojvodina's oil extraction fields.

¹⁸ ['Blokada puteva ka rudniku Cerovo zbog odnosa kineske kompanije prema vlasnicima imanja'](#); Glas javnosti, 19 May 2020.

¹⁹ ['Massive protest in Bor over pollution'](#), N1, 19 September, 2020.

²⁰ Igor Todorović, ['Excessive air pollution recorded today in Bor'](#); Balkan Green Energy News, 9 September 2020.

²¹ CINS, ['CINS: Prvostepena presuda protiv Zidina, kompanija kriva za zagađenje u Boru'](#), N1, 2 October 2020. Višnja Arandelović, ['Profit preči od čistog vazduha'](#); Politika, 7 October 2020.

Photo: Ist Media

Bor, Serbia

CASE 2

Labour rights abuses in Bulgaria's mining and metallurgy sector

Workers identified several serious violations of labour rights guarantees, demonstrating a lack of implementation and oversight of labour laws in the EU's own mining sector.

Bulgaria is the third largest copper and fourth largest gold producer in Europe. According to the official data, about 25,000 workers are employed in the mining sector (which includes coal, oil and gas; non-ferrous metals; and construction materials), representing some 5% of Bulgaria's GDP. However, the testimonies of people employed in the mining and metallurgy companies in the Bulgarian Panagyurishte region reveal the problems with labour conditions in the gold and copper supply chains. A survey²² conducted in November 2019 included 61 interviews conducted with both workers and local residents. The interviewed workers were employed by Asarel Medet AD, which operates an open-pit copper mine and a gold mine; Aurubis Bulgaria AD, which operates smelters that produce copper, gold, other rare metals and sulphuric acid; and Chelopech Mining EAD, which operates an underground copper mine and a gold mine. Chelopech received support from the European Bank for Reconstruction and Development in 2005 and 2008.

Core issues identified by the research include the lack of equal treatment of workers employed directly and indirectly, lack of independent trade unions, precarious and low-pay working conditions, intimidation and silencing of critics, and the negative health impact on workers and the local communities.

a. Worse treatment for indirectly employed workers

In the mines covered by the survey, workers are employed directly as well as by subcontractors. Directly employed workers receive standard social and health security payments, regular vacations and additional payments for meals and overtime, but this is not the case for subcontracted workers, who often receive only half the wages of a directly employed worker.

AVERAGE MONTHLY WAGES IN 2018		
Company	Directly employed workers	Subcontracted workers
Asarel Medet AD	EUR 800	EUR 300-400
Aurubis Bulgaria AD	EUR 1000	EUR 400-500
Chelopech Mining EAD	EUR 1160	EUR 300-400

²² The survey was conducted from 2-22 November 2019 by Free Information Surveys EOOD, a professional sociological company based in Stara Zagora, Bulgaria, according to its contract with CEE Bankwatch Network, which commissioned Free Information Service Ltd. (2019) to conduct sociological surveys on the situation of the workers in Panagyurishte mining region in the copper and gold mining industries and the ICT raw materials supply chain.

b. Employer-controlled unions

The Constitution of Bulgaria and the Labour Code provide for the right to form independent trade unions. The survey concluded that the unions present in the three companies are controlled by the employer, and are thus not independent. These unions are known as company or 'yellow' unions.

c. Intimidation and silencing workers

Interviewees said they were afraid to make any demands. Workers are forced to sign confidentiality statements regarding salaries and working conditions. Those who refuse are not hired or are dismissed. These confidentiality statements allow the company owners to undermine worker solidarity and maintain control by instilling fear in the workforce through the threat sanctions and job terminations. Aurubis Bulgaria AG's managers use these confidentiality statement restrictions so effectively against their workers that some of them are afraid to speak out about poor working conditions – even after they've been dismissed or quit. Transparency in all three companies regarding working conditions and salaries is replaced by information centres, which do not answer any of the workers' questions.

d. Negative health and safety impacts

Chelopech Mining EAD workers are regularly exposed to dust, arsenic and other heavy metals as well as chemical reagents used in the flotation process. Miners working in Asarel Medet AD's open-pit mine and flotation factory often complain of mine dust, heavy metals and chemical reagents. Metallurgists who work in Aurubis Bulgaria AG's metallurgy facilities complain of exposure to sulphur dioxide and heavy metals gases. The local population has experienced exposure to dust coming from the open-pit mine, which increases the risk of cancer and respiratory diseases. 'I spit black in the morning. There are periodic medical check-ups and [they] all show "healthy". If I tell my boss that I'm not feeling well, my head hurts... [the boss yells], "You're fine"', declared a 30-year-old Chelopech mine employee.

e. Negative environmental impacts

Two dangerous waste facilities used by the mining industry – Asarel Medet AD's Lyulyakovitza mining waste tailing dam and the Vlahkov Vrah mining waste facility used by the construction industry – have caused fear among the local residents. The Panagyurishte mine workers and residents from the local villages are afraid of the gigantic Lyulyakovitza tailing dam, and they believe that once Asarel Medet AD leaves the open-pit copper mine in 5 to 7 years, there will be no one to ensure the safety of the hazardous waste is properly maintained. Local voices have noted: 'Offshore owners of the company will take their money to some offshore island and the mining waste will remain here in the tailing dam and nobody will care for its safety!'

The environmental and economic impact on the local population has been negative. Agricultural lands and waters are polluted and acid rain is common. This makes it impossible for local residents to maintain small agrarian enterprises such as livestock farms and gardens that produce rose oil and medicinal herbs.



CASE 3

Transfer of toxic mining waste materials from Bulgaria to Namibia

The disposal plan for arsenic waste from the Chelopech mine violates the international convention on waste disposal, showing how the procurement of raw materials at the expense of human health and environmental protection can have severe consequences.

Canadian company Dundee Precious Metals has used continuous loans from the European Bank for Reconstruction and Development (EBRD) to improve the profitability and performance of its copper and gold mining operations in Bulgaria. Arsenic content in the precious metal concentrates is one of the main environmental and health issues connected to the operations. The company failed to ensure the extraction, stabilisation and safe deposit of the arsenic in Bulgaria and instead the concentrate with arsenic is exported to Namibia.

The primary saleable product of Chelopech is a gold-copper concentrate containing, on average, 5.5% arsenic. After the tailing dam of the nearby smelter collapsed in 1988 and because of the relatively high arsenic content of the concentrates, in 1990 the Bulgarian government issued a decree that Chelopech concentrate could no longer be treated in Bulgaria, unless arsenic capturing and treatment facilities were installed at the smelter. For this reason, the arsenic is transported by sea to the Tsumeb smelter in Namibia. The annual processed ore in the Chelopech gold mine has increased from around 0.5 million tons in 2004 to above 2 million tons in 2019. **By the final year of the mine, which is projected to be 2025, around 100,000 tons of arsenic will be extracted, processed, stored and/or released in some form elsewhere around the world.**

Dundee applied for the approval of cyanide leaching technology, claiming that this would also ensure the capture and stabilisation of the arsenic residue, but with no success. In addition, the project's EIA and permit, which were respectively approved and issued by the relevant ministry, were ultimately rejected by the Bulgarian Administrative Court in 2010 due to significant deficiencies. Under the threat of not being able to process the concentrate, Dundee acquired the Tsumeb smelter in 2010.

The Tsumeb smelter in Namibia was constructed in the early 1960's and is one of the few smelters in the world equipped to treat complex concentrates as its primary feed. Behind the neutral term 'complex concentrate'²³ lies the fact that complex concentrates have high levels of one or more deleterious elements, such as arsenic, uranium, cadmium or mercury. Smelters that will currently accept complex concentrates include Tsumeb in Namibia, Altonorte in Chile, Guixi in China and Horne in Canada. For complex concentrates that contain more than one per cent arsenic, the DPM smelter in Namibia at Tsumeb is now the only smelting option.

According to Dundee's annual report, in 2019 Tsumeb smelted 215,289 tons of complex concentrate, including 79,233 tons from Chelopech. Some of the third parties' concentrate has even higher arsenic content – in concentrate from El Brocal mine in Peru, for example, the arsenic

²³ John C. Menzies, 'Complex Copper Concentrates', *Cmi Capital Blog*, 28 July 2019.

content is reported at 7.2%. According to local experts, before the treatment of imported concentrate began, the smelter worked primarily on concentrates with 2.5-3% arsenic content.

Thus, it is not a surprise that in 2010, massive numbers of Tsumeb's smelter workers began making complaints related to their health. The issue was reported widely by national media²⁴ and the scandal grew to the point where the government had to interfere. The primary reaction of the authorities was to impose a reduction of the smelter's production by half until technological improvements were put in place (the production curtailment was lifted by the Namibian government in December 2013). A health study was conducted by the National Institute for Occupational Health of South Africa, supported by the Namibian Ministry of Environment and Tourism. The samples for the study were taken in March and July 2013 and the evaluation showed high levels of arsenic in the blood and urine of the workers. The conclusions were: 'Urinary arsenic levels were high showing widespread excessive absorption of arsenic. This problem is known to the NCS (Namibia Custom Smelter) management, workers and occupational health service providers'²⁵.

In relation to the Tsumeb smelter, Dundee's 2014 Sustainability Report stated: 'After the copper concentrate has been smelted, the extracted arsenic is classified as hazardous waste'. This hazardous waste is stored in a hazardous waste disposal site (HWDS). The HWDS for the Tsumeb smelter was ready in 2012 and has an approved capacity to contain approximately 201,500 m³ of hazardous waste. According to the estimations made in the 2016 Tsumeb EIA report, the first cell of the HDWS contains around 50,000 m³ with a density of 2 t/m³.

During a monitoring visit made by Bulgarian NGO Za Zemiata²⁶ in 2019, the first cell was already completed and 100,000 tons of arsenic were buried there. The projections are that the rest of the volume (150,000 m³) has a lifespan of eight years and will be filled with 1,800 m³ (3,600 tons) per month.

One can pretend that transferring complex copper concentrates across the world, treating them in Namibia and leaving the immense amount of arsenic waste there is a normal business practice, which ensures the metal supply needed for today's economy. **But the fact is that the toxic material, which Bulgaria has forbidden to be treated on its territory and which most other countries do not accept, has found its dangerous storage place near the town of Tsumeb.**

According to Article 144 of the Namibian Constitution, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989) should automatically be applied as part of Namibian law. The Convention is an international treaty designed to reduce the movement of hazardous waste between nations, and specifically to prevent the transfer of hazardous waste from more developed to less developed countries. It identifies waste composed of copper compounds and arsenic and arsenic compounds as hazardous waste. Furthermore, Article 95 of the Namibian Constitution states directly that: '...in particular, the Government shall provide measures against the dumping or recycling of foreign nuclear or toxic waste at Namibian territory'.

Following the exposure of the problem and significant criticism from citizen groups, Dundee has made improvements to the hazardous waste facility. There are strict protocols to ensure workers do not bring arsenic dust home or out of the smelter, and there are some experiments being conducted on vitrification of the arsenic dust. Funds from the EBRD were used for the improvement of the efficiency and cost-effectiveness of the copper production cycle, but they did not target solving the most burning environmental and health issues associated with the waste. As of today, there is no adequate solution for arsenic waste.

²⁴ Shasimana Uugulu, 'Tsumeb copper miners suffer from arsenic effects', *The Villager*, 2018.

²⁵ O. Abrahams, S. Kgalamono, C. Nattey, N. Ndaba, D. Rees, K. Wilson, *Preliminary Report on the Survey of Namibia Customs Smelter Workers, Tsumeb, Namibia*, National Health Laboratory Service, National Institute for Occupational Health, August 2013. More information: Genady Kondarev, 'Health reports confirmed widespread over-exposure to toxic arsenic at Tsumeb smelter in Namibia', CEE Bankwatch Network, 22 December 2015.

²⁶ Za Zemiata and CEE Bankwatch Network have been monitoring the issue of arsenic export from Bulgaria for the last six years.

EU Biodiversity Strategy for 2030: more new solutions won't be enough without less business as usual

The **EU Biodiversity Strategy for 2030**²⁷ is another strategic document guiding Europe's regenerative approach to future growth. The Strategy's key commitments include the legal protection of a minimum of 30% of the EU's land area and 30% of the EU's sea area, the integration of ecological corridors, and the strict protection of at least a third of the EU's protected areas, including all remaining primary and old-growth forests. It also includes the key commitments of the **EU Nature Restoration Plan**.

This Plan aims to reduce pressure on ecosystems. This is inevitably connected with revising the conditions for the most polluting industries and ensuring that these conditions are not loosened. And while the mining industry is most often associated with soil, water or air pollution, mining exploits remote and inaccessible areas, also presenting a threat to the habitats and species that live there, which are also often some of the most precious and endangered ones. The damaging biodiversity impacts of gold mines in Armenia and Bulgaria have been described in Case 4 (page 16) and Case 5 (page 18).

²⁷ European Commission, [EU Biodiversity Strategy for 2030: Bringing nature back into our lives](#).

Photo: CEE Bankwatch Network

Amulsar, Armenia

CASE 4

A gold mine in Armenia threatens the habitat of the IUCN World Red List Persian leopard

The case of the Amulsar gold mine is just one example of a common pattern in mining cases: metal mining poses a huge threat to biodiversity, and it is often the communities who lead the effort to protect nature.

The Amulsar Gold Mine is situated in central Armenia close to the popular spa town of Jermuk. Amulsar Mountain feeds the headwaters of major rivers for a number of very important water basins in the country. Canadian company Lydian International planned to develop an open-pit gold mine, which was expected to impact not only the water sources and air quality, but also the state of wildlife in this valuable natural region. The company received support from the EBRD (in 2009 and 2017) and the International Finance Corporation (IFC) (the latter withdrew from the project in 2017). Lydian originally planned to use an extraction and processing technology known as cyanide leaching, which has alarmed the surrounding communities due to the technology's potentially hazardous effects. Local residents, who make their livelihood by tending apricot orchards, collecting wild plants, breeding animals and farming fish, blocked access to the mine in 2018.

In the summer of 2020, the company used force to break the protesters' road blockades and intimidated and discredited members of the local community, protesters and activists by starting court cases.

Independent experts, e.g. from WWF-Armenia and Balkani Wildlife Society (Bulgaria)²⁸, argued that the approval of the project was in violation of the Republic of Armenia's flora and fauna laws, as the implementation of the investment would lead to a reduction in populations of a number of species threatened with extinction (as classified by the Republic of Armenia Red Book). The mine is also considered contrary to the Convention on the Conservation of European Wildlife and Natural Habitats, commonly known as the Bern Convention. The protection of wild species of plants and animals includes the protection of endangered individuals, but also their habitats. These habitats are protected in the network of areas known as the Emerald Network.

The Amulsar mine operations could destroy three Emerald sites, 11 specific habitats and 76 protected species. The Persian leopard, the largest cat in the Caucasus, is among the species endangered by the Amulsar mine. It is estimated that only about 10 individuals of this species live in Armenia, moving along two migration corridors. One of the corridors crosses the mine area.

Non-governmental organisations involved in the monitoring of the mine submitted a complaint to the Bern Convention against the government of Armenia. In the complaint, the Armenian government is accused of disregarding procedures for assessing investments in environmentally valuable areas and failing to assess protected species and habitats in accordance with the Bern Convention.

²⁸ Andrey Kovatchev, Elena Tsingarska-Sedefcheva, and Andrey Raley, [Biodiversity offsetting and other problems of the ESIA of Amulsar gold project in Armenia](#), Balkani Wildlife Society, January 2019.



CASE 5

The impact of the Ada Tepe gold mine on the ecological status of Krumovitsa River, Bulgaria

Plans for mine expansion will significantly harm the biodiversity of EU-protected areas, an example of how authorities are currently able to sidestep EU legislation and ignore expert studies to continue producing raw materials.

Ada Tepe is a gold mine in the area of the Eastern Rhodope Mountains near Krumovgrad in Bulgaria, which officially began operation in August 2019. Ada Tepe is the one out of six sections of the gold mining field Khan Krum. Dundee Precious Metals owns a 30-year concession for the Khan Krum mining field, and the Ada Tepe mine was financed by the EBRD. It impacts the Natura 2000 Habitats Directive site Rodopi-Iztochni and the Natura 2000 Birds Directive site Krumovitsa. Bulgarian state authorities only approved the project after the investor significantly reduced the project's exploitation area and minimised their expected usage of pollutants. The investor was further obliged to prevent environmental degradation and pollution through strict management of waste water and mining waste.

An independent hydrobiological study on the impact of the mine's operation on a 12 kilometre section of the Krumovitsa River was conducted in October 2020²⁹. Discharge conditions were not suitable for proper ecological assessment because some river sections were dry, without any surface water flow. However, the visit took place during a rainy period and erosional flows coming from the mining area were registered and observed to be the cause of the blanketing and colmatation (clogging) of the Krumovitsa River bed. Such an impact disrupts water exchange between the surface and hyporheic zones and negatively affects the macroinvertebrate community, which is highly dependent on the conditions in the interstitial microhabitats and hyporheic zone during periods of drought. The affected section was 2 kilometres long. These conditions differed significantly from those upstream of the mining area, where the river was in excellent ecological status. The presence of fish and otters along the whole investigated section of Krumovitsa River is a positive sign, however, indicating that the river ecosystem is not heavily affected.

Wastewater management of the Ada Tepe mining area has deficiencies and inconsistencies with the recommendations laid down in the EIA and Appropriate Assessment reports. The water quality monitoring plan of the investor neglects the importance of the biological quality elements and is not sensitive to accidental pollution.

The plans of the same investor for large scale future mining developments in the area of Krumovgrad are in contradiction with the conclusions of the Appropriate Assessment report for the Ada Tepe gold mine on the project's implications on the Natura 2000 sites. **Any future enlargement of the Ada Tepe mining section or any future development of any of the other five mining sections within the concession contract which fall within the boundaries of the municipality of Krumovgrad will have a significant negative impact on Rodopi-Iztochni.**

²⁹ Pencho Pandakov, 'Impact of the Ada Tepe mine on the ecological status of Krumovitsa river', forthcoming in 2021.

Yet, regardless of the above recommendations, the website of the Bulgarian Ministry of Environment and Waters shows that the investor has not followed the above conditions. Khan Krum mining field consists of six mining sections, according to the information on the concession contract. Furthermore, apart from the Khan Krum mining field, Dundee holds permits for metal search and exploration in six other large mining fields similar to Khan Krum (Chiirite, Divna, Dalbokata reka, Elhovo, Lada and Yarilo), according to the register of these permits with the Ministry of Energy. Chiirite, Lada and Yarilo have already received the green light from the Ministry of Environment without an Appropriate Assessment procedure as required, and the exploration for gold can start at any time.

The case of Ada Tepe mine is a good example of how expert conclusions are going to be neglected by the future plans of the investor and state authorities. In the case of the Khan Krum mining field expansion, biodiversity loss will be increased, which is clearly contrary to the European Biodiversity Strategy.

The EU Circular Economy Action Plan: reduced demand, not more resources

Europe, as well as the whole world, needs investments in innovative, new mining technologies which will do away with unsustainable ones such as cyanide leaching or the dumping of toxic waste. The same applies to most of the strategic technologies and sectors diagnosed in the Commission's foresight Study, where rare materials are needed. The innovations should ensure these technologies' substitution with less harmful, less expensive and widely available materials and components. It would be naive to think that the EU can overcome the current competition for scarce resources; it is more likely to become more severe, and the prices will continue to rise. The primary task is to adjust products and their production cycles not by supplying more, but by decreasing demand.

One of the top concerns of the EU is fitting the economy into the principle of circularity of materials. In the new **EU Circular Economy Action Plan**, a lot of effort is made to empower consumers and public buyers so that they can avoid the premature obsolescence of goods and to provide for a new 'right to repair'. However, the strategy does not place much emphasis on 'reducing the needs', for individuals or for industry. Nowadays, 'recycle' is a bit of an outdated mantra. 'Recycle' is less sustainable than 'reduce' and 'repair' on the EU's hierarchy of waste management, which seeks to achieve a circular economy in line with the zero waste philosophy. So far, the use of raw materials has only increased, due to the promotion of hyper production within an economy which operates beyond natural boundaries.


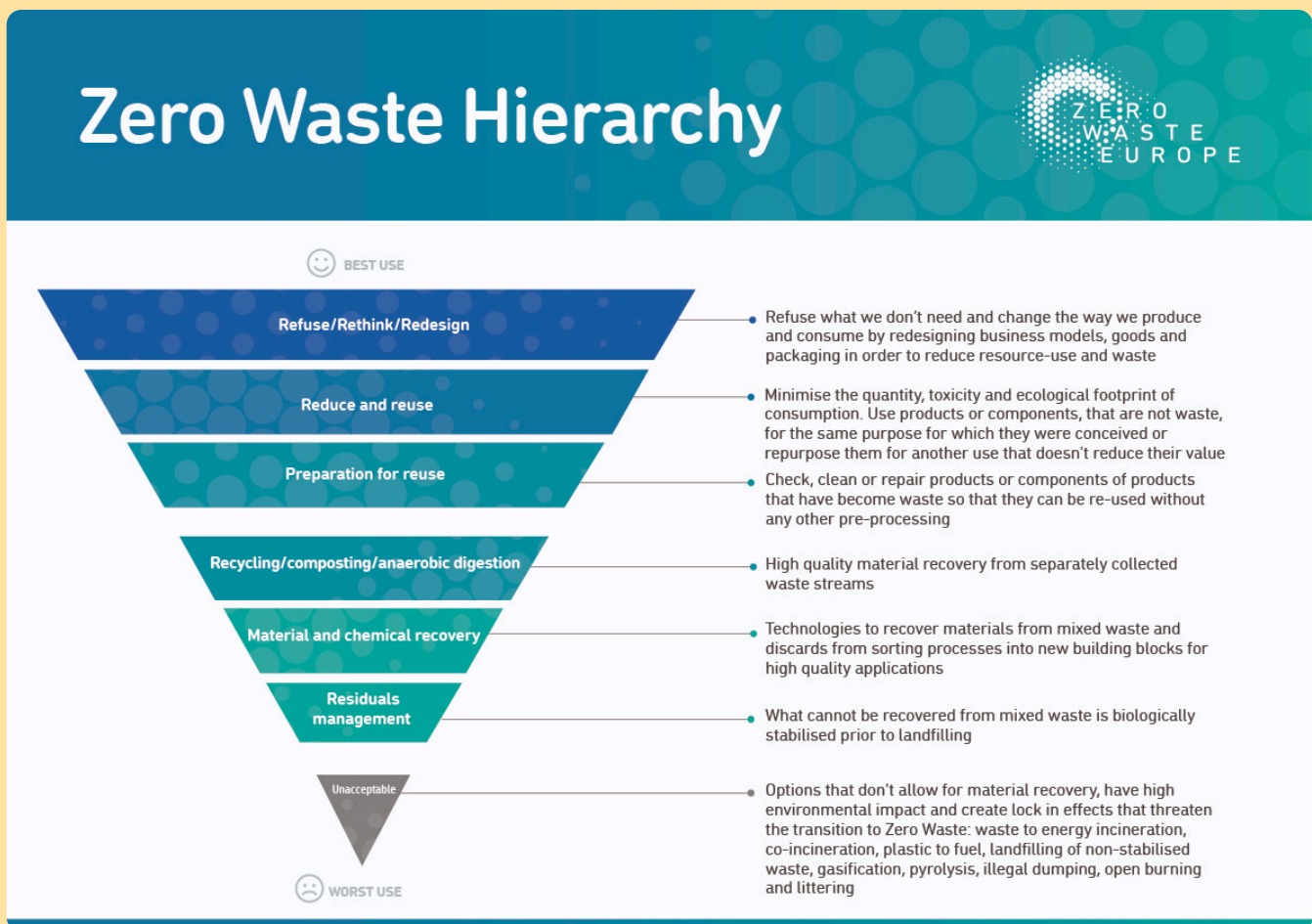


Photo: Andras Barta, Plixabay

First reduce, always repair, eventually recycle

The Right to Repair movement in the United States and Europe has been gaining momentum as citizens start to understand that the old model of 'take-use-throw away' is socially and ecologically unsustainable.



Source: Zero Waste Europe, [A Zero Waste hierarchy for Europe](#), 20 May 2019.

Repairing appliances instead of throwing them away or recycling them should be a priority for the EU. There are several benefits of making repair accessible and affordable everywhere in the EU so as to maximally extend the life of products like electronics.

First, repair is sustainable, as our planet has limited resources which will eventually run out. A 4.5 ounce iPhone requires 295 pounds of raw material (ore and water). As demand increases and manufacturers seek to maximise profit, the total amount of raw materials required will only increase. Every cell phone repaired is one less that needs to be manufactured.

Second, fostering repair will give people access to affordable products, make a huge dent in the e-waste problem, and create jobs which are not outsourceable. These jobs are skilled, well paid, and continually in demand. The electronics and computer repair industry in the United States supports 56,625 small businesses that employ 143,637 people, for a total of USD 19 billion of annual revenue.³⁰ For comparison, for every 1,000 tonnes of e-waste, landfilling creates one job, recycling creates 15 jobs and repairing creates 200 jobs.

Third, when we fix things, we give people without access to technology the opportunity to join the Internet community and thus bridge the digital divide. The Internet is no longer a luxury. It has been declared a human right, and available and reasonably priced repair services uphold that right.

Repair should be a priority for the EU if it wishes to be consistent in its pursuit for a smaller ecological footprint and greater respect for human rights. Recycling is better than throwing things away, but it isn't the answer – it should be a last resort solution which comes after an extended lifespan through the sustainable design (the EU's Ecodesign Framework Directive, which recently included electronics) and manufacturing of products and through the availability of repair services. The value of recycling lies in the possibility to retrieve valuable raw materials so as to minimise the extraction of new ones. Second, fostering repair will give people access to affordable products, make a huge dent in the e-waste problem, and create jobs which are not outsourceable. These jobs are skilled, well paid, and continually in demand. The electronics and computer repair industry in the United States supports 56,625 small businesses that employ 143,637 people, for a total of USD 19 billion of annual revenue. For comparison, for every 1,000 tonnes of e-waste, landfilling creates one job, recycling creates 15 jobs and repairing creates 200 jobs.

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³⁰ ['It's time for a repair jobs revolution,'](#) iFixit, accessed 15 January 2021; ['Electronic & Computer Repair Services Industry in the US,'](#) IBIS World, 30 November 2019.

³¹ Tim Schauenberg, ['The EU declares war on e-waste,'](#) DW, 7 November 2019.

Photo: Fxquadro, Adobe Stock

Electronic waste (e-waste) is the fastest growing stream of waste, with nearly 50 million tonnes generated globally each year³². It is also a toxic type of waste, as it contains metals such as lead and other substances like phthalates and brominated flame retardants which, once leaked, cause irreparable damage to the human body, water systems, animals and plants. The Basel Convention is an international treaty which regulates the global movement of hazardous waste. Despite the fact that numerous countries have ratified the Convention, e-waste is still a lucrative business in the Global South, where electronics are shipped from countries in the Global North. Illegal e-waste landfills and the informal recovery of metals from electronic waste is the only livelihood opportunity in some areas in the Global South. Currently in the European Union, just 31% of e-waste is recycled,³³ or 3.9 Mt of the total 10.4 Mt e-waste generated by EU countries. The European Environmental Agency has estimated that a maximum of 75% of all e-waste could potentially be redirected to separate collection, and the EU's current Waste Electrical and Electronic Equipment (WEEE) Directive envisages between 55% and 80% depending on the type of product. For this purpose, industrial recycling centres³⁴ are being created in Europe where e-waste can be safely recycled and metals reintegrated into the electronics supply chain.

Increased opportunities for recycling e-waste have the potential to change the raw materials sector, because they provide an alternative to mining for the raw materials used to make electronics. This and other alternatives can provide jobs and strengthen resilience, all while reducing demand and reversing the damage done to ecosystems.

Multilateral development banks support mining projects with European taxpayers' money

The **EBRD** has been supporting raw materials mining projects for years. Some problematic aspects of these projects are presented in this publication, such as the case of the Amulsar gold mine in Armenia (Case 4, page 16) or Dundee Precious Metals' investments in Bulgaria and Namibia (Cases 3 and 5, pages 13 and 18).

Despite the high standards set in the Bank's policies, the EBRD has proven unable to ensure full alignment of the mining projects it supports with the requirements of the SDGs. Without substantial change at the level of technologies and the business model, it is nearly impossible for the mining projects to fit in the new SDGs agenda. But even in the current situation, multilateral development banks such as the EBRD can do more to protect biodiversity and water resources, and to ensure that the will of local communities is respected. Only outside of biodiversity and water no-go zones, and with the consent of communities, the EBRD can help improve mining projects. They should set progressive sustainability conditions for the mining projects and consequently execute them.

³² World Economic Forum, [A New Circular Vision for Electronics: Time for a Global Reboot](#), January 2019.

³³ European Environment Agency, [The case for increasing recycling: Estimating the potential for recycling in Europe](#), 18 June 2020.

³⁴ ['Homepage'](#), Interecycling, accessed 15 January 2021.

Speaking at the launch of the European Raw Materials Alliance (an industry driven alliance) in September 2020, the Vice-President of the **European Investment Bank (EIB)**, Ambroise Fayolle, said:

Sustainable raw materials are key for Europe to continue to play an active role in the entire value chain of innovative low carbon technologies. This calls for a greater emphasis on material recycling, circular economy principles and innovative solutions to reduce primary material usage, substitute critical raw materials and improve efficiency in extraction. The EIB stands ready to continue to make a difference in these areas and mobilise financing, including risk-sharing instruments, where there are market gaps.³⁵

The EIB, which aspires to become a leader in financing climate neutral investments, has previously declared its support for the transition to a low-carbon, environmentally friendly and climate-resilient economy. This includes financing projects relating to the supply chain of critical raw materials needed for low-carbon technologies in the European Union.

The EIB's weak point in these projects has been the implementation of its safeguards policies related to environmental and social standards, as well as transparency. The EIB also lacks proper human rights due diligence, especially important for mining projects, where displacement and other negative impacts on the living conditions of the local communities are common.

CASE 6

European development finance supports mines in West Africa without transparent due diligence

The EIB's inability to control the impact of its mining projects outside the EU indicates that the EU will continue to face difficulties in trying to fund mining projects that are sustainable, or even those that meet basic human rights and environmental standards, without significant changes in its policies and procedures.

The African Lion III fund is a financial intermediary project supported by the EIB with the aim to develop the small- and medium-scale mining sector in Africa. The EIB signed this project in 2008 with an amount of up to EUR 15 million. The Bank stated that it has sufficient and efficient due diligence in place, which enables it to control the impacts of projects implemented outside Europe. When it comes to financial intermediaries, the Bank states that:

... [I]n line with the Bank's procedures for this type of operations, the EIB does not assess the individual investments made by the Fund but relies on the Fund's obligations to ensure that all portfolio investments comply with the applicable environmental and social standards (in this case the International Finance Corporation's Performance Standards 2006) and requirements.³⁶

³⁵ [EIB welcomes launch of European Raw Materials Alliance](#), EIB, 29 September 2020.

³⁶ EIB communication to CEE Bankwatch Network, 11 April 2019.

The EIB doesn't publish information about the final beneficiaries of its intermediary projects on its website. The information received on request included the list of companies in which the Fund has invested, but not the list of mines which the companies have used the Fund for. The information regarding the environmental and social performance has been disclosed in a form of the table presented below.

Investee ESMS Assessment

Investee	Rating	Comments
Aurora Minerals	Satisfactory	<ul style="list-style-type: none"> - Remains a shareholder of influence in two companies and AFL3 reinforces Aurora's role in ensuring ESMS policies are developed and strengthened in its investees. - Still early stage exploration so limited ESMS impact from company activities.
Kasbah Resources	Satisfactory	<ul style="list-style-type: none"> - Quiet 2018 with little progress on project financing. - Maintains positive relationship with Moroccan authorities during this period of inactivity.
Roxgold	Excellent	<ul style="list-style-type: none"> - [...] operated successfully with a strong safety track record - only one LTI to date. - [...] successfully commissioned without incident. - Large local employer benefiting from a substantial inclusive training program that has maximised employment opportunities for the community.
Toro Gold	Excellent	<ul style="list-style-type: none"> - [...] operated successfully in Senegal. - Transition from large construction workforce to permanent operations workforce. - High profile ESMS team in place and a strong performer. - Proactively managing proximity to national park.

Table: EIB, Disclosed part of ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM (ESMS) ASSESSMENT 2018 Audit Prepared by: Lion Manager Pty Ltd, for African Lion III Limited, email to CEE Bankwatch Network, 5 May 2020.

CEE Bankwatch Network's research established that one of the supported mines is probably Mako gold mine in Senegal, operated by Petowal Mining Company, which is owned by Toro Gold. It received a 15-year mining concession from the Senegalese government in July 2016. **Toro Gold was engaged with UNESCO on the issue of the mine's impact on Niokolo-Koba National Park, which is on the List of World Heritage in Danger. UNESCO's 2019 report on the state of conservation of the properties on this List³⁷ describes the fragmentation of the chimpanzee habitat in Niokolo-Koba National Park and the degradation of the intervention zone at Mako.**

The EIB's weak due diligence means that there is no effective way for the Bank to monitor the impact of such projects. This calls into question whether the EIB can support the acquisition of raw materials in a sustainable way, as Vice-President Fayolle claims.

³⁷ United Nations Educational, Scientific and Cultural Organization, ['State of conservation of the properties inscribed on the List of World Heritage in Danger'](#), (item 7A of the Provisional Agenda at the Convention Concerning the Protection of the World Cultural and Natural Heritage, World Heritage Committee, Forty-third session, Baku, Azerbaijan, 30 June - 10 July).

Photo: Csaba Nagy, Pixabay



The way forward

In order for the EU's green and digital approach to not be business as usual, it needs to have a clear vision and dedicated funds to overcome the problems related to raw materials mining. The challenges and case studies raised in this report suggest that the EU should consider the following actions to ensure that its new development model is a sustainable one, and not a raw deal.

- **The reduction of resource use should be the underlying principle for any new publicly financed project.** Resource efficiency considerations should no longer come as an 'afterthought', but should be examined all along the lifetime of operations, including before they take place. This principle should be considered as part of a methodology for individual project assessment so that the principle of prevention of pollution at the source and the precautionary principle are enforced³⁸.
- **A significant shift from the current technologies, which require heavy consumption of water, energy and harmful substances, should be a part of the transformation agenda.** Alternatives exist, but they are not largely applied because they are not the cheapest feasible options. Instead, the real costs of resource exploitation, including the costs of pollution and high levels of water and energy consumption, should be reflected in the final product to encourage the use of more sustainable alternatives.
- **Old mining sites should be remediated and their toxic elements cleaned.** The European Green Deal is the best opportunity to finally take care of thousands of old mining sites and facilities across Europe and its neighbouring countries which continue to jeopardise the goals for the protection of ecosystems and human health.
- **Environmental permits and procedures must be strengthened and adjusted to the mining projects.** Many national authorities accept and approve EIA reports with incorrect data or manipulative conclusions, often under political pressure to secure investments. Legal loopholes allow the authorities to grant environmental permits even without an EIA procedure or any further conditions and requirements, as illustrated in the Serbia copper mine case. The quality of EIA assessment and the implementation of EIA permit recommendations can have a major impact on protecting biodiversity and preventing pollution, and ensuring high-quality permits are implemented needs to be a priority in mining cases.
- **Toxic compounds and their international transport should be better controlled.** EU and international waste legislation require waste to be reduced at the source and hazardous waste to be disposed of in the state where it was generated. These basic waste management rules are systematically disregarded by mining companies who sell or transport metal concentrates around the world. Very often, the metal concentrates contain toxic compounds which, instead of being treated according to the waste requirements in the country of origin, are exported and dumped elsewhere, usually in countries with weak environmental legislation.

³⁸ European Commission, [EIA Directive](#), 2009; European Commission, [Industrial Emission Directive \(IED\)](#), 2010. The principle of prevention of pollution at the source is enshrined in Article 192(2) of the Treaty of the Functioning of the EU (TFUE) and has been implemented through secondary legislation.

- **Concession requirements should prevent the uncontrolled trade and export of critical raw materials or rare earth elements out of the EU.** Many of the raw materials resources concession contracts include only one or two basic metals which are found in the largest quantities at the deposit. The contracts do not account for other elements available in the ore, which can be other critical raw materials or rare earth elements. In these cases, the state loses revenue, and these important materials are most often exported. How will the Commission ensure that the materials from mining projects in the EU will serve the industrial purposes of the EU and will not be exported or sold to the stock exchange? All current metal concessions in the EU should be reviewed and the missing elements should be accounted for in the concession contracts.
- **Impacted communities should have a clear legislative option to reject mining projects.** More and more local communities affected or threatened by mining projects oppose their development worldwide. These communities, even in the EU, are often subject to intimidation and repression by the state authorities or the companies. It is high time for EU legislation to clearly formulate the right of affected communities to reject any heavy industry project and, in that way, to give them the ability to protect their right to a clean and healthy environment.



Photo: Vlad Chetani, Pexels

CEE Bankwatch Network's mission is to prevent environmentally and socially harmful impacts of international development finance, and to promote alternative solutions and public participation.

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