

SUSTAINABILITY
REPORT 2021

PRESERVING VALUES

ZANGEZUR
COPPER MOLYBDENUM COMBINE

SUSTAINABILITY
REPORT 2021

PRESERVING VALUES



MISSION STATEMENT

As the top copper and molybdenum producer in Armenia, we deliver value and prosperity to shareholders, employees and communities. We explore, develop, and build, and operate a mining enterprise that responsibly produces copper and molybdenum for the global community – sustaining and enhancing our way of life, protecting our environmental surroundings, and returning value to our stakeholders. Our goal is to become one of the leading copper and molybdenum producers in the world while continuing to drive innovation, digitalization and change across the industry, while optimizing the mining value chain in real time.

ABOUT THIS REPORT

The aim of our first sustainability report is to communicate our vision and our sustainability goals to our stakeholders. By making our plans public, we are also holding ourselves accountable: We must and want to be measured against our progress.

This report covers the activities of “Zangezur Copper Molybdenum Combine” Closed Joint-stock Company (ZCMC) in fiscal year 2021 (January 1 to December 31), unless otherwise stated. The activities contain ZCMC mining and processing operations in the Kajaran open-pit mine, in the province of Syunik in Armenia; the corporate offices in Kajaran and Yerevan; and the key functions over which they exercise control.

The report includes all the significant impacts that our activities have on the environment, society and our

governance. The report has been compiled with reference to the transparency standard of the Global Reporting Initiative (GRI Standards 2021).

The company sold part of its treasury stock, which comprised 60% of total shares, to a new shareholder during 2021. The new shareholder transferred 25% of the acquired treasury stock to the Government of the Republic of Armenia. Information relating to significant events after December 31, 2021, and up to the date of this report's publication in April 2022 is not included.

The report contains forward-looking statements based on current assumptions and expectations. Various factors may cause results to differ from the estimates presented here. The report has not been audited.

The ZCMC Executive Board ([see page 59](#)) has established a sustainability directorate under the risk management umbrella to support the review and approval of the sustainability strategy. However, the sustainability reporting approval process has not been included and it is scheduled to be formalized during 2022. As this sustainability report will be the company's first, the individual existing departments have been instructed to create their reviews for the data provided for sustainability reporting independently.

A MESSAGE FROM THE CEO



I am pleased that ZCMC's First Sustainability Report is out, thanks to the dedicated work of everybody in the team who contributed. A sustainability report is an integral part of the reputation of the company, its commitment to being a good corporate citizen, its face. This report was put together under the previous management and ownership of the company. And I am thankful to the previous management for this effort. Today it is the face of our company and we take full ownership of it. There are problems identified, and I appreciate that we as the new owners and management of the company have a lot of work to do to make sure that the face of the company improves each year.

There was also a lot of work done in the field of sustainability and there are indicators in this report that I believe everybody working in ZCMC should feel proud for.

Environmental, social management, health and safety, accountability and transparency are not just a trendy think in mining. It is the new *modus operandi* for all those companies that want to have a future in the modern industry, who want to secure the trust and buy in of their communities and who want sustainable success. I want this to become ZCMC's *modus operandi* for the years to come. I want to thank the team at ZCMC all those of our employees

who contribute every day to making sure we have a safe, sustainable operation. There is always room for improvement and I want all of us to be proud of the improvement we achieve every year compared to the previous.

I want to convey a message to all our team, to all our stakeholders and shareholders, to our communities and to the people of Armenia. ZCMC is the heart of Armenia's economy. It is the duty of all of us to ensure the health of this enterprise on all realms, but especially in the area of sustainability. Modern mining is a one where there is no room for a compromise on good environmental management, on social justice on decent workplace for all, on transparency and accountability.

It is with this recognition that we have published this report that is also a new starting point for all of us. This report will be published annually and each year we will strive for improvement and for better results on all aspects of sustainability.

Roman Khudoli
CEO ZCMC

A MESSAGE FROM DIRECTOR OF SUSTAINABILITY



The Sustainability Directorate of ZCMC is happy to present the first Sustainability Report of ZCMC. We consider this a historic event, as this is the first time the largest enterprise in Armenia and one of the world's top molybdenum producers is presenting a Sustainability Report.

I joined the ZCMC team when this report was mostly completed and first and foremost I want to thank the previous management of the Sustainability team and the team itself for the courage, for the effort and for the initiative. Enormous work has been done and we are sharing it with all our stakeholders thanks to the consistency and hard work of the team.

Sustainability is not part of the operation. The goal is to make it the core of the operation on all realms. We are not there yet. The industry is challenged worldwide and especially in developing countries, Armenia among them. There is still a lot to do to make sure that mining companies adopt all modern sustainability standards, implement them and in so doing, change the perception of the industry. And I am glad the team realizes this and strives for change.

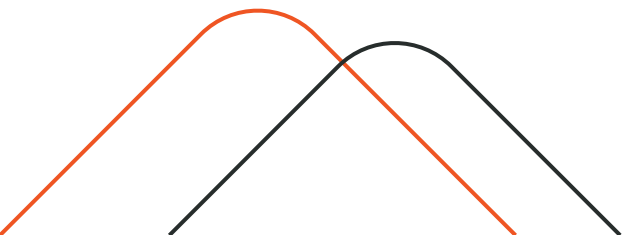
This report reveals a lot of effort ZCMC has put into adopting ESG good practices in areas where those were either non-existent or weak. But it also reveals gaps and deficiencies. We are glad it does. Because it gives us clear guidelines of where we need improvement and what we want to see improved in the next year's report and in years to come.

Mining is not just a necessary industry. It is essential, especially nowadays, with the green transition aspiration on the agendas of all countries. Mining needs to be driving the sustainability debate and for that the industry needs to transform itself. Maybe even in quicker pace than any other industry.

Greenwashing is not an option. It is not going to make it easier for mining companies to get the social license to operate. That is why an open, honest and in-depth dialogue is needed. We hope to be opening it with this report and improving together.

I want to thank the management of ZCMC, for the commitment to change and I want to invite everybody in the team to be part of that change.

Sincerely,
Armen Stepanyan
Director, Sustainability





JOHANNES BHATT
Former Chief Executive Officer of ZCMC

DEAR READERS,

I am pleased to present ZCMC's first ever sustainability report. Here, we outline the many ways our employees are making a difference in the workplace and in our communities.

We recognize that environmental, social and governance (ESG) factors are becoming bigger priorities for investors, shareholders and a broader group of stakeholders. Therefore, as miners, we want to integrate ESG topics more visibly into corporate strategies, decision-making, and stakeholder reporting.

ESG continues to be a major focus at ZCMC and is becoming more integral to our strategy with each passing year. I am particularly proud of the tremendous progress we made during a very challenging year. Even as the COVID-19 pandemic continued to pose

challenges, ZCMC applied the same ingenuity and innovation to deliver on our corporate citizenship mission.

However, the true measure of our success as a leading Armenian mining company is our relationship with the local communities where we live and operate. To support these communities, we have continued investing in our social focus areas, all of which are underpinned by diversity and inclusion, to ensure our giving is strategic, impactful and in line with our corporate values.

In 2021 our focus was on following key issues:

1. Health and safety:

- ▶ implementing a new PPE policy in 2021 (personal protective equipment),

- ▷ strong focus on health and safety training, and
 - ▷ improving all relevant health and safety KPIs as a key goal.
2. Protecting all of our employees against the risks and dangers related to the COVID-19 pandemic in order to safeguard continuation of our operations at all times. I am grateful for the incredible teamwork, resilience and care across ZCMC.
3. Environment:
Various key projects launched in 2021 for
- ▷ improving waste collection and recycling, and for
 - ▷ improving our water-use efficiency as well as driving improvements on a broad scale.
4. Further digitalizing our EHS database (environment, health and safety) and environmental data sources.

5. Continuing our efforts to strengthen our stakeholder relationships and maintaining our positive impacts on surrounding communities at the same high level.

We will continue to develop and implement our ESG strategy within our corporate strategy cycles.

Looking ahead, I have a positive feeling about the progress we will continue to achieve as we work closely together with our communities, customers and shareholders. While we still have work ahead of us to create shared value, we have a solid action plan in place for 2022. I invite you to read on to learn more about our work, the people in our company, and our communities' stories, all presented in this report.

Johannes Bhatt
Chief Executive Officer of ZCMC

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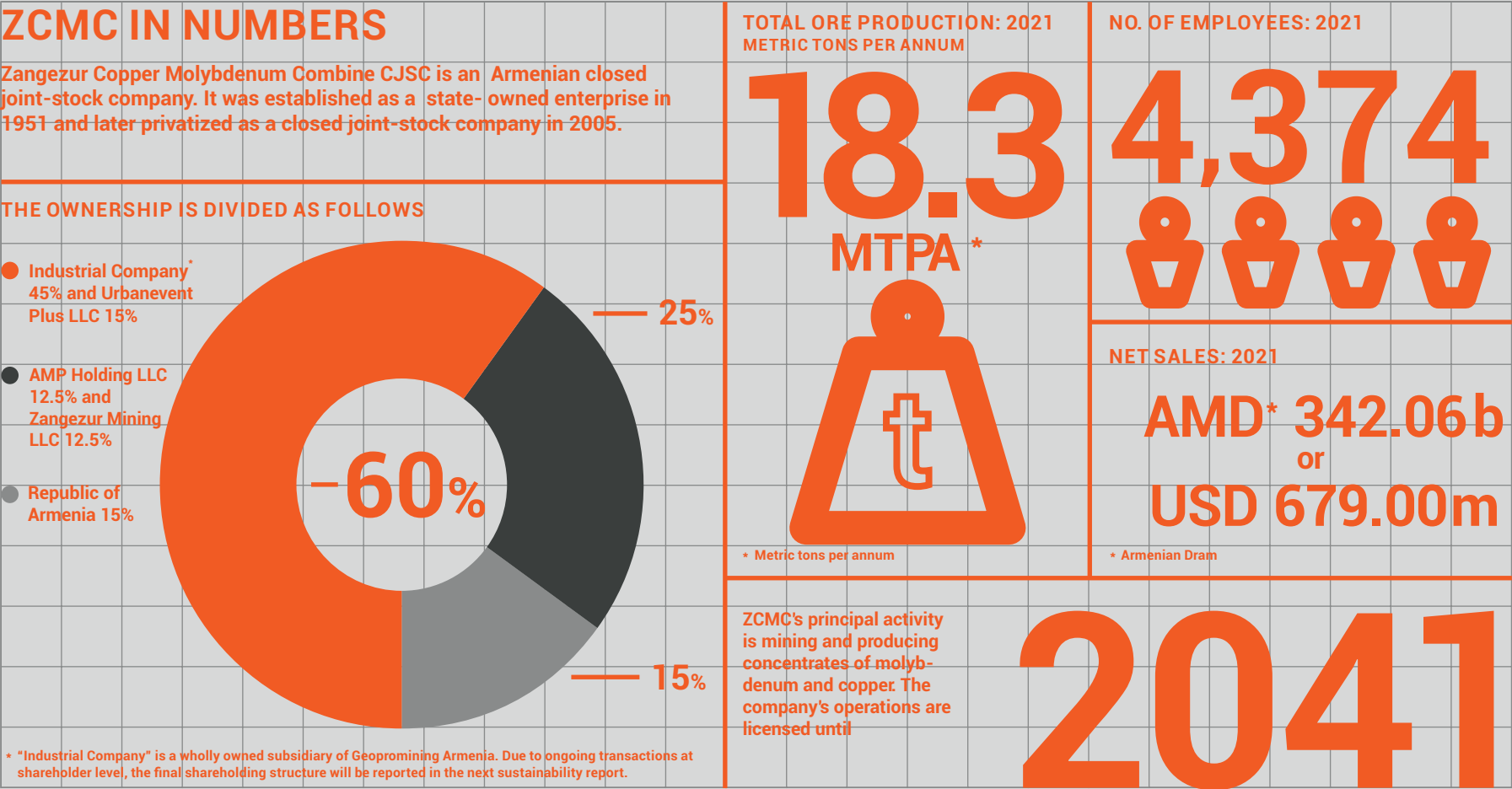
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ABOUT ZCMC

Armenia's mining industry has been strengthening its domestic economy and enriching nations around the world through its ores and minerals for 250 years. Since the country's earliest days of copper extraction in the 1770s, sizable deposits of gold, molybdenum, lead and zinc have also been discovered and processed for international sale. The mining industry has enjoyed steady growth and now accounts for roughly one-third of Armenia's economy. This makes mining companies integral not only to construction projects and technological developments worldwide, but to the continued growth of Armenia itself. The Zangezur Copper Molybdenum Combine (ZCMC) is chief among these companies.

ONE OF ARMENIA'S BIGGEST EMPLOYERS

Since its founding in 1951, ZCMC has grown to become a recognized leader in the mining industry in its home country of Armenia and abroad. The state-owned enterprise was privatized as a closed joint-stock company in 2005, and was the country's fourth-largest employer in 2021. For almost 70 years, ZCMC has been among the largest taxpayers. High-quality reserves and large-scale corporate responsibility programs distinguish ZCMC from other mining companies in the region, while the company's size



▲ Top view of the Zangezur Mountains, the location of the Zangezur Copper Molybdenum Combine, Armenia

allows it to produce enormous volumes of ore – 22 million tons per year – and still achieve impressive operating efficiency.

In addition to the quality of the reserves, location provides a distinct competitive advantage. ZCMC is headquartered in Kajaran, just a few hundred kilometers south of Armenia's capital city of Yerevan and within Syunik, the country's second-largest province. From here, the company enjoys proximity both to Syunik's administrative center and to the natural resources in Kajaran's varied and textured topography. Mountains nearly 4,000 meters high surround the mine and the open pit is operated at an elevation of between 1,830 and 2,360 meters.

The company mainly mines and processes Armenia's large, long-lived, thoroughly proven deposits of molybdenum and copper. These two minerals are used worldwide in thousands of products considered indispensable to modern society, while their concentrates are essential to the steel industry and industrial production.

But valuable resources lose their value without someone to tap them, process them and begin transforming them into salable goods. This is precisely where ZCMC has entered and helped plug Armenia into the global economy, as ZCMC serves the metal and mining industries of China and much of Europe, where smelters are the main beneficiaries.

ZCMC is a single operation comprising the following three units:

- ▶ The open-pit mine
- ▶ The processing plant
- ▶ The Artsvanik Tailing Storage Facility

This report will look at each unit in depth to illustrate the company's history and scope of activities.

OPEN-PIT MINING

ZCMC was put into operation as a closed mine in 1951. Both sub-surface and surface extraction were used in combination from 1954 to 1962, after which point surface extraction was used exclusively.

The open pit in operation sits on the right side of the Voghji river, roughly 2,200 meters above sea level. The higher elevation improves efficiency by drastically reducing interference from groundwater, as mines that extend below the water table rely heavily on dewatering equipment to keep the site sufficiently dry. With such low groundwater inflow at ZCMC's mine, only water from precipitation and

surrounding creeks and rivers needs to be drained from the pit. This keeps the need for dewatering equipment to a minimum, making the way for more reliable access to the region's generous ore basin.

Recent geological explorations indicate that the Kajaran ore basin has a total of 2.21 billion metric tons of proven ore reserve. Copper content accounts for 5.22 million metric tons of that reserve, while the molybdenum content makes up 0.72 million tons. ZCMC operates the Kajaran deposit as an open-pit mine that currently produces tens

of millions of tons of ore annually, and could do so for centuries, given the size of the reserve.

The process is as follows: Ore is initially accessed through blast mining, at which point it is extracted from the mine by excavation shovel 24 hours a day and loaded into trucks. From there, the ore is sent to the primary crusher either directly by truck or via the in-pit ore pass and rail haulage. The ore is then processed into molybdenum and copper concentrates, which are then roasted and smelted both in Armenia and abroad.

▼ Open-pit logistics operations at ZCMC



PROCESSING PLANT OPERATIONS

The products of ZCMC's mining can be found in a wide range of industries, including mechanical engineering, automotive manufacturing, electronics and electrical engineering, petrochemical and oil refining, power generation, construction, consumer goods, healthcare, food and chemicals. But how does the ore go from its raw state to a salable good?

The answer lies partly in the processing plant. At the processing plant, the conventional processes of crushing, grinding and froth flotation turn the freshly mined ore into separate concentrates of copper and molybdenum. After separation, the copper and molybdenum concentrates are dewatered in two separate plants. Quality control is then conducted in state-of-the-art laboratories that handle the ore samples, perform flotation analyses, and carry out other research tests.

ZCMC expanded the plant's flotation capacity between 2005 and 2009 with new larger-volume forced-air cells; these operate with low-pressure air and automatic level controls, increasing efficiency and modernizing plant operations.

Overall, the ZCMC processing plant is a mature, modern facility currently capable of treating ore at an impressive rate of 22 MTPA (metric tons per annum). But with throughput set to increase after the installation of additional



▲ Flotation cells inside the processing plant

technology, such as a new grinding line and a ball mill, this plant's star is just beginning to rise.

How Our Minerals Keep the World Running

Copper is currently one of the most in-demand and versatile metals in the world, and a mainstay in the production of industrial steel. It has also become indispensable in the development of renewable energy: The electrical conductor industry consumes up to 60% of the global refined copper output to manufacture various cables and wires.

In addition to widespread application as a catalyst in the petroleum industry, most commercial molybdenum is used in the production of alloys such as steel. The steel industry also relies on molybdenum oxide and ferromolybdenum – derived from molybdenum – for their strengthening properties and resistance to corrosion and heat.



TAILING STORAGE FACILITY

The next important step after processing occurs in the Artsvanik Tailing Storage Facility (TSF).

The TSF is an engineered structure consisting of two parts: an area to contain residues from mining operations and metal ore processing, and a protective dam to manage the associated water. Minerals that do not float during froth flotation gravitate through a series of pipes and channels that connects the processing plant and TSF. This route lies on the left bank of Voghji river and deposits the minerals at the tailing storage facility in Kapan.

The Artsvanik tailing dam is located in the Artsvanik gorge, 34.5 km from the processing plant. Situated 900 m above sea level, the dam currently operates with a capacity of 398 million cubic meters.

Expanding its operations and updating its facilities has allowed ZCMC to grow as a global player in recent years. The company's net sales came to AMD 341.3 billion (USD 691.3 million) as at December 31, 2021. Their total capitalization was AMD 267 billion (USD 551.6 million) as of September 30, 2021. AMD 111 billion (USD 230 million) of this is equity, while AMD 156 billion (USD 321 million) is debt.

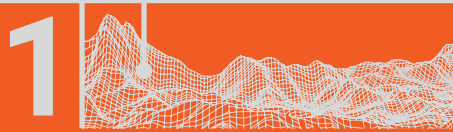
With investments in community programs, renewed focus on sustainability, and a clear commitment to working for the good of all its stakeholders, ZCMC is charting a path for future success.



Map of the Artsvanik Tailing Storage Facility, 34.5 km from the open-pit mine and processing plant

▲ Lake view of Artsvanik Tailing Storage Facility

STRATEGY



ZCMC'S Sustainability Value Mission: We deliver on tradition and experience. In over 70 years of operation, ZCMC has proved to be a reliable employer actively dedicated to our community, and a trustworthy, transparent business partner. Preserving the values that embody our corporate identity is at the heart of everything we do.

<div>KEY FACTS & FIGURES: SUSTAINABILITY STRATEGY</div>				<div>OUR CORPORATE RESPONSIBILITY ACTION FIELDS</div> <div><div>1</div>Community development</div> <div><div>2</div>Local education and capacity building</div> <div><div>3</div>Employee health</div> <div><div>4</div>Modernization</div> <div><div>5</div>Resource conservation</div> <div><div>6</div>Vertical integration</div> <div><div>7</div>Digitalization</div>
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ZCMC VALUES

Sustainability is a key value that informs both our activities today and our plans for tomorrow. Mining operations' impact on the environment is by now well established. But these operations are also vital for ensuring access to the raw materials that entire sectors rely on to provide a better quality of life to all people around the world and to keep technology advancing. To this end, ZCMC indirectly makes a significant contribution to vital industries such as solar energy and communications infrastructure. This in turn benefits the company itself as new technology makes us more efficient, protects our employees and enables us to deliver high shareholder returns.

The community also benefits from our operations: The geographical area we work in is home to many of our employees. Around 70% of the working-age population in the city of Kajaran is employed by ZCMC. Our company is part of their landscape and part of the community. Our employees are the foundation of our success, and their dedication and expertise are what make our business profitable.

Protecting the environment, improving the quality of life for our employees and in the communities close to us, and preserving the character of our company are the most important focal areas of our ESG work.

We ensure that our business practices remain responsible through transparency in the form of open communication with stakeholders and accountability within the organizational structure. This is vital to the company's reputation and to minimizing any risks associated with legal consequences. Preserving the reputation that we have built up over 70 years is essential to us. We also value the trust that our employees and partners place in us. It has helped us deliver better returns for shareholders, manage risk effec-

ZCMC Mission



We are dedicated to sustainably using natural resources and the latest technology to help people realize their dreams by providing mankind with two minerals essential to modern life.

tively, reduce environmental impacts, cut operating costs, attract and retain high-caliber employees, and provide more business development opportunities.

ZCMC is fully committed to sustainable development – that is, meeting the needs of the present without compromising the ability of future generations to meet their own needs. In this chapter, we will describe our approach to sustainability and showcase some of the programs we have initiated to achieve our sustainability targets.

ZCMC MISSION STATEMENT

ZCMC is dedicated to sustainably locating, mining and processing two of the most sought-after minerals in the world: copper and molybdenum. The company's strong competitive advantage in these areas helps the company.



Sustaining this advantage and remaining a leader in the industry are ZCMC's defining top priorities. We are constantly working toward fulfilling these priorities, and the company has committed itself to values that best illustrate this:



UPDATING OUR ESG STRATEGY

To stay current with the most sustainable practices and planning, ZCMC finished updating its ESG strategy in early 2021. The revised strategy is built around the following criteria:

- ▶ Achieving sustainable development goals and delivering real benefits to the stakeholders
- ▶ Building on the positive social impact and minimizing harm to the environment
- ▶ Being equipped with all necessary tools and the ability to plan and strategize in response to the rapidly changing human and natural environment, in due time and at reasonable cost

The strategy follows the analyses of the material areas where our company has the biggest environmental impact and is aligned with the ICMM Mining Principles for Sustainable Development as well as the UN's Sustainable Development Goals.

Community development is a matter that ZCMC takes to heart. We have invested in training the local population, maintaining and building local infrastructure, and promoting equality in our workforce. We are monitoring our company's adherence to its environmental, social and governance obligations as well as setting ourselves targets for improvement.

STAKEHOLDER MANAGEMENT

We stay in constant dialog with our stakeholders through channels like a monthly employee magazine, our website, and our corporate responsibility and financial reporting.

From employees to multinational NGOs, we have identified our stakeholders so that we can have a clear understanding of the impact our operations have on them and define their relevance to our company, their expectations and their needs. One of the main platforms we use to engage with stakeholders is the Extractive Industries Transparency Initiative (EITI). ZCMC is one of the founding members. EITI promotes multi-stakeholder dialogue regarding natural resource management. Additionally, we recognize that all stakeholders have an important impact on our business. We see the value in maintaining good relationships with all the people who have an interest in ZCMC. Our business depends on it.

ZCMC Stakeholders

INTERNAL

- ▷ Our employees
- ▷ Contracted workers
- ▷ Temporary workers and service providers
- ▷ Trade unions

EXTERNAL

- ▷ Local communities and authorities
- ▷ State authorities
- ▷ Local and national NGOs
- ▷ Local and national business partners
- ▷ Transnational and international organizations (e.g. UNO, World Bank, ICF, EU, EBRD)

ZCMC Action Fields		
We have identified the following most strategic corporate responsibility action fields:	1	COMMUNITY DEVELOPMENT
	2	LOCAL EDUCATION AND CAPACITY BUILDING
	3	EMPLOYEE HEALTH
	4	MODERNIZATION
5	RESOURCE CONSERVATION	
6	VERTICAL INTEGRATION	
7	DIGITALIZATION	

SOCIAL, ECONOMIC, TECHNOLOGICAL AND ENVIRONMENTAL IMPACTS

ZCMC began operations in 1951 and moved to open-pit exploitation mining at the beginning of 1962. This timeline demonstrates that the positive and negative impacts associated with mining in this region have been successfully managed for almost 70 years. We are fully focused on continuing this successful trend and harnessing the power of such modern technology as cloud-based fleet management systems to ensure that we can continue making positive contributions to society.

Although mining in general has a considerable impact on the environment, mining copper and molybdenum is essential for advancing society and technology. Copper is Armenia's main export, and the country and its people are thus reliant on mining to make Armenia a competitive player on the global market.

We are committed to limiting the negative impacts of mining and maximizing the positive impacts both in our region and on the climate.

A number of projects to modernize our operations and make them more environmentally friendly are currently in the planning stages. We also have measures in place to reduce environmental impacts. Thanks to the finished refurbishment of existing roads that were part of our transport route, we have now managed to reroute most of our trucks to the M2 highway, away from local roads. This has significantly reduced the noise, dust and potential traffic accidents that the local population was previously exposed to.

The key positive impacts of our operations include reliable and gainful employment, personal development and infrastructure funding.

These go a long way toward balancing the key negative impacts of our operations, which include the use of non-renewable natural resources, pollution and health impacts on the workforce and local population.

VALUE CHAIN

Our value chain covers the exploration of the site, reserve estimations, designing, permitting, development/construction, mining, logistics, processing and selling, decommissioning, and restoration and monitoring.

For our value chain, we have analyzed the potential for both the positive and negative impacts of our business activities. We have considered the following impact categories:

- ▷ Labor and working conditions
- ▷ Demographic and gender impacts
- ▷ Economic impacts and employment
- ▷ Community health and safety
- ▷ Impacts on quality and accessibility of infrastructure services
- ▷ Impacts on ecosystem services, tourism and cultural heritage
- ▷ Cumulative impacts

ZCMC SUPPLY CHAIN IMPACTS

With its mining operations, ZCMC stands at the beginning of an important supply chain that spans the entire globe. We transport our copper concentrate and molybdenum concentrate from the mine by truck to Yerevan, some 350 km away. Here the copper concentrate and molybdenum concentrate is loaded onto trucks and taken 700 km to the primary port, Batumi, located in Georgia. The concentrates are then shipped onwards to a number of destination ports around the world.

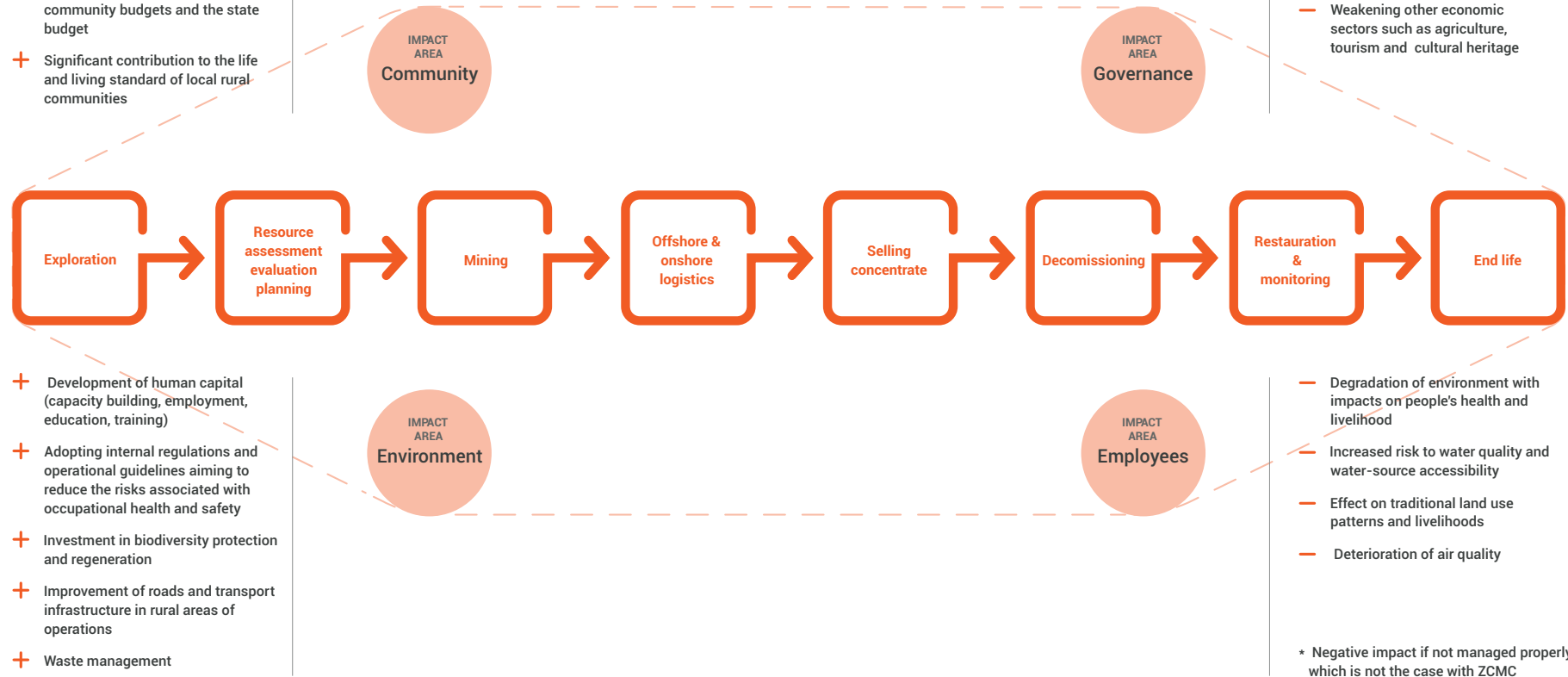
ZCMC VALUE CHAIN

POSITIVE IMPACTS

- + Creation of job opportunities
- + Increased tax revenues for local community budgets and the state budget
- + Significant contribution to the life and living standard of local rural communities

NEGATIVE IMPACTS*

- Increasing the risk of traffic accidents in local rural areas
- Weakening other economic sectors such as agriculture, tourism and cultural heritage



Ferromolybdenum requires an additional step in the supply chain: Molybdenum concentrate is transported by truck to smelters in Yerevan first to produce ferromolybdenum. The ferromolybdenum then follows the same route as the copper and molybdenum concentrates.

ZCMC also procures as many services and materials locally as possible to support the local economy. In 2021, 77% of ZCMC suppliers were either from the Kajaran area or local Armenian service companies.

The processing and selling operations are performed by external suppliers and contractors. To ensure that all business partners comply with ZCMC and international standards, ZCMC has been using a supplier ESG evaluation form since 2021.

RISKS AND OPPORTUNITIES

Most material risks associated with our business activities are risks to the environment and to people, such as accidents that could impact employee health or the natural environment, for instance. Our company is also subject to operational and financial risks.

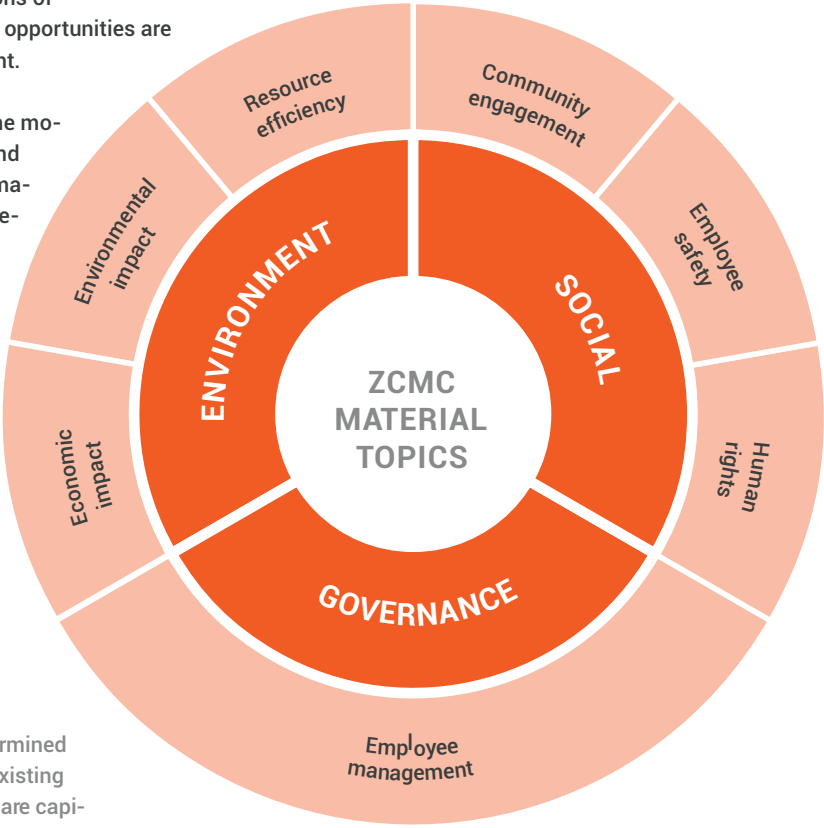
We analyze all risks and the impact that these risks could have on our business if they were to materialize. Risks are classified according to probability of occurrence and severity of impact, and monitored constantly. The company evaluates risk pursuant to ISO 31000:2018.

We also monitor our value chain and sector in general for opportunities (see page 19). Discussions of how to best exploit and move on these opportunities are held at the highest level of management.

The main opportunities for ZCMC at the moment lie in modernizing its facilities and processes, improving efficiency, automation and digitalization, and vertical integration. One example of a modernization project currently in the planning stages is a cloud-based fleet management system that would allow us to monitor fuel consumption and wear and tear on tires, thus reducing the costs associated with running and maintaining our fleet and the environmental impacts of transporting our products.

MATERIALITY ASSESSMENT

The material topics at ZCMC were determined at Group level, based on applying the existing best practice. Due to changes in the share capital structure in 2021, they will be aligned with the new Group's material topics, following in 2022.



HOW WE APPROACH ESG

In light of the above-named impacts and material topics, ZCMC has set itself clear targets that shape its overall approach to ESG.

- 1 The company aims to reduce safety incidents on site and maintain its rate of zero fatalities. ZCMC Risk Oversight manages occupational health and safety at the company through health and safety officers, accident logging, timely investigation of work accidents, and by providing specific training to employees to raise awareness and equip them to handle any risks they may encounter. State inspections are also performed annually at high-risk facilities, further ensuring the safety of all relevant parties.
- 2 Another important target is improving employee development within affected communities. Measures to achieve this target include continuing to fund and promote training and development opportunities along with developing the skills of the workforce.
- 3 In the field of community development, the company remains committed to investing in community programs, initiatives and infrastructure development. In one instance, ZCMC recently funded the structural refurbishment of a bridge and asphalted streets and sidewalks in the city of Kajaran.
- 4 The company also remains dedicated to reducing water and energy consumption, and waste through the efficient use of resources. This includes identifying, developing and implementing measures and technology to reduce energy consumption and waste while conserving natural resources.
- 5 In terms of the environment, ZCMC aims to keep the environmental incidents as low as possible by raising employee awareness, training in and adherence to occupational health and safety measures, and careful monitoring of equipment and processes. In the area of governance, the company takes a zero-tolerance stance on child labor and discrimination in the workplace; the same goes for

From “Developing” to “Stable”

UPGRADE IN MOODY'S FOREIGN CURRENCY CREDIT RATING

In June 2021, Moody's Investors Service upgraded ZCMC from B3 to B2 in their foreign currency rating with a stable outlook. The upgrade reflects deleveraging, EBITDA expansion amid rising copper prices, and planned debt reductions in 2021–2022 as well as ZCMC's plans to reduce their environmental footprint.

corruption, fraud and bribery. All of these are monitored internally by our health and safety officers and compliance teams.

- 6 The company has established an Environmental & Social Oversight Committee which performs quarterly reviews of the company's sustainability performance and compliance with sustainability policies. You can learn more about this in the chapter “Governance.”

FULLY COMMITTED TO SUPPORTING COMMUNITIES

ZCMC is involved in several social projects that focus on supporting local communities to create shared value along the value chain. Our company has designated a budget to fund community development projects every year. These projects promote education, culture and sports, among other values.

Some of our recent projects even included, for example, computer skills training courses for employees in field of operations, sponsoring local sports competitions, in-kind donations to local cultural organizations, and supporting people struggling in poverty.

The funding was divided between projects in the areas listed in the table.

ZCMC SOCIAL PROJECTS

No.	Type of project	Sustainable Development Goals	Amount AMD ('000)	Amount USD ('000)
1.	Construction activities in social sector	3, 4, 9, 11, 17	337,158	669
2.	Social projects and community investment	1, 2, 3, 4, 8, 9, 11, 16, 17	1,317,029	2,614
3.	ZCMC Foundation	1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 17	2,227,866	4,422
Total			3,882,053	7,705

▲ Total budget in 2021, converted from Armenian drams to U.S. dollars based on the exchange rate at December 31, 2021

▼ Sustainable Development Goals



FUTURE DIGITALIZATION

ZCMC aims to evolve from a traditional mining company with many manual processes into a modern enterprise, with fully digitalized assets and data-driven processes, by the end of this decade.

The company is currently rolling out a digital strategy that covers all areas from production processes and environmental impact monitoring to administrative functions and technical support.

The total figure budgeted for implementing digital projects in 2021 was around AMD 86.4 million, or USD 180,000. Of this, 45% was earmarked for the digitalization of production processes, such as digital production monitoring, production flow monitoring, water metering points, mine fleet management, fuel management, health and safety management, and risk management, including environmental risks.

Three further focal points of investment activity in 2021 were the renovation of the diesel park, fleet management, and the operation control center.

By implementing its digital strategy, the company aims to increase the functionality of its machinery through full automation, resulting in:

- ▷ in-depth visualization of its resource base and optimization of mining operations,
- ▷ process optimization of supply chain “from mine to customer”, and
- ▷ improved error prediction and diagnostics while transitioning to a new maintenance strategy.

ZCMC is working tirelessly to streamline its operations and increase productivity.

We aim to increase the amount of value creation within our company and within the country to increase efficiency, profitability, and transparency in the production of molybdenum and copper concentrates.

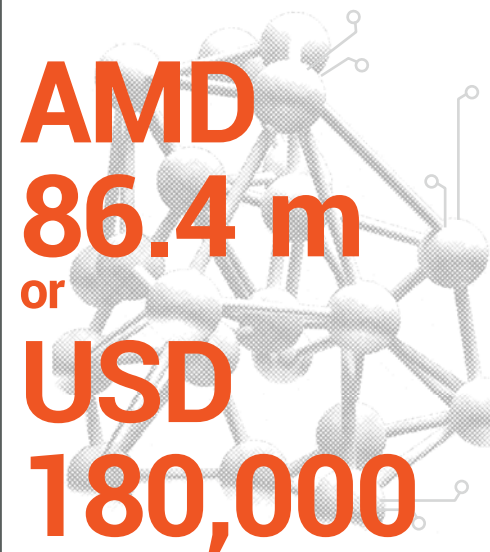
We are refining several projects to modernize and digitalize our equipment and processes.

The aim of future investment will be to achieve

- ▷ an increase in ore production,
- ▷ value generation,
- ▷ jobs creation, and
- ▷ increased strength and stability of the Armenian economy.

Total budget for implementing digital projects in 2021

**AMD
86.4 m
or
USD
180,000**



COMMUNITY

2



Retaining strong local support and keeping the channels of communication open with our communities is one of ZCMC's top priorities. We regularly invest in local infrastructure and human capital to improve quality of life for our employees and their families. We want to create an inclusive society and help our local communities to thrive – economically, environmentally and socially.

KEY FACTS & FIGURES: COMMUNITY

SYUNIK REGION



97%

of employees come
from this region

77%

of our suppliers are
based in this region

INFRASTRUCTURE PROJECTS

Our contribution to development in the region



**BRIDGE AND ROAD CONSTRUCTION,
LAND RESTORATION**

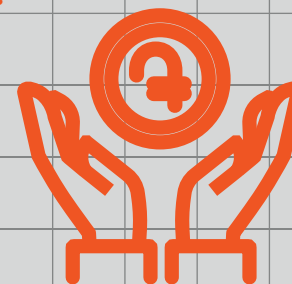


**CONSTRUCTION OF SPORTS,
CULTURAL AND ENTERTAINMENT
FACILITIES**



**IMPROVEMENT OF EFFICIENCY
OF UTILITY SERVICES**

We have contributed AMD 3.8 billion /
USD 7.8 million to levelling up the region,
of which AMD 1.65 billion / USD 3.35 million
has been spent on construction and social
projects



WORK IN THE COMMUNITY

Our contribution to improving life in the region



REGULAR CHARITABLE PROGRAMS



**PROMOTION OF SPORTS AND
CULTURE**



**VOCATIONAL TRAINING
SPONSORSHIP**



**EMPLOYEE VOLUNTEERING
INITIATIVES**



**EDUCATIONAL PROGRAMS FOR
CHILDEN OF OUR EMPLOYEES AS
WELL AS FROM FAMILIES IN NEED**

CONTRIBUTION TO THE CENTRALIZED
LOCAL BUDGET IN TAXES IN 2021

AMD 62.6 b
or
USD 124.4 m

World Bank estimations* put the GDP multiplier
effect, based on growth of production volumes
of mining sector, gross value added and employ-
ment, at 1.8 for Armenia, while the employment
multiplier is estimated at 5.3.

* Armenia: Strategic Mineral Sector Sustainability
Assessment 2016

LOCAL COMMUNITIES

ZCMC provides employment opportunities and drives economic activity in our region. The company directly contributed AMD 158 billion (USD 314 million) to the region in 2021, including the total value of operating costs, employee wages and benefits, payments to land-owners and community investments.

We invested a total of AMD 3.8 billion, or USD 7.9 million, in social projects in the region in the past financial year, ranging from health, education and environmental protection initiatives to business development programs. Due to the COVID-19 pandemic and the successful completion of a number of infrastructure projects in previous years, the amount we invested in our local region declined by 41.7% against the previous year (AMD 9.3 billion/USD 17.8 million) in 2021.

We deliver positive, social outcomes and raise the standard of living.

The aim of our financial commitments to social projects in the region is to deliver positive, social outcomes and raise the standard of living for everyone in our communities.

Total investment in social projects in the region in 2021



**AMD
3.8 b
or
USD 7.9 m**

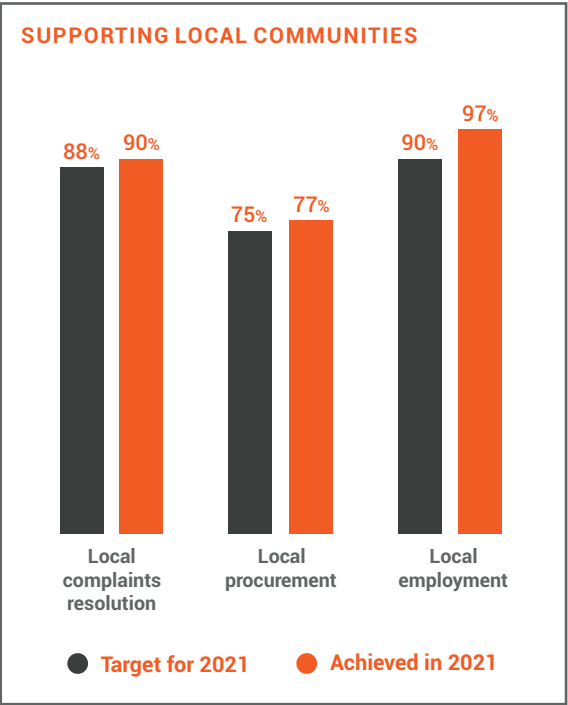
The mining industry provides stable, reliable employment opportunities and drives economic activity in local communities. These are often areas where other economic opportunities are very restricted. The environmental and social impact of mining is offset by the significant economic and social benefits including the production of essential raw materials, employment, small business development, tax and royalty streams, training and skills development, and socio-economic programs.

THE COMPANY'S CONTRIBUTION TO THE DEVELOPMENT OF LOCAL COMMUNITIES IS REFLECTED IN DIFFERENT TYPES OF CONTRIBUTIONS.

Economic Contribution to Develop the Region	Infrastructure Development	Community Development
Taxes paid to centralized/local budget	Bridge and road reconstruction	Regular charitable programs
Employment of local people	Land restoration	Promotion of sports and culture
Development of social local infrastructure (transport, power)	Construction of sports, cultural, entertainment facilities	Vocational training sponsorship
	Improvement of efficiency of utility services	Employees volunteering

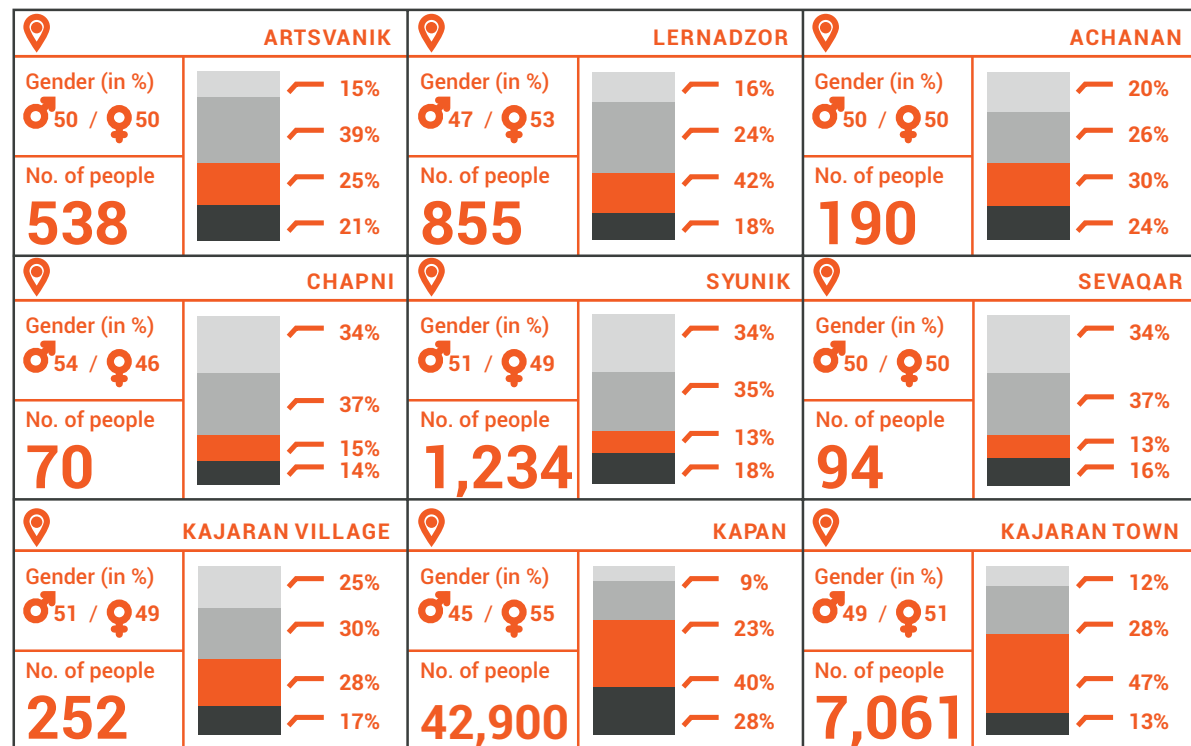
IN TOUCH WITH
OUR COMMUNITIES

We work in partnership with our local communities and maintain constant dialog to understand how our activities impact their lives, culture and heritage. We work together to set targets in areas that are important for the community.



▲ Kajaran proudly displays its namesake

Permanent residents in communities (both rural and urban areas) affected by ZCMC's business operations, based on the 2016 census:



 Local community
  0–18 years
  19–45 years
  46–60 years
  60+ years

We use careful stakeholder management to engage with the community regarding their concerns and we are fully committed to mitigating the negative impacts of mining operations on both people and the environment to the best of our ability.

The company has developed and established a grievance procedure to handle any complaints it receives from the community. The grievances are ranked as minor, moderate and major based on the issue raised. The issues are assigned to the areas: health, land, environment, reputation.

In 2021, ZCMC successfully resolved a number of grievances relating to health, land, the environment and the company's reputation.

The main issues identified during the course of stakeholder consultations and discussions, and during the implementation of various community projects mainly relate to health, economic and environmental concerns, such as air pollution, water contamination, diseases, food contamination, noise pollution, land acquisition, traffic accidents, health care services, urban migration, infrastructure accessibility and quality, risks to the ecosystem, tourism, cultural heritage, and economic dependency.

MONITORING RISKS

ZCMC has identified the following indicators to measure the cycle of risks resulting from its mining operations that affect local communities. The company has developed and implemented measures to counteract them, based on five criteria:

- ▷ Equality and diversity
- ▷ Employment
- ▷ Economic activity
- ▷ Health and safety
- ▷ Infrastructure

Monitoring Indicators for Risk-mitigation Measures	Risk Category	Long Term	Yearly
Emigration tendency, Kajaran town	Employment	✓	
Total number of employees engaged in public consultations and social projects	Employment	✓	
Total number of long-term contract and sub-contract workers at ZCMC	Employment		✓
Number of road accidents involving vehicles registered to ZCMC fleet	Health and safety		✓
Total number of employees in ZCMC who participated in first-aid training during reporting year	Health and safety		✓
Total number of events and training courses carried out on disaster risk management in ZCMC and affected communities	Health and safety		✓
Total number of ZCMC slurry pipeline failures during reporting year	Infrastructure		✓
Total surface of agricultural land plots polluted due to failure of slurry pipelines during reporting year	Infrastructure		✓
Ratio of women employed directly and indirectly by ZCMC	Equality and diversity	✓	
Total amount of taxes and fees paid to local budgets and local suppliers	Economic activity		✓

The following monitoring indicators signal the success we have had in engaging with local communities. These indicators are monitored on a yearly basis, with a particular focus on stakeholder management, information disclosure and grievance redress mechanisms.

Monitoring Indicators	Yearly
Public discussions and consultations carried out in affected communities during 2021	✓
Participants at discussions and consultation meetings organized by ZCMC	✓
Media materials and publications referring to environmental and social issues disclosed by ZCMC online during reporting year	✓

INVESTING IN OUR REGION

In addition to providing stable, long-term employment, we invest in our region every year as we do in our business. In 2021 we provided financial support for:

SOCIAL PROJECTS:

- ✓ Local infrastructure maintenance and construction of new facilities (roads, public buildings, sport facilities, electricity system, water sewage, etc.) in Kajaran and Kapan
- ✓ Regional healthcare infrastructure maintenance
- ✓ Employee initiatives focusing on land rehabilitation and reforestation in Artsvanik, Syunik and Kajaran village

SPONSORSHIP & DONATIONS:

- ✓ Donations in kind for families in need in affected communities
- ✓ Sponsoring local cultural events in Kapan and Kajaran
- ✓ Sponsoring local sports in all communities

SOCIAL SUPPORT FOR ZCMC EMPLOYEES:

- ✓ Health: travel and accommodation subsidies during vacation days
- ✓ Sports and recreation
- ✓ Tuition fee subsidies for continuing education

ZCMC also provided funding in the amount of AMD 1.65 billion (USD 3.35 million) to construction and social projects in the Syunik region such as for the reconstruction and refurbishment of schools and daycare facilities; the improvement of administrative buildings and streets; and the construction of docks, playgrounds, and other community facilities.

The company contributed a total of AMD 2.23 billion (USD 4.51 million) towards social, cultural, and sporting events; made donations in kind to families and individuals in need; and provided support for local communities in Kajaran, Kapan, Chapni, Sevaqar, Achanan, Lernadzor, Artsvanik and Syunik through non-governmental and charity organizations.

The company's environmental department is currently working on an initiative with educational institutions to raise awareness of eco-culture among the residents of the affected communities.

LOCAL SUPPLIERS

77% of our suppliers are either from the Kajaran region or local Armenian service companies.

Over the past year, we have developed a supplier screening procedure designed to uncover any issues, such as previous misconduct or corruption, using international data. We want to ensure that we only work together with suppliers and other business partners that share our values and take their position and responsibilities seriously.

We use a supplier screening procedure to ensure our business partners share our values.

ZCMC is committed to developing long-term relationships with suppliers based on trust. We also engage with external decision-makers in the supply chain to create added value and launch cost-reduction initiatives. We

carefully consider continuing and renewing contracts with existing suppliers, and monitor pricing. We ensure that all of our suppliers adhere to our code of ethics and anti-corruption policy and aim for preferential procurement. We also ensure that suppliers observe human rights and engage in environmental management. We monitor the availability of critical commodities that impact production and the sustainability of suppliers – particularly as a result of the COVID-19 pandemic. We have also updated our supply chain policies, procedures and processes to ensure that our procurement practices are fair and transparent.

SOCIAL ASPECTS OF PROCUREMENT STRATEGY

Our top priority in the local communities and regions in which we are active is creating economic opportunities. This is where our strengths lie and our aim is to continue driving economic activity in our region by employing local people, buying local products and engaging local services.

Our aim is to continue driving economic activity in our region.

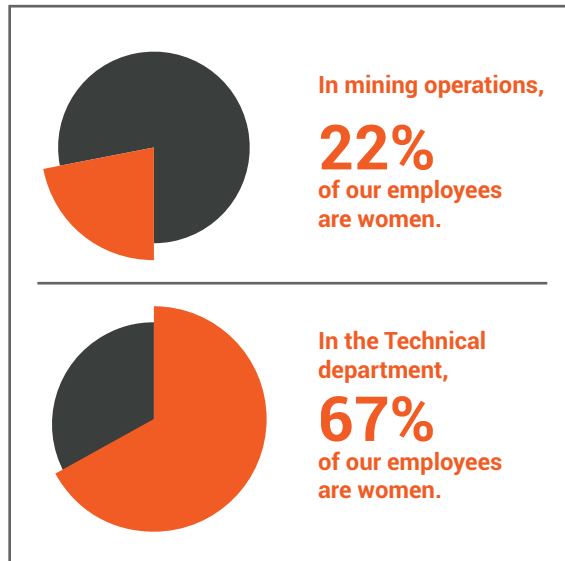
We expect the impacts of the COVID-19 pandemic to continue affecting local communities in the coming years and will focus on investing in education and training opportunities, and monitoring the impact of our investments, to ensure community members are equipped for long-term employment. We will also continue our work in developing local suppliers and granting preferential procurement for local businesses.

REGIONAL CHALLENGES

ZCMC works hard to gain and retain the acceptance of the local communities in which we operate. Due to the difficulties that exist in wider Armenian society, the support for mining operations, due to the opportunities that they provide, is solid in many communities, especially in Kajaran, Kapan and the Syunik region.

There are sufficient qualified miners in Armenia, but there is a severe shortage of qualified engineers, geologists, mining economists, etc. This lack of local capacity is a serious threat to our ambition of sourcing employees from the local region.

ZCMC collaborates with the National Polytechnic University of Armenia, Kapan branch, to offer courses in various fields such as mining production processes. Pre-graduation courses are offered in metallurgy and material sciences, information technology, open-pit mining, and economics and management. The company also takes interns from other Armenian universities. In addition, we take every opportunity to raise awareness of the shortage of qualified staff in the fields mentioned above that our company faces.



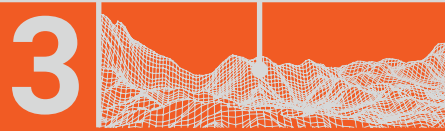
ZCMC works hard to gain and retain the acceptance of the local communities in which we operate. We continually invest in training, education and gender equality to improve lives and access to employment opportunities.

The company is perceived as an attractive employer due to the fact that it can offer reliable employment with steady earnings and the potential for further personal development.

Women are currently underrepresented in the regional mining sector. Mining is a traditionally male-dominated sector and only 22% of our employees are female (see “Employees”). This means the full potential of the communities are not being used, which leads to imbalances, particularly economically, in the miners’ communities.

ZCMC is dedicated to bringing balance back to the communities by employing women in other areas of our business operations, 67% of our employees in production, for instance, are women. We will also continue investing in training and education to improve lives and access to gainful employment.

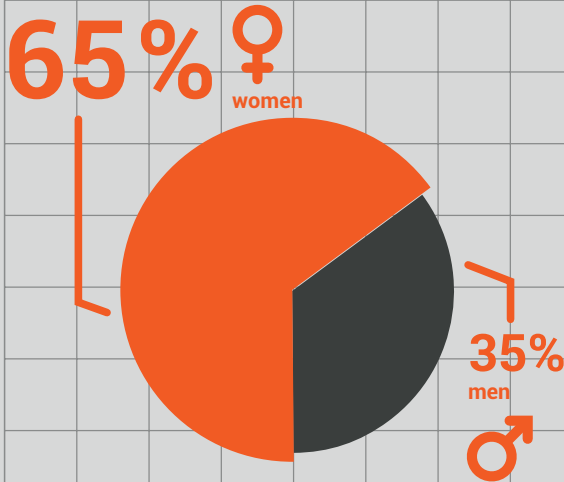
EMPLOYEES



We respect and invest in our employees. ZCMC looks back proudly on its tradition as an employer. For over 60 years, the company has been the only major employer in Syunik Province and was the fourth-largest employer in all of Armenia in 2021. Our long-term employer strategy has thus proved durable for over half a century, and we aim to build on it in the years to come.

KEY FACTS & FIGURES:
EMPLOYEES

EMPLOYEES IN TECHNICAL
DEPARTMENT BY GENDER



AVERAGE TRAINING TIME PER EMPLOYEE



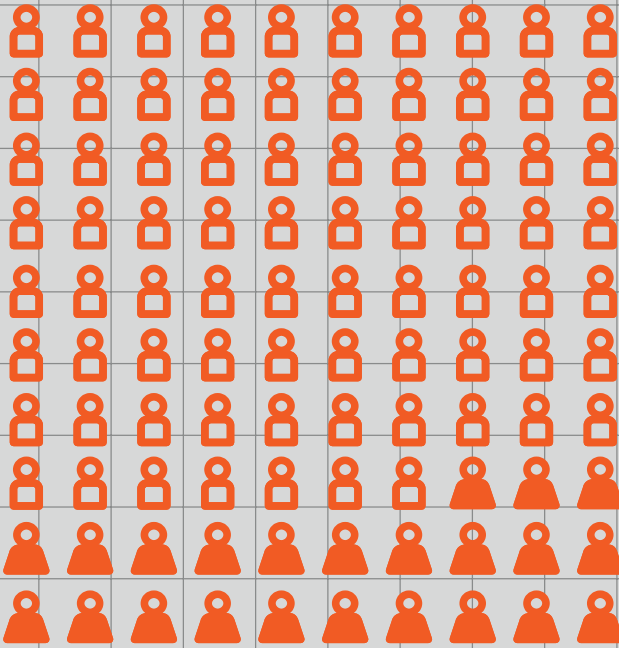
15h

4,374

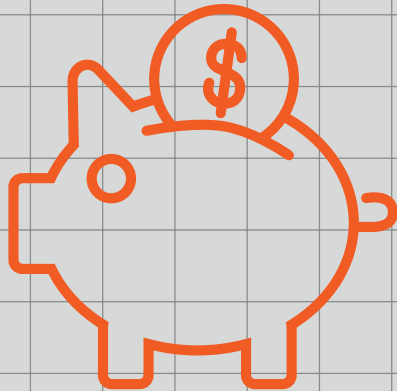
total
employees

77.2%
men

22.8%
women



TOTAL STAFFING BUDGET



AMD
29.4 b
or
USD
58.6 m

LONG-TERM EMPLOYER STRATEGY

The local economy of the Kajaran community has revolved around mining ever since ZCMC began operations in 1951. In light of this, two simple facts can be stated:

- ▷ the economic development of the region has always been intertwined with the economic growth of ZCMC, and
- ▷ urban areas initially attracted younger people who were ready to leave the countryside in search of jobs.

The modern migration to city life has imbued ZCMC with a profound sense of responsibility. As part of a future-oriented response to the area's increased younger population, the company continues to invest heavily in the education, training and development of local community members. These investments serve the dual purpose of providing communities and employees with the skills they need today while simultaneously growing a talent pool for the future.

ZCMC invests heavily in the education, training and further development of local community members.

For example, young people are given the opportunity to develop digital fluency as well as technology and engineering skills, and thus to equip themselves for long-term success. Taken together, the upward economic trends, job creation, and investments in employees and communities have given Kajaran's economy a new face. ZCMC currently employs over 4,000 people in both the city and rural areas, and its workforce boasts a broad spectrum of expertise and qualifications.

Any employer strategy that aspires to be sustainable must also be held accountable. This is why ZCMC pledges the strictest adherence to the Armenian Labor Code as the basis for regulating all labor relations including the rights, obligations and responsibilities of ZCMC as an employer.

The code also covers the following important issues, among others:

- ▷ Employment contracts
- ▷ Hours of work
- ▷ Paid leave
- ▷ Minimum working age and protection of young workers
- ▷ Equality

- ▷ Trade union regulation
- ▷ Collective bargaining and collective agreements
- ▷ Labor dispute settlements

The labor code also protects employees with a raft of benefits, including life and disability insurance, medical aid, up to 18 months of paid maternity leave and up to two weeks of paid paternal leave, housing benefits and education benefits.

ZCMC takes these and other obligations to its workforce seriously and is always looking for new ways to better fulfill its duties as an employer.

Overall, prospects for the company are encouraging: The mine's reserves have been estimated to yield ore and minerals for another 150 years. But ZCMC does not take success for granted. The company makes every effort to ensure that safety plans are in place for any technical risks and has prepared contingencies in the event of environmental events such as seismic activity in the region, pollution and pandemics that could potentially disrupt operations at the mine.

HEALTH AND SAFETY

At ZCMC, protecting people – from employees and visitors to contractors and suppliers – is far more than just a legal or social obligation. We view it as integral to our operations.

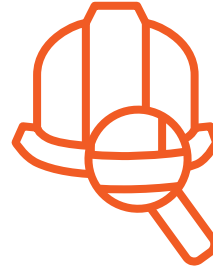
The company considers a safe work environment to be a basic human right. As such, it is dedicated to protecting its employees by complying with all relevant legislation and regulations, and by pursuing a goal of zero fatalities.

Health and Safety is the highest priority for ZCMC.

Achieving this has required ZCMC to take up exhaustive measures that place health and safety squarely in the foreground. We take the special needs of workers into account when developing safety procedures and instruction. We also implement work training based on existing procedures to help constantly maintain a safe and healthy environment. By identifying hazards, we can plan better to minimize risks. Clients, visitors, contractors and all other stakeholders are also expected to comply with our health and safety regulations.

298

The number of health and safety and environment inspections held on and off site in 2021



26

The number of risk assessments on location

Our Health and Safety department takes numerous concrete measures to identify and eradicate potential threats to safety, including the following:

- ▶ Safety training for new employees and visitors
- ▶ Performing daily inspections and audits
- ▶ Conducting hazard identification and risk assessments (i.e. of lifting equipment, electrical hoists, cranes, blasting transportation vehicles, tailings dam, explosive materials storage)

- ▶ Organizing workshops that educate participants in first aid and raise awareness of safety hazards present when working in close spaces or at great heights

PERSONAL PROTECTIVE EQUIPMENT POLICY 2021

ZCMC revised its personal protective equipment (PPE) policy in 2021 to further ensure the health and safety of employees in all company production areas and sites. Based on the hierarchy of controls and within risk management, PPE represents the last line of defense and is therefore always used in conjunction with engineering, administrative and procedural controls.

The PPE policy regulates the free provision and use, along with a number of other related processes, of personal protective equipment (special overalls, steel-toe and steel-sole shoes, helmets, safety goggles, earplugs or earmuffs, etc.) by employees of the company in order to ensure safe working conditions while carrying out production activities. The policy was developed in line with the requirements of the Occupational Safety and Health Administration (OSHA) standards.

No. of meetings for training on HSE requirements in 2021



979

ZCMC personnel

188

Induction of personnel/others

33

Contractors and sub-contractors

The policy aims to regulate the process of selecting, acquiring and providing PPE, and the proper use, storage and, if necessary, replacement of useless or damaged PPE.

All management staff members are responsible for implementing the policy and ensuring that the workers under their supervision adhere to the relevant procedures. The Health and Safety department also oversees the correct implementation of the procedures, presentation and practical training of the ZCMC employees every two years.

HEALTH AND SAFETY FOR CONTRACTORS

Contractors constitute one of the pillars of ZCMC's operations. Ensuring their safety is no less important than ensuring the safety of the company's own employees. Our Health and Safety department has set down certain requirements for engagement, induction, monitoring, and performance reporting of all contractors who work on behalf of ZCMC.

First, each contractor is required to execute only those tasks as defined in the contract. They must also comply with all HSE directions as well as the instructions that ZCMC provides. Additionally, they must ensure that their own employees and subcontractors have the qualifications, training, experience and expertise necessary for the job.

Contractors are expected to guarantee that all work is performed under appropriate supervision. To facilitate

communication and avoid misunderstandings, each contractor appoints someone responsible for HSE and to liaise with ZCMC on all relevant health, safety and environmental issues. Their duties also include ensuring that safe working procedures have been completed for all tasks identified as "high risk."

Finally, the responsibilities of keeping the ZCMC workplace safe and healthy, and raising any issue that may potentially become a health and safety concern for ZCMC, lie with the contractors.

ZCMC's rigorous attention to norms and procedures has resulted in a very safe environment.

WORK-RELATED INCIDENTS IN 2021

Incident	Total
Total incidents	272
Total man hours worked	7,768,224
Property damage (cars and trucks)	14
First-aid cases	251
Traffic incidents	2
Environmental incidents	2
Lost work-day cases	3

LEARNING AND DEVELOPMENT

ZCMC is dedicated to training and developing its employees so they can carry out their work to maximum effect. To shore up holes in the training and provide adequate support, the company regularly performs a training needs analysis (TNA).

This process identifies knowledge gaps around which the next training plans may be designed and helps the company understand where meaningful growth can still occur among its workers.

The 2021 Learning and Development Plan focused on general and technical training.



LEARNING AND DEVELOPMENT PLAN MEASURES		STATUS 2021		
		Development of operational procedure	Procedure review and update	Communication and training to workforce
1.	New employee induction training	<div></div>	<div></div>	<div></div>
2.	Safe working procedures training	<div></div>	<div></div>	<div></div>
3.	First-aid training	<div></div>	<div></div>	<div></div>
4.	On-the-job certifications	<div></div>	<div></div>	<div></div>
5.	Fire extinguisher training	<div></div>	<div></div>	<div></div>
6.	Hazard identification	<div></div>	<div></div>	<div></div>
7.	PPE training	<div></div>	<div></div>	<div></div>

completed in progress not started

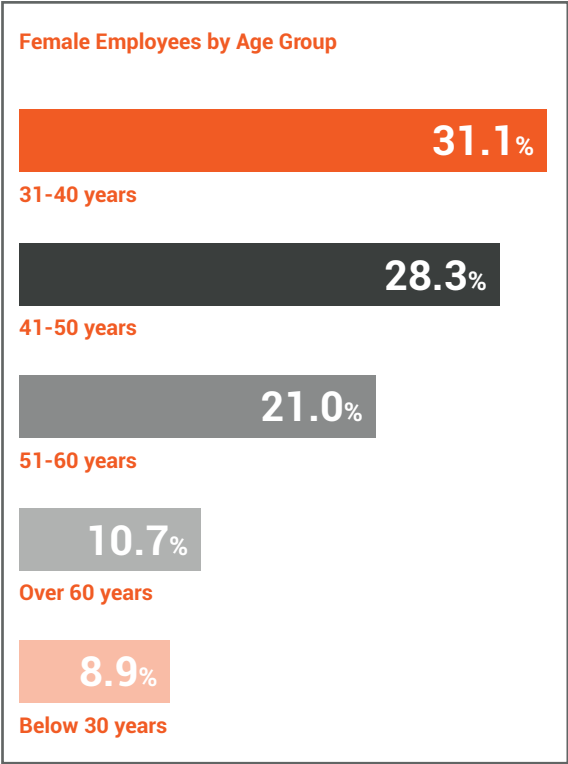
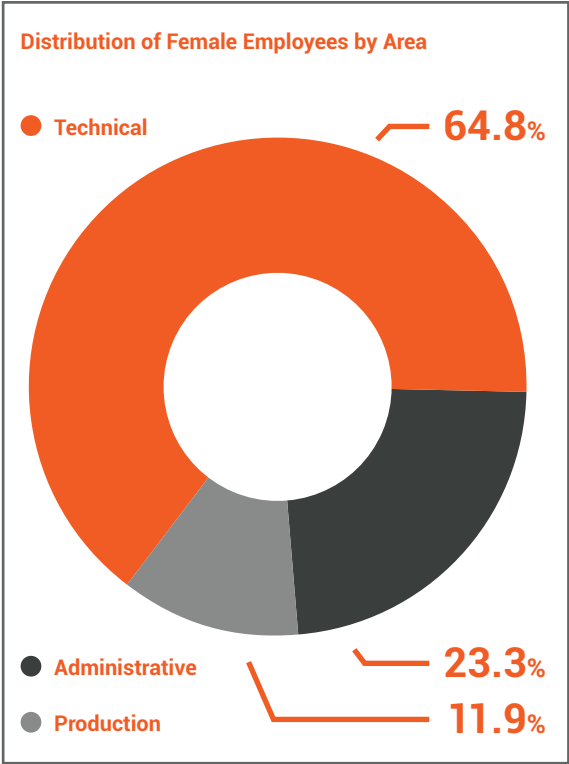
DIVERSITY

In 2013, Armenia ratified the law “Guaranteeing Equal Rights and Opportunities for Men and Women,” which regulates gender equality and protects women and men from gender discrimination.

ZCMC takes this matter to heart. The company recognizes that equal opportunity regardless of gender is good for the company, the community and the country. That is why ZCMC eagerly promotes the participation of women in all its activities and pursues a general policy of non-discrimination, including with regards to gender.

In 2021, a total of 997 employees were women, representing 22.8% of the workforce.

ZCMC's initiatives to promote diversity and equality in 2021 resulted in zero incidents of discrimination against women.



ZCMC'S EFFORTS TO COMBAT COVID-19

The world has entered its third year in the grip of COVID-19, the disease caused by the SARS-CoV-2 novel coronavirus. Since the beginning of the pandemic, ZCMC has implemented a number of measures to protect its employees from the spread of the virus.

Disinfection is carried out and supervised by the Health and Safety department twice a day. Spray disinfectants are applied every two hours on the most used surfaces, whereas bactericidal lamps treat closed-off spaces.

Other mandatory measures include wearing a mask during working hours, reducing the size and frequency of in-person indoor meetings, reading and recording employee temperatures twice daily, enforcing a distance of 1.5 meters between people and workspaces wherever feasible, and ventilating all rooms every two hours.

All measures to prevent the spread of COVID-19 are carried out under the direct control of the Health and Safety department.

COVID-19 at ZCMC in numbers: 2020-2021

218

Recorded cases of COVID-19 at ZCMC

3

Health and Labor Inspection Body of the Republic of Armenia inspections

2x

Frequency of disinfection procedures/day

Result:

0

Fatalities from COVID-19 in 2020-2021.



The Health and Labor Inspection Body of the Republic of Armenia carried out three inspections between 2020 and 2021. The inspections found that ZCMC maintains all anti-pandemic measures to the highest standard. The inspection body went on to thank the company for these preventive measures and their effectiveness.



Scan the QR code to see a video detailing the measures the company has taken to combat the spread of COVID-19.

- ▶ PPE equipment provided to workers: disposable protective clothing, overalls, glasses and/or face shields, masks, gloves, closed-toe shoes or shoe covers
- ▶ Employee temperatures were read twice a day at the start and at the end of work in accordance with Armenian law.

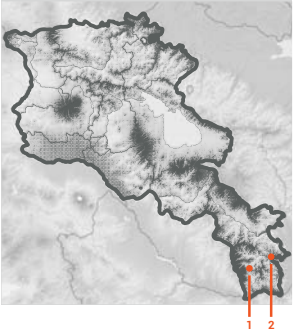
EMPLOYEE BREAKDOWN – 2021

4,374
ZCMC employees

This represents a drop of 2.4% compared to 2020. This decrease was the result of some people leaving and around 180 people retiring during 2021, combined with a freeze on hiring as of June of last year.

ZCMC also upheld its tradition of providing employment to the communities in which it operates.


Almost all the company's workforce came from the Syunik Province, and the rest from greater Armenia:



- ▷ 72% from Kajaran (1) and surrounding villages
- ▷ 25% from Kapan (2)
- ▷ 3% from the rest of the country

135 New hires

Security, transport and administration saw the highest increase in staff.

**257** Employees left ZCMC

2.8% Turnover rate (401-1)

**3,377** (77.2%) Male employees

**997** (22.8%) Female employees

All employees worked in one of three areas:

1 Production
2,843 employees (65%)


2 Technical
524 employees (12%)

3 Administrative
1,007 employees (23%)



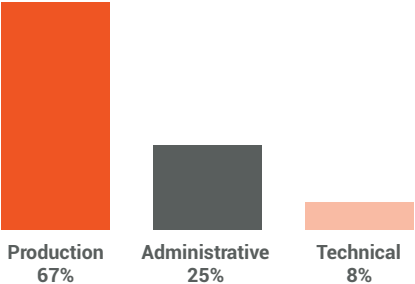
97.1% Share of staff working full-time

The remainder is made up by the contractors' workforce.

**AMD 29.4 b, or USD 58.6 m** Total staffing budget

An increase of 5% compared to the previous year

Share of budget by department



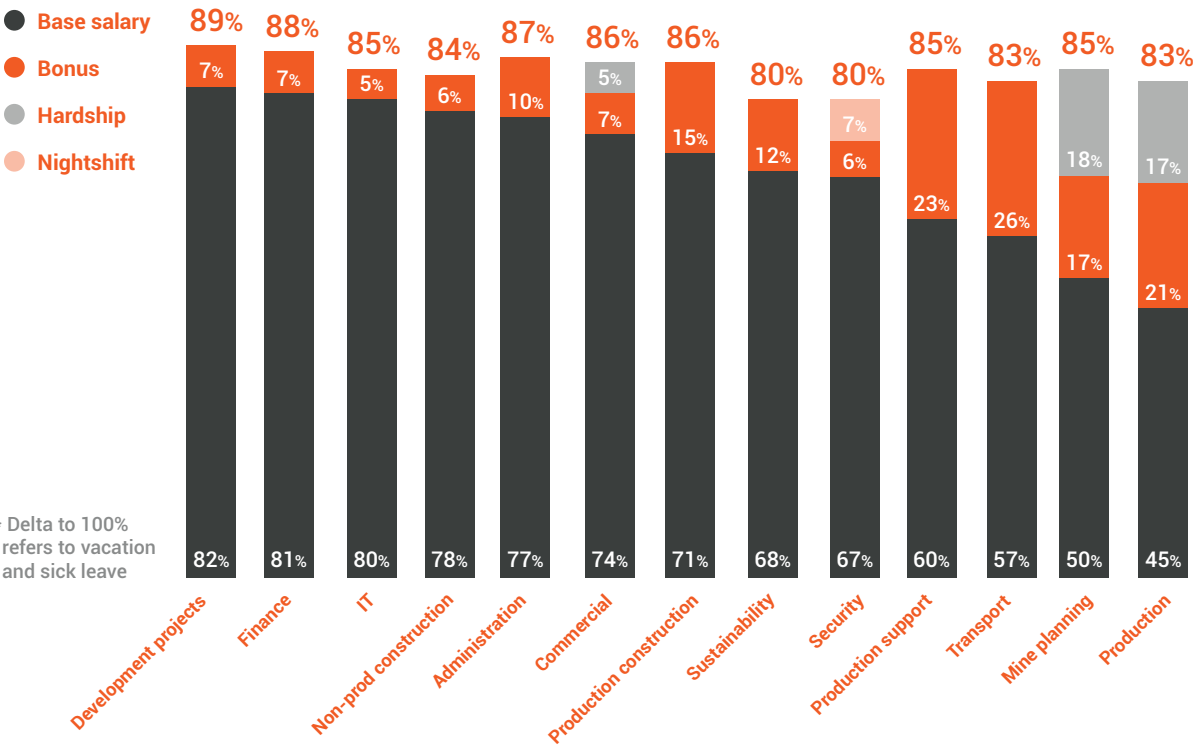
Production 67%

Administrative 25%

Technical 8%

SALARY COMPONENTS*
IN %

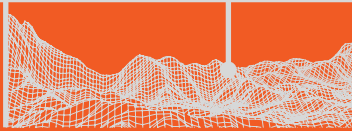
Employee remuneration consists of a base salary, a fixed bonus, a hardship bonus and a nightshift bonus.



All ZCMC employees belong to a trade union committed to protecting employees' rights and their working conditions, as well as providing additional benefits. Among these are a one-time payment that employees receive in recognition of special occasions, including marriage, childbirth, military service or a death in the family. No additional benefits were paid to employees in 2021.

ENVIRONMENT

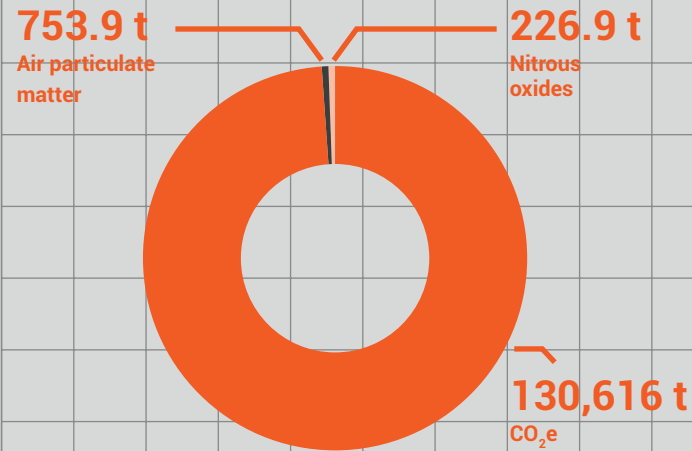
4



We believe the environment is our greatest asset. For the last, almost 70 years, ZCMC has been committed to monitoring and minimizing its impact on the environment. Now we are taking steps to level up this commitment to secure a more sustainable future for everyone.

KEY FACTS & FIGURES:
ENVIRONMENT

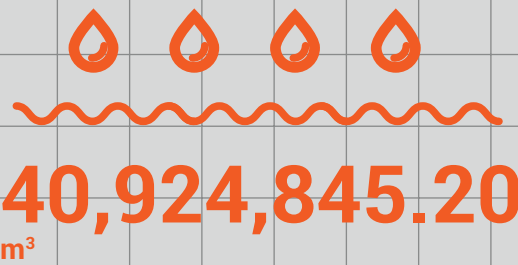
EMISSIONS



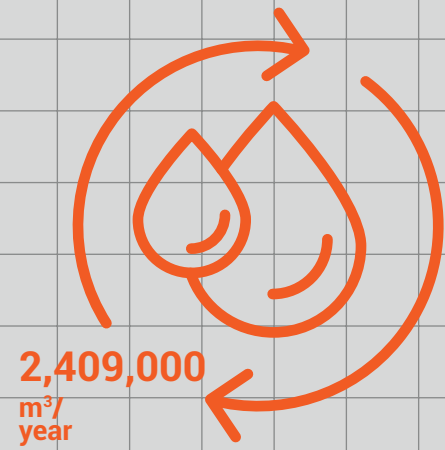
ENERGY CONSUMPTION
TOTAL



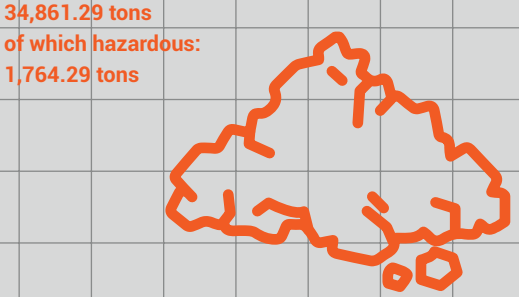
TOTAL WATER CONSUMPTION
FROM 4 INTAKE LOCATIONS



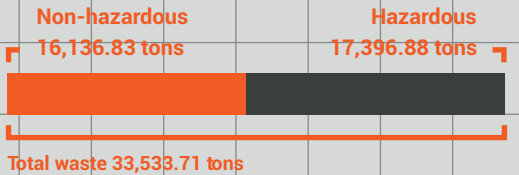
RECYCLED WATER RE-ENTERING
DAILY OPERATIONS



TOTAL MATERIALS



WASTE (TONS)



ENVIRONMENTAL RESPONSIBILITY

Operations in the mining sector typically have a severe impact on the environment. If the appropriate care is not taken to protect the natural environs in which operations unfold, long-term issues can arise that mainly affect the communities and stakeholders from around our site. Such mismanagement can even jeopardize our license to operate.

A crucial line of defense when it comes to environmental protection is consistent reporting. That is why any significant environmental incident ZCMC is involved in is documented and communicated for further assessment. By conducting transparent reporting and sharing the knowledge gained from these incidents, the company is consistently developing a better understanding of environmental impacts and, more importantly, how to mitigate them. We consider this environmental risk mitigation a pillar for maintaining the “social license” to operate.

The company has developed its environmental management system (EMS) for all ZCMC activities in accordance with ISO 14001. The EMS goes beyond the basic environmental management and monitoring plans to also encompass health and safety management plans.

WATER

Armenia's geographic positioning between the Black Sea and Caspian Sea have made it rich in water resources. For comparison, it processes over 3,100 m³ of water per year per capita, just shy of double the world average of 1,700 m³. The region's inhabitants throughout history have even constructed reservoirs and irrigation channels to maximize water efficiency, and that practice has lived on in to modern times.

Not all the structures have aged well, though. Poor and old water infrastructure, damaged water reservoirs, broken pipelines and irrigation network malfunctions result in average annual losses of about 70% of Armenia's water resources. This brings Armenia's yearly average water resources per capita down to 465 m³, a figure lower than those of neighboring countries with minimum water resources such as Georgia and Azerbaijan. Specifically, the Syunik region, including Artsvanik and Kapan, faces water-supply challenges. Current pipelines are worn out from decades of improper servicing, leaving many communities without access to drinking and irrigation water. Of seven local communities, only Sevaqar and the town of Kajaran have a water quality of "sufficient," while other areas like Kapan face water supply interruptions of as many as 10 hours a week.

Problems with drinking water and irrigation water are priority issues in the community development programs, but only a portion of the water infrastructure in the affected communities can be restored.

Water Resources

Armenia's geographic positioning between the Black Sea and Caspian Sea have made it rich in water resources:

Armenia
3,100 m³ year/capita

World average
1,700 m³ year/capita

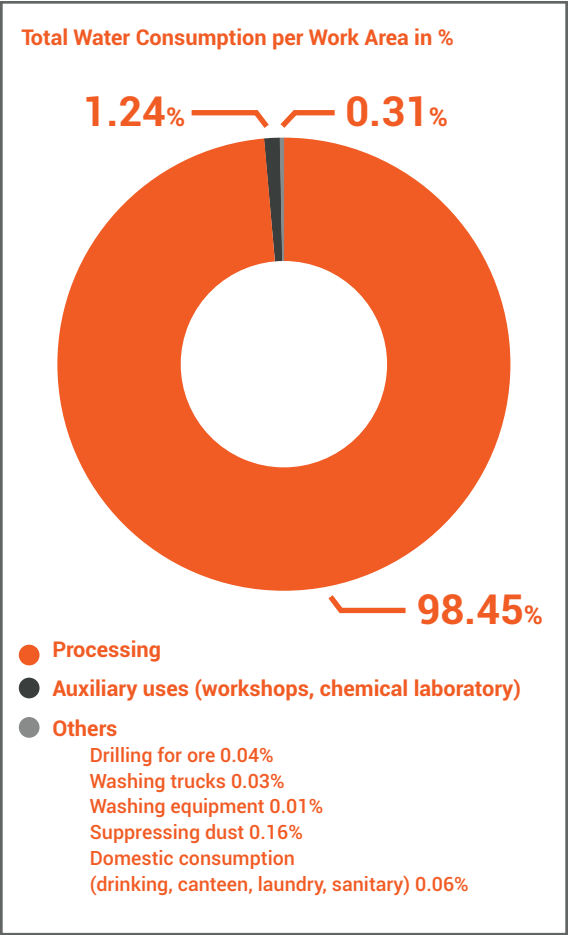
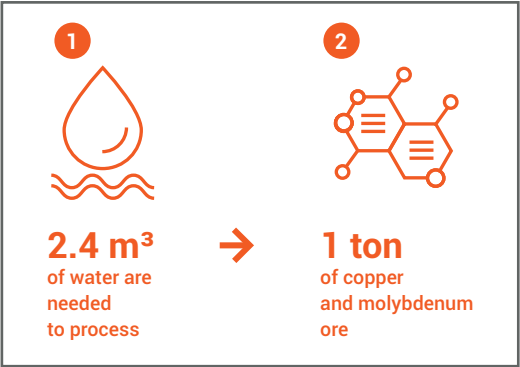


ZCMC WATER CONSUMPTION

Water is essential to mining. Nevertheless, ZCMC goes to extraordinary lengths to ensure that this vital resource is carefully monitored and sustainably used. The company carefully monitors any potential impacts on water quality throughout the mine life cycle, including the amount of water used, all to ensure sustainable water resources for the long term.

ZCMC draws water from four intake locations and consumes 69,970,590 m³ of water annually. Of that:

- ▶ 68,842,111 m³ of fresh water comes from nearby rivers, and
- ▶ 117,589 m³ of drinking water is provided from the Kajaran city water system.



ESTIMATED ANNUAL WATER CONSUMPTION DURING THE MINING WORK CYCLE

Communities	%	m³
Drilling for ore	0.04	29,409
Washing trucks	0.03	24,290
Washing equipment	0.01	5,320
Suppressing dust	0.16	113,934
Processing	98.45	68,886,881
Auxiliary uses (workshops, chemical laboratory)	1.24	865,348
Domestic consumption (drinking, canteen, laundry, sanitary)	0.07	45,408
Total	100	69,970,590

WATER IMPACT AND MITIGATION PLAN

ZCMC has identified five categories of negative impacts on water quality and set out to address them through the following action plans and mitigating measures.

1 Biodiversity impacts

To offset the impacts on biodiversity and water quality, a water recycling system has been installed to recirculate water flows back into the facility for reuse. Contingency plans are in place to assess the volume and composition of run-off water and determine whether further mitigation is necessary, and to what extent.

2 Contamination with sediment from the mine

The catchment area at the mine discharges water runoff containing contaminants and sediments. Mitigating measures include regularly removing contaminated sediment and disposing of it in a suitable facility, as well as providing a suitable means of isolating the pumps and drainage system in case a major pollution spill should occur at the mine.

3

Impacts from processing operations

Processing operations have also seen the introduction of various controls and mitigation measures. ZCMC aims to minimize river abstractions by capturing process-return waters from other sources such as on-site surface water runoff. Water levels of affected rivers will be monitored and pumping operations will be adjusted during periods of lower flow. Determining baseline flow rates and levels in rivers will help mitigate negative impacts.

4

Chemical spillage

Chemical spillage presents clear and present risks to water sources. Storage areas with surrounding bunding walls will be built to contain any spills. Surface water runoff from these bunded areas will be passed through a suitable separator or otherwise processed. There will also be surface water runoff directly within the production area, process plant and raw materials area. Contingency plans are being drawn up to contain large spillages.

5

Contamination from other sources

With regards to contamination from other sources, storing the mined ore could lead to the contamination of watercourses and the surrounding earth. The product will be stored in an enclosed facility to avoid the effects of rainfall and surface water runoff. Wastewater drainage systems will also be provided, as well as suitable means of disposing surface water.

Controls and mitigation measures are constantly being developed to account for all five categories of negative impacts on water quality.

WATER TREATMENT

Annually, the amount of recycled water re-entering daily operations comes to 2,409,000 m³ for the processing plant. ZCMC is exploring several options to increase the amount of recycled water and water recirculation during production. We see this as an indispensable step toward more sustainable mining and protecting the environment.

We have already initiated the first measures. For example, the wastewater from trucks and equipment washing is run by an oil-water separator and then directed to a sedimentation pond. The treated water is then recycled and used for dust suppression in the mining operations.

**Reused water
(annually)**

**2,409,000
m³**
for the processing plant

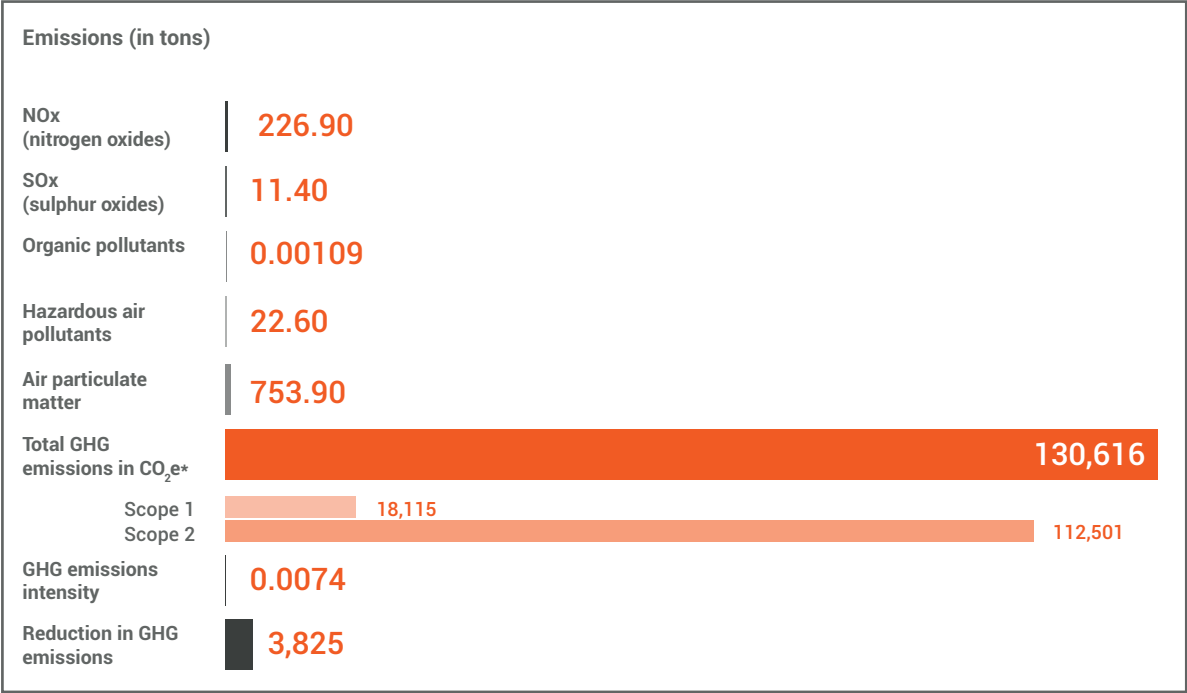


▲ Upper end view of the Artsvanik Tailing Storage Facility – decanter

EMISSIONS

ZCMC's commitment to the environment goes beyond the reduction of its own emissions. It plays a broader role in the overall transition to a world of net-zero carbon emissions: Demand is increasing for products made from the minerals, ores and extracts that ZCMC produces. As these materials are essential to the energy transition, the company is engaging in partnerships to develop the technologies that will enable its customers to decarbonize their own products.

The reduction in GHG emissions was achieved through carbon-offsetting programs (reforestation and landscaping) in mine and dam areas.



* Scope 3 emissions, including commuting, business travel, material transport and product distribution, were not counted by the company

WASTE AND MATERIALS

ZCMC produces a large variety of waste from its own operations, including used tires, lab waste, processing waste and rocks. Mismanagement of waste can harm the environment and communities surrounding the open mine and the processing facility. In 2021, ZCMC generated 33,533.71 tons of waste, of which 17,396.88 tons was hazardous. Of this figure, 99 % constitutes the mineral waste after ore processing going to the tailing storage facility.

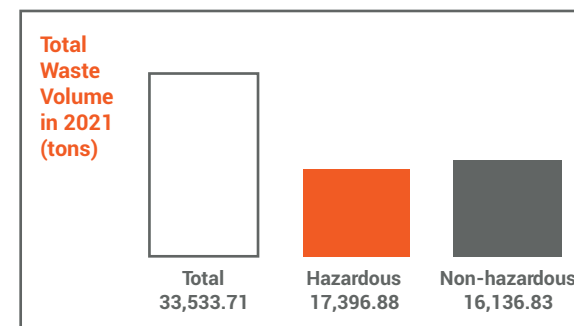
The waste disposal method has been determined according to the waste hierarchy pyramid concept and is based on waste recycling and disposal regulations currently applicable in the country.

HAZARDOUS WASTE	tons
Sludge and tailings	17,392.90
Land fill	1.65
Reused	1.08
Recycled	0.68
Storage	1.54
Other	0
Total	17,396.88

NON-HAZARDOUS WASTE	tons
Sludge and tailings	16,135.45
Land fill and storage	239,31
Reused	0.11
Recycled	0.02
Total	16,136.83

Waste is heavily regulated under Armenian law. Significant legal and financial risks can arise when waste is not properly managed. The company is currently putting programs in place to ensure the proper management of all types of waste.

During 2021 there were no significant environmental incidents recorded involving hazardous waste.

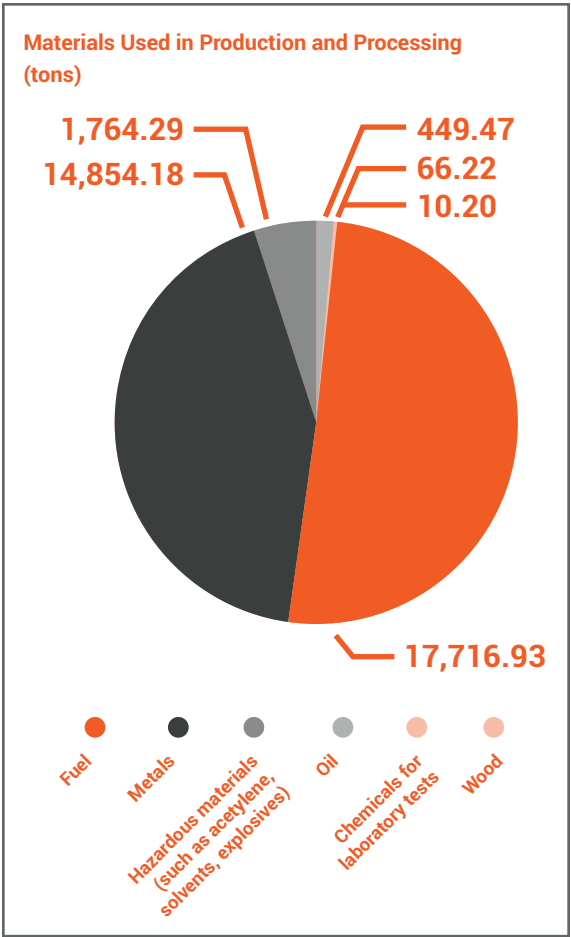


MATERIALS

The general materials used for the production of copper concentrate and molybdenum concentrate include diesel fuel, oil, explosives, ball bearings for ball mills and lab chemicals.

Some of the hazardous materials include explosives, flammable substances, sulfuric acid, sodium cyanide, flotation chemicals, solvents and compressed gases, most of which come from the processing plant operations.

The total amount of materials used for production in 2021 was 34,861.29 tons.



ENERGY

In ZCMC's energy and resource efficiency management plan (E&RE MP), the company sets out the requirements to be addressed for efficient use of energy and other resources, such as water, soil, materials and others, to prevent pollution and manage its operations effectively.

ZCMC consumed approximately 446,431,213 kWh of energy in 2021.

ENERGY CONSUMPTION	kWh
Energy consumption within the organization	445,578,113
Energy consumption outside of the organization	853,100
Energy intensity	1,981

BIODIVERSITY

The impacts associated with climate change and particularly biodiversity loss pose significant risks to people and the environment on which we all rely. As such, ZCMC recognizes the responsibility to effectively mitigate the impact of our operations on nature and recognizes its own dependence on healthy ecosystems to run a successful mining operation. The company has identified three biodiversity performance indicators.

Protected and restored habitats also indicate biodiversity performance. In 2021, 7.7 ha of land around Artsvanik Tailing Storage Facility were restored. This was achieved by using flora species that perform several functions simultaneously: They absorb heavy metals, stop soil erosion, reduce dust, restore the microclimate in place and their root systems provide additional reinforcement of the dam.

The company also looks at habitats included in the national conservation list that are affected by the mining operations. A total of twelve areas were studied during 2021.



This was followed by protection measures taken for four protected flora species that are particularly specific to the Zangezur canyon.

The brown bear (*Ursus arctos*) has been the emblem of Kajaran city since its foundation. The name Kajaran is derived from the Armenian word “Kaj” meaning brave, and the suffix “-aran” meaning place. Thus, the word Kajaran is translated from Armenian as “the place of the brave.”

Phase 1: Physical Closure

- ▷ Selling of all materials used in production and processing
- ▷ Correct disposal of hazardous waste and contaminated soil
- ▷ Dismantling of all existing equipment, buildings, structures and foundations
- ▷ Clearing of the area

Phase 2: Environmental Restoration

- ▷ Open-pit slopes and waste dumps strengthened and recultivated
- ▷ Restoration of the drainage system
- ▷ Removal of excess water from the tailing dam
- ▷ Open-pit soil and vegetation restoration

MINE CLOSURE

The ZCMC Mine Closure team is involved in planning effectively for all activities required before, during and after the operating life of the mine. The mine closure plan consists of two phases.

Recultivation work is seasonal and only implemented 150 days each year. The open-pit area, following the completion of the recultivation works, has the potential to be developed into an artificial lake and recreational area if water accumulates at the bottom of the pit. This would involve the re-establishment of the Sakhkar river to its original course, whereby it runs through the open-pit area to prevent the stagnation of the lake.



△ Regenerated area with vegetation planted by ZCMC employees near the tailing storage facility

ENVIRONMENTAL ASPECTS

Mining operations cause a lot of negative environmental impacts in the supply chain and require immediate action to remedy them.

One of the negative impacts that has been in focus during 2021 (as well as in previous years) is combating deforestation and long-term damage to the ecosystem. For example, during 2021 the company invested AMD 21,144,594 or USD 43,597 to implement large-scale reforestation and greening projects in all the areas close to the mine and in nearby cities.

The reforestation projects were implemented in:

- ▶ Kajaran and Kapan for landscaping, CO₂ reduction
- ▶ Land rehabilitation projects near Artsvanik Tailing Storage Facility to prevent landslides and reduce CO₂ emissions

Two ZCMC employees plant trees ▶

In 2021, ZCMC planted a total of



530

trees



12,070

plants



2,365

rose bushes



1,430

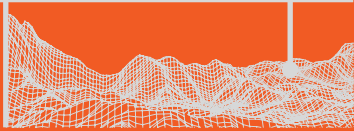
bushes

around the Artsvanik Tailing Storage Facility and in Kajaran and Kapan.



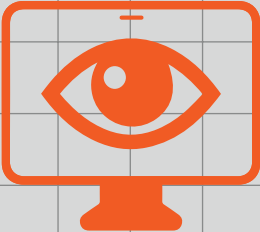

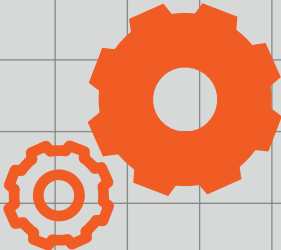
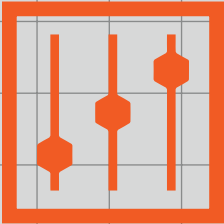


GOVERNANCE

5



Effective corporate governance is vital to ZCMC as it protects the company's reputation and supports a profitable performance. It forms the foundation for ensuring ethical conduct that is in line with international standards and preserves the values that characterize our company. It means stakeholders' concerns are heard and acted upon, helping us to maintain good relationships.

KEY FACTS & FIGURES: GOVERNANCE

MAIN FOCAL AREAS OF THE EXECUTIVE BOARD IN TERMS OF CORPORATE GOVERNANCE			MAIN EXTERNAL FRAMEWORKS USED
			1. UN initiatives – UN Global Compact, SDGs
→ MONITORING ACTUAL PERFORMANCE AGAINST STRATEGIC TARGETS	→ INTEGRATING THE COMPANY'S ETHICAL VALUES INTO THE CORPORATE CULTURE	→ DEVELOPMENT AND MODERNIZATION	2. Global and national management standards – ISOs, OHSAS, EITI, WTO IHR, UN Declaration of Human Rights
			3. International associations and charters – ILO, Rio Declaration, IFC Standards and Guidelines
→ EFFECTIVE MANAGEMENT AND CONTROL	→ STAKEHOLDER INCLUSIVITY	→ CONTRIBUTING TO THE UN SDGs	

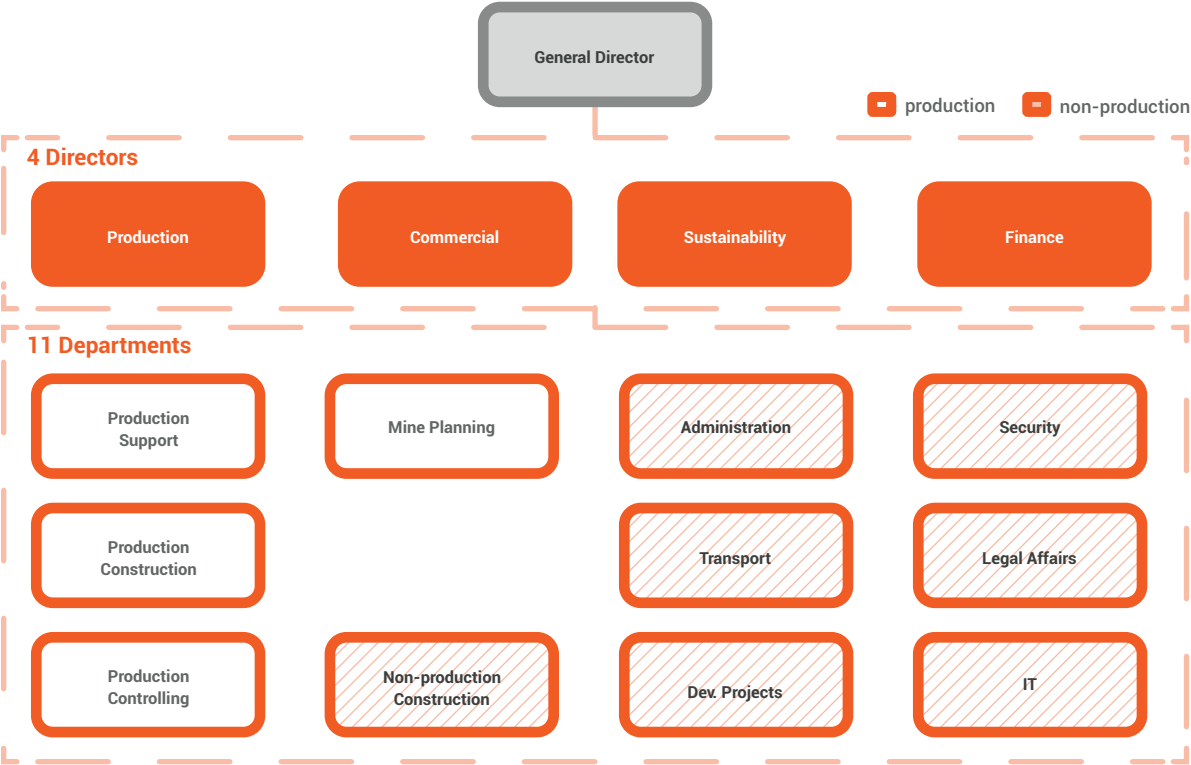
ESG GOVERNANCE

ZCMC understands that establishing well-integrated governance structures and risk management procedures are vital to ensuring the company's profitability and therefore safeguarding its future.

The company is committed to strategic decision-making that balances short-, medium- and long-term outcomes, monitoring target achievement and initiating fine-tuning to operations and procedures whenever necessary to ensure a positive performance.

ZCMC has eleven departments assigned to four directorates. Each department and each directorate reports directly to the General Director. The General Director's direct management team includes two deputies, two secretaries and 18 other support staff. The four directorates are responsible for the areas of Production, Commercial, Sustainability and Finance. All departments and directorates are also divided into production and non-production functions. The organizational structure of ZCMC and the reporting functions can be seen in the organizational chart.

ZCMC ORGANIZATIONAL CHART 2021



GOVERNANCE BODIES

The company's governance bodies and their roles and responsibilities are laid out in ZCMC's articles of association. They include the General Shareholders' Meeting, the Board of Directors and the Executive Board. The Executive Board is directly responsible for each of the company's departments and ultimately for the efficiency, safety and profitability of operations.

The Board of Directors ensures the ethical, effective and responsible leadership at Board and Executive Board level, maintaining close contacts with the Executive Board and regularly receiving reports and information in more informal formats. The Board of Directors sets and steers the strategic direction, laying out the path that the company will follow to maximize its opportunities, avoid risks, adhere to regulations and be ideally positioned for the future. The Directors also oversee and monitor management and performance in general to ensure accountability.

The Board structure includes the Compliance and Control functions which provide direct support to the departments and the Executive Board:

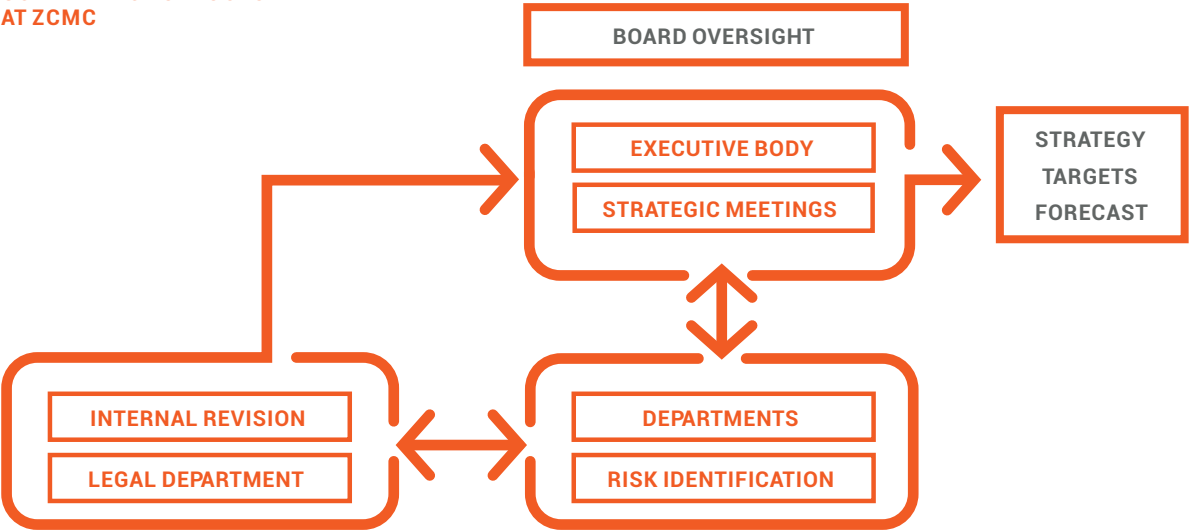
- ▶ The Sustainability directorate works closely together with the Legal department to refine and monitor adherence to the company's ESG policy, the ZCMC Code of Conduct, ethics and occupational health and safety. The department also ensures compliance with ZCMC's human rights policy as well as anti-bribery and

anti-corruption regulations and standards. ZCMC's Sustainable Development policy, social performance, supplier ESG evaluations and biodiversity standards are also managed by the Sustainability department.

- ▶ The Compliance team, part of the Legal department, is responsible for ensuring the compliance of all operations and activities on the mining site with local laws as well as international standards, regulations and best practices available.

- ▶ Risk management is incorporated within each of the company's individual departments. In close cooperation with Legal, the teams and individuals responsible within the departments identify, analyze, evaluate and report risks to the Executive Board which defines the extent and probability of the risks using risk-based targets. Material risks that could pose a significant threat to the company are followed closely together with the Board of Directors.

GOVERNANCE STRUCTURE AT ZCMC



INTERNAL ESG POLICIES

ZCMC believes that compliance combined with best practices in corporate governance and business ethics is key to maintaining the company's attractiveness to investors and achieving its strategic goals. The company therefore operates in line with internal policies and adheres to a number of general and specific international standards and guidelines. Our own internal ESG policies are developed, monitored and refined at a number of levels throughout the company, with responsibilities and final accountability firmly established.

The company's key corporate governance principles are in line with its vision and mission:

- ▶ Sound and efficient management of the company's day-to-day operations by the Executive Board accountable to the Board of Directors and the General Shareholders' Meeting
- ▶ Compliance with relevant Armenian laws
- ▶ Strong business ethics

- ▶ Zero-tolerance stance on corruption combined with effective anticorruption measures
- ▶ Active collaboration with investors, creditors and other stakeholders in order to increase the company's assets and market value

Anti-corruption Policy

The anti-corruption policy that we developed in 2017 and have established throughout our organizational structure is a very important milestone that governs our approach to management. This policy provides Board members, Directors and managers with a clear overview of our values and practical guidelines on how to handle situations involving corruption, bribery and fraud. ZCMC sees corruption as a serious crime that can severely damage the company's reputation and its economic situation.



In line with our values of conducting our business in an honest and transparent manner, we make all material facts and events that are relevant to ZCMC publicly available to stakeholders and interested parties on our website under Investor Information:



**[WWW.ZCMC.AM/ENG/
INVESTORINFORMATION/
SIGNIFICANTDATAANDNEWS/](http://WWW.ZCMC.AM/ENG/INVESTORINFORMATION/SIGNIFICANTDATAANDNEWS/)**

ECONOMIC PERFORMANCE

Sustainability governance is one of the top priorities of the Executive Board. Achieving our sustainability targets has a direct impact on our economic performance and this influence will increase in future as regulations become stricter.

The CEO and Directors have a number of joint performance indicators that were established in 2021. These performance indicators are grouped into social, environmental and economic indicators and are monitored in the first instance by the teams and departments who then report directly and regularly back to the Executive Board on these matters.

PERFORMANCE INDICATORS

Social Indicators	Environmental Indicators	Economic Indicators
Employee retention rate	Total ore extracted	Product sold (in tons)
Pension benefits	Total waste produced	Total employees
Health benefits	Total energy	Turnover
Percentage of women employed and share in senior positions	Total fuels and chemicals	Net profit
Hours of health and safety training	Total water used	Total operating costs
Number of fatalities	Total fines for economic non-compliance	ROACE (return on average capital employed)
Lost-time accidents	Total fines for environmental non-compliance	% of expenditure for extraction relative to turnover
Number of compensated occupational diseases	Total fines for social non-compliance	Total investments
Involvement in community projects	Net CO ₂ emissions, other net emissions	HR capital investment (e.g., employee training/education, community education)
	Net CO ₂ emissions compensation measures	Total wages and benefits, employment cost
	Net NO _x emissions	

EXTERNAL FRAMEWORKS

ZCMC follows and supports a number of international sustainable development initiatives, standards and guidelines, both general and those specifically focused on mining and extraction operations. The company is committed to the United Nations Sustainable Development Goals and has identified a number of projects that it is involved with that support specific targets and we will continue to focus our attention on the contributions that we can make to achieving SDGs in all future projects and initiatives.

ZCMC also refers to the UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, particularly in all its dealings with local stakeholders.

The company adheres to several global and national management standards through our departments and teams, such as the ISO standards, specifically environmental management standards (ISO 14001:2015), quality management standards (ISO 9001:2015), and occupational health and safety standards (ISO 45001:2018).

Two sets of guidelines that we adhere to that are specific to our business are the IFC's Environmental, Health and

Safety Guidelines for Mining and the EITI (Extractive Industries Transparency Initiative) Standard. Compliance is monitored very closely and awareness of the risks that may arise for the company as a result of non-compliance is communicated clearly.

Overview of External Frameworks Used at ZCMC

UN INITIATIVES

- ▶ UN Global Compact
- ▶ Sustainable Development Goals of the UN 2030 Agenda
- ▶ UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters

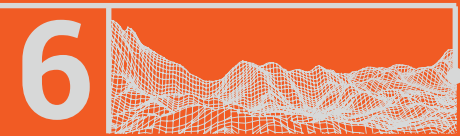
GLOBAL AND NATIONAL MANAGEMENT STANDARDS

- ▶ ISO 14001:2015 / ISO 9001:2015
- ▶ OHSAS 18001:2007 / ISO 45001:2018
- ▶ ISO/IEC 27001:2013 / ISO 26000:2010
- ▶ EITI Extractive Industries Transparency Initiative Standard
- ▶ WHO-IHR The World Health Organization International Health Regulations
- ▶ The Universal Declaration of Human Rights

INTERNATIONAL ASSOCIATIONS AND CHARTERS

- ▶ The Universal Declaration of Human Rights
- ▶ ILO (International Labour Organisation)
- ▶ The Rio Declaration on Environment and Development; IFC International Finance Corporation Performance Standards on Social and Environment
- ▶ IFC Environmental, Health and Safety guidelines
- ▶ The IFC's Environmental Health and Safety Guidelines for Mining

APPENDIX



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KEY INDICATORS

ENVIRONMENTAL 2021

Performance Indicator

Materials	Total materials	t	34,861.29
	Hazardous materials ¹	t	1,762.29
	Fuel	t	17,716.93
	Oil	t	449.47
	Chemicals ²	t	66.22
	Metals	t	14,854.18
	Wood	t	10.20
Energy	Total energy		446,431,213.00
	Total energy consumption inside organization	kWh	445,578,113.00
	Energy consumption outside organization	kWh	853,100.00
	Energy intensity ³	kWh/t	1,981
Waste by type	Total waste	t	33,721,794.24
	Total hazardous waste	t	17,396.88
	Sludge and tailings	t	17,392.90

Waste by type	Land fill	t	1.65
	Storage on site	t	1.540
	Reused	t	1.08
	Recycled	t	0.68
	Other	t	0
	Total non-hazardous waste	t	16,324,914.24
	Sludge and tailings	t	16,135.45
	Landfill and storage	t	239,31
Emissions	Reused	t	0.11
	Recycled	t	0.02
	Total GHG emissions	t CO ₂ e	130,616.16
	GHG emissions Scope 1	t CO ₂ e	18,115.50
	GHG emissions Scope 2	t CO ₂ e	112,500.66
	NO _x	t/year	226.90
	SO _x	t/year	11.40

¹ e.g. explosives, solvents, acetylene ² e.g. substances for ore lab testing ³ kWh per ton of ore

Emissions	Hazardous air pollutants	t/year	22.60
	Air particulate matter	t/year	753.90
Compensation for CO ₂ emissions ²	Reforestation Kapan and Kajaran	t CO ₂	0.243
	Reforestation Artsvanik	t CO ₂	0.269
Water	Total water intake	m ³ /year	40,924,845.20
	Voghji river	m ³ /year	20,559,680.60
	Sakhkar river	m ³ /year	388,800.00
	Geghi river	m ³ /year	18,932,929.00
	Total water consumption by operations in volume	m ³ /year	69,970,590.00
	Drilling ore	m ³ /year	29,409.00
	Processing	m ³ /year	68,886,881.00
	Equipment washing	m ³ /year	5,320.00
	Dust suppression	m ³ /year	113,934.00
	Truck washing	m ³ /year	24,290.00
	Auxiliary use ⁴	m ³ /year	865,348.00
	Domestic use ⁵	m ³ /year	45,408.00
	Total water recycled and reused	m ³ /year	2,409,000.00

Water	Total water consumption by operations	m ³ /year	69,970,590.00
	Drilling ore	%	0.04
	Processing	%	98.45
	Equipment washing	%	0.01
	Dust suppression	%	0.16
	Truck washing	%	0.03
	Auxiliary use	%	1.24
	Domestic use	%	0.06

SOCIAL 2021

Performance Indicator

Employees	Total employees	headcount	4,374
	Male	headcount	3,377
	Female	headcount	997
	Production directorate	headcount	2,843

⁴ workshops, chemical laboratory

⁵ drinking, canteen, laundry, sanitary

Employees	Technical department	headcount	524
	Administrative department	headcount	1,007
	Ratio male employees	%	77.2
	Ratio female employees	%	22.8
	Ratio employees Production	%	65.00
	Ratio employees Technical	%	11.98
	Ratio employees Administrative	%	23.02
	Ratio women Production department	%	11.90
	Ratio women Technical department	%	64.80
	Ratio women Administrative department	%	23.30
	Women <30 years	%	8.90
	Women 31-40 years	%	31.10
	Women 41-50 years	%	28.30
	Women 51-60 years	%	21.00
	Women >60 years	%	10.70
Employees hired from local region	Total	%	97.00
New hires / leaves	Total new hires	headcount	135
	Total leaves	headcount	257
Turnover rate		%	2.8

Training hours per employee	Total average	h	15
Share of staffing budget by departments	Production	%	67.00
	Technical	%	8.00
	Administrative	%	25.00
Local employment target		%	97
Health and safety	Total incidents	number	272
	Trucks and car damage	number	14
	First-aid cases	number	251
	Traffic incidents	number	2
	Environmental incidents	number	2
	Lost work-day cases	number	3
Performance Indicator		AMD million	USD million
Staffing	Total budget	29,496.90	58.56
Community investments	Total budget	3,882.05	7.86
	Construction and social budget	1,654.18	3.35
	Social, cultural, sports and donations	2,227.87	4.51
Reforestation projects	Total budget	21.14	0.43



GRI CONTENT INDEX

Zangezur Copper Molybdenum Combine (ZCMC) has reported the information cited in this GRI Content Index for the period from January 1, 2021, to December 31, 2021, with reference to the GRI Standards.

GRI STANDARD	DISCLOSURE	CHAPTER	COMMENTS
GRI 1 used for compiling the report:	GRI 1: Foundation 2021		
GRI 2: GENERAL DISCLOSURES			
	2-1 Organizational details	About ZCMC	
	2-2 Entities included in the organization's sustainability reporting	About this Report	
	2-3 Reporting period, frequency and contact point	About this Report	
	2-4 Restatements of information	About this Report	
	2-5 External assurance	About this Report	
	2-6 Activities, value chain and other business relationships	About this Report / Strategy / About ZCMC	The company does not sell any products which are banned, the subject of stakeholder questions, or the subject of public debate.
	2-7 Employees	About ZCMC / Employees	
	2-8 Workers who are not employees	About ZCMC / Employees	

**GRI 2:
GENERAL
DISCLOSURES**

2-9 Governance structure and composition	Governance	The company has the following governing bodies: shareholders' committee, Board of Directors and Executive Board (CEO and directors).
2-10 Nomination and selection of the highest governance body	-	The Board of Directors is selected for a period of 3 years, by resolution of the General Shareholders' Meeting.
2-11 Chair of the highest governance body	-	
2-12 Role of the highest governance body in overseeing the management of impacts	Strategy / Governance	
2-13 Delegation of responsibility for managing impacts	Governance	
2-14 Role of the highest governance body in sustainability reporting	Governance	
2-15 Conflicts of interest	-	All material facts and events are transparently published on ZCMC's investor relations website: http://www.zcmc.am/eng/investorinformation/significantdataandnews/
2-16 Communication of critical concerns	-	The highest governance body reviews the effectiveness of the company's risk management processes for economic, environmental and social topics. The critical issues are treated in high confidentiality; therefore this information is not published.
2-17 Collective knowledge of the highest governance body	-	All material facts and events are transparently published on ZCMC's investor relations website: http://www.zcmc.am/eng/investorinformation/significantdataandnews/

**GRI 2:
GENERAL
DISCLOSURES**

2-18 Evaluation of the performance of the highest governance body	-	All material facts and events are transparently published on ZCMC's investor relations website: http://www.zcmc.am/eng/investorinformation/significantdataandnews/
2-19 Remuneration policies	Employees	
2-20 Process to determine remuneration	Employees	
2-21 Annual total compensation ratio	-	All material facts and events are transparently published on ZCMC's investor relations website: http://www.zcmc.am/eng/investorinformation/significantdataandnews/
2-22 Statement on sustainable development strategy	CEO Letter	
2-23 Policy commitments	Governance	
2-24 Embedding policy commitments	-	The company does not publish this information.
2-25 Processes to remediate negative impacts	-	The company does not publish this information.
2-26 Mechanisms for seeking advice and raising concerns	-	The company does not publish this information.
2-27 Compliance with laws and regulations	Strategy / Environment	The company has not identified any non-compliance with environmental laws and/or regulations during the reporting period.
2-28 Membership associations	About ZCMC / Governance	
2-29 Approach to stakeholder engagement	Strategy	
2-30 Collective bargaining agreements	Employees	

TOPIC-SPECIFIC DISCLOSURES

GRI 201: Economic Performance 2016	GRI 3, 3-3 Management of material topics	About ZCMC	
	201-1 Direct economic value generated and distributed	About ZCMC	
	201-2 Financial implications and other risks and opportunities due to climate change	-	There were no financial implications due to climate change in the company during the reporting period.
	201-3 Defined benefit plan obligations and other retirement plans	-	All material facts and events are transparently published on ZCMC's investor relations website: http://www.zcmc.am/eng/investorinformation/significantdataandnews/
	201-4 Financial assistance received from government	-	None. No government body holds shares in the company.
GRI 203: Indirect Economic Impacts 2016	GRI 3, 3-3 Management of material topics	Community	
	203-1 Infrastructure investments and services supported	Community	
	203-2 Significant indirect economic impacts	About ZCMC	
GRI 204: Procurement Practices 2016	GRI 3, 3-3 Management of material topics	Community / Employees	
	204-1 Proportion of spending on local suppliers	Community	
GRI 205: Anti-corruption 2016	GRI 3, 3-3 Management of material topics	Governance	
	205-1 Operations assessed for risks related to corruption	-	No operations were investigated for corruption risks during the reporting period.
	205-2 Communication and training about anti-corruption policies and procedures	Governance	
	205-3 Confirmed incidents of corruption and actions taken	-	The company did not register any confirmed incidents related to corruption during the reporting period.

GRI 206: Anti-competitive Behavior 2016	GRI 3, 3-3 Management of material topics	Governance	
	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	-	The company is not involved in any legal action related to anti-competitive behavior, anti-trust or monopoly practices.
GRI 301: Materials 2016	GRI 3, 3-3 Management of material topics	Environment / Governance	
	301-1 Materials used by weight or volume	Environment	
	301-2 Recycled input materials used	Environment	
	301-3 Reclaimed products and their packaging materials	-	Not applicable
GRI 302: Energy 2016	GRI 3, 3-3 Management of material topics	Environment / Governance	
	302-1 Energy consumption within the organization	Environment	
	302-2 Energy consumption outside of the organization	Environment	
	302-3 Energy intensity	Environment	
	302-4 Reduction of energy consumption	Environment	
	302-5 Reductions in energy requirements of products and services	-	Not applicable
GRI 303: Water and Effluents 2018	GRI 3, 3-3 Management of material topics	Environment / Governance	
	303-1 Interactions with water as a shared resource	Environment	
	303-2 Management of water discharge-related impacts	Environment	
	303-3 Water withdrawal	Environment	
	303-4 Water discharge	Environment	
	303-5 Water consumption	Environment	

GRI 304: Biodiversity 2016	GRI 3, 3-3 Management of material topics	Environment / Governance	
	304-1 Operational sites owned, leased, managed in, or adjacent to protected areas and areas of high biodiversity value outside protected areas	Environment	
	304-2 Significant impacts of activities, products and services on biodiversity	Environment	
	304-3 Habitats protected or restored	Environment	
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	Environment	
GRI 305: Emissions 2016	GRI 3, 3-3 Management of material topics	Environment / Governance	
	305-1 Direct (Scope 1) GHG emissions	Environment	
	305-2 Energy indirect (Scope 2) GHG emissions	Environment	
	305-3 Other indirect (Scope 3) GHG emissions	Environment	During the reporting period, no other emissions associated with the company (employee travel to work, business travel, emissions from material transport or product distribution) were accounted by the company.
	305-4 GHG emissions intensity	Environment	
	305-5 Reduction of GHG emissions	Environment	
	305-6 Emissions of ozone-depleting substances (ODS)	Environment	
	305-7 Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	Environment	

GRI 306: Waste 2020	GRI 3, 3-3 Management of material topics	Environment / Governance	
	306-1 Waste generation and significant waste-related impacts	Environment	
	306-2 Management of significant waste-related impacts	Environment	
	306-3 Waste generated	Environment	
	306-4 Waste diverted from disposal	-	The company did not measure the waste diverted from disposal during the reporting period.
	306-5 Waste directed to disposal	Environment	
GRI 401: Employment 2016	GRI 3, 3-3 Management of material topics	Employees / Governance	
	401-1 New employee hires and employee turnover	Employees	
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	-	Employees with fixed-term or part-time work contracts are granted the same benefits as full-time employees.
	401-3 Parental leave	-	No parental leave was taken during the reporting period.
GRI 402: Labor/Management Relations 2016	GRI 3, 3-3 Management of material topics	Employees / Governance	
	402-1 Minimum notice periods regarding operational changes	-	Employees are typically informed as soon as possible about significant operational changes which could gravely affect them. The company takes seriously the collective bargaining agreements applicable through Armenian labor law.

GRI 403: Occupational Health and Safety 2018	GRI 3, 3-3 Management of material topics	Employees / Governance	
	403-1 Occupational health and safety management system	Employees	
	403-2 Hazard identification, risk assessment, and incident investigation	Employees	
	403-3 Occupational health services	Employees	
	403-4 Worker participation, consultation, and com- munication on occupational health and safety	-	Workers are represented in formal joint management- worker health and safety committees.
	403-5 Worker training on occupational health and safety	Employees	
	403-6 Promotion of worker health	Employees	
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Employees	
	403-8 Workers covered by an occupational health and safety management system	Employees	
	403-9 Work-related injuries	Employees	
	403-10 Work-related ill health	Employees	
GRI 404: Training and Education 2016	GRI 3, 3-3 Management of material topics	Employees / Governance	
	404-1 Average hours of training per year per employee	Employees	
	404-2 Programs for upgrading employee skills and transition assistance programs	Employees	
	404-3 Percentage of employees receiving regular performance and career development reviews	-	

GRI 405: Diversity and Equal Opportunity 2016	GRI 3, 3-3 Management of material topics	Employees / Governance	
	405-1 Diversity of governance bodies and employees	Employees	
	405-2 Ratio of basic salary and remuneration of women to men	-	The ratio of basic salary and remuneration of women to men is 1:1.
GRI 406: Non-discrimination 2016	GRI 3, 3-3 Management of material topics	Employees / Governance	
	406-1 Incidents of discrimination and corrective actions taken	Employees	The company did not register any cases of discrimination during the reporting period.
GRI 413: Local Communities 2016	GRI 3, 3-3: Management of material topics	Community / Governance	
	413-1 Operations with local community engagement, impact assessments, and development programs	Community	
	413-2 Operations with significant actual and potential negative impacts on local communities	Community	
GRI 415: Public Policy 2016	GRI 3, 3-3: Management of material topics	Strategy	
	415-1 Political contributions	-	All material facts and events are transparently published on ZCMC's investor relations website: http://www.zcmc.am/eng/investorinformation/significantdataandnews/

LEGAL NOTICE

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