

Mr. Arun Misra

CEO and Wholtime Director
Hindustan Zinc Limited



HINDUSTAN ZINC
Zinc & Silver of India

Q. The Mining and Manufacturing Sector is one of the major engines of growth for India's economy. How do you see this segment evolve in the days to come in terms of further enhancing its stakes in India's growth story?

A. In the past 20 years, the market capitalization of the top 40 mining companies has more than tripled from \$387 billion in 2003 to \$1,225 billion in 2022, mainly due to consolidation. India's GDP from manufacturing is climbing and is set on the path to becoming a significant global manufacturing hub that has the capacity to export items worth US\$1 trillion by 2030. The manufacturing sector contributes significantly to the Indian economy, accounting for roughly 27.3 million jobs and 17% of GDP. By undertaking significant policy efforts and regulatory involvement in the auction process, the imposition of tariffs, and land availability, the Indian government is also contributing to the growth of the metals and mining sectors. The mining industry has the potential to help achieve the Sustainable Development Goals (SDGs) through socioeconomic gains, foreign exchange earnings, livelihoods and employment opportunities, infrastructure development, communication, the delivery of essential services, and the provision of raw materials for green technologies.

With government initiatives like the National Manufacturing Policy, the sector will move towards Industry 4.0, and the

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adoption of digitization initiatives across the manufacturing portfolio will add impetus to bring India's core manufacturing sector up to par with international manufacturing standards. Further, to enhance the mineral resource inventory of India through the acceleration of mineral exploration, the Indian government is coming up with favourable reforms for promoting exploration of strategic and critical minerals with new exploration licences to reduce import dependency. Recently, 30 critical minerals have been outlined by the ministry that are crucial for economic growth and development in the clean energy, defence, and telecommunication sectors of the country. Progressive digital transformation through artificial intelligence and automation in the mining sector will play a vital role in the growth of mineral production and

sustainable mining. With the advent of such innovative disruptions, our operations will become more efficient using predictive analysis, and companies will strive towards a safe, smart, and sustainable future.

Q. Being from a core engineering sector often termed the brick-and-mortar segment, how has technology and business evolved over the years in your sector? What are some of the revolutionary technological transitions that the sector has witnessed, and one must watch out for?

A. There is an emergence of new technology for remote and automated work. The trend of requiring miners to use technology to work safely was advanced by COVID. Technology advancements in the mining industry are mostly driven by themes like automation, digitization, efficiency, and sustainability.

The use of technology is to enhance operations, thus making them safer and more reliable. The operational prowess owing to technology and innovation has made way for real-time monitoring and analysis, thus enhancing the overall decision-making process. Digitalization and automation improve mining techniques, reducing waste and enabling more focused mining. Drones, AI, sensors, the Internet of Things, digital twins, augmented reality, and extended reality, among other cutting-edge technologies, are optimised by digital innovations to give mine operators tools that reduce worker risk and danger, boost operational effectiveness, lower labour and equipment costs, and shorten the time it takes to set up a mining operation. At Hindustan Zinc, we are currently using drones, IOT, AR/VR, AI, and sensors to explore more resources, reduce man-machine interaction, and increase efficiency and productivity. Some other innovative digitalization initiatives include operating machines from the surface during blasting and the implementation of advanced process controls.

Since the majority of mining operations' carbon emissions stem from their reliance on diesel fuel, electric-powered vehicles are providing a more sustainable model for reducing mining carbon emissions going forward. For instance, at Hindustan Zinc, we have deployed India's first ever battery electric vehicle in underground mining and have also deployed 21 vehicles across our smelter locations, thus paving the way for a sustainable future.

We have made sustainability central to our growth and value-creation journey and remain focused on ensuring safe operations with minimum environmental impact of our business across the lifecycle.

Q. With rising accountability towards sustainability, industries are looking for more avenues to tap into alternate sources of energy and renewables. How is the mining sector looking at renewable and alternate sources of energy as an effective tool to further business and sustainability?

A. The mining sector is increasingly adopting renewable energy sources to power operations. Given the high energy demands of mining operations and the overall environmental lifecycle sustenance, alternate sources of energy have resulted. By utilising renewable energy sources like solar, wind, and hydropower, mining businesses can lessen their dependence on fossil fuels. Long-term cost savings from this modification could increase the financial viability and competitiveness of the mining operations.

The use of renewable energy technology not only supports sustainability objectives but also helps to lower long-term operating expenses and reduce energy price volatility. Over the next five years, it is anticipated that the world's renewable energy supply will increase by 50% due to rising demand. For us at Hindustan Zinc, we are driven by the Sustainable Development Goals 2025 and are committed to becoming a net zero emission company by 2050 or sooner, in line with the business ambition for the 1.5° campaign led by Science Based Targets initiative (SBTi). We have signed a 450 MW power delivery agreement for round-the-clock renewable power and have also initiated biomass utilisation in our captive power plants as a substitute for coal as an alternate source of energy.

Q. Taking the sustainability debate further, there has been a lot of talk about judicious and minimal use of natural resources to guard against their depletion. As a mining company involved in unearthing natural resources, how do you see yourself treading this path of ambiguity?

A. The mining sector is crucial for the economic growth and development of a nation, and it is up to the mining companies to strike a balance between serving social requirements and protecting our natural resources for future generations. Mining firms are essential for fostering economic expansion, creating jobs, and providing a solid platform for the infrastructure ecosystem.

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safe operations with the minimum environmental impact of our business across the lifecycle. We have ingrained into the organisational fabric a strong sense of respect for human rights and the ethos of sharing the benefits of business with our stakeholders. Our strategic approach is aligned with national and international standards and Sustainable Development Goals.

By using effective extraction and processing methods, we continuously work to increase the efficiency of our resource consumption. Adopting technology that reduces waste production, improves water and energy use, and supports the protection and preservation of biodiversity are some examples of how to do this. We are a certified 2.41 times water positive company and are on track to become 5 times water positive by 2025.

We are constantly working to negotiate the grey area between resource use and depletion by adhering to these principles, making sure that our mining operations promote sustainable development while protecting our natural resources for future generations.

Q. Hindustan Zinc has been at the helm of numerous CSR initiatives that it has successfully executed. Can you give us an idea of some of these initiatives and how they have made a tangible impact?

A. We have prioritised Corporate Social Responsibility (CSR) as a crucial element of our inclusive growth strategy. We have aligned our CSR initiatives with community needs, national priorities, and the United Nations' Sustainable Development Goals (SDGs), which is crucial for creating a meaningful and lasting impact. These are just some of the initiatives that have benefited society at large and transformed communities on the road to empowerment and dignity.

We have centred our CSR efforts on strengthening the local economy and improving the overall quality of life in the community at large. We are touching the lives of 1.723 million people in 237 villages through sustained CSR initiatives and in more than 2500 villages through the **Khushi NandGhar** Initiative, thereby bringing positive social change. In fact, we have achieved the Sustainable Development Goal and positively impacted more than 1 million lives by strengthening the local economy, promoting skill development and education in the region, and improving the quality of life in communities.

Education, one of the largest CSR verticals, begins with the **Khushi NandGhar** programme for children below 6 years of age, where pre-school learning is imparted to them. Then comes the **Shiksha Sambal Initiative**, which provides remedial classes to students in grades 6 to 12, followed by **Unchi Udaan**, which is a residential training programme to support the high-performing students from around our operational areas to prepare for competitive exams.

Other areas that we are constantly working towards are transforming the lives of our **Sakhi** (our women empowerment initiative), **Samadhan** (an initiative encompassing sustainable livelihoods), and **Zinc Kaushal Kendra** (a skilling initiative). With **Sakhi**, we are ushering in an age of not just financial independence but empowerment from within by forming self-help groups and microenterprises. Under **Samadhan**, our focus is to imbibe the farmers with sustainable farming technologies and innovations that catapult their production. We have 5 FPOs (Farmer Producer Organisations) with more than 5000 shareholders and 2 microenterprises—dairy and mineral mixtures—to enhance the scale of their operations by offering high-quality supplies at affordable rates and



supporting their livestock development endeavours. Further, with our *Zinc Kaushal* programme, we aim to make rural youth employable by providing necessary professional skills in the domain of their choice.

By focusing on various aspects such as education, sustainable livelihoods, community asset creation, environment and safety, women's empowerment, health, water and sanitation, sports, and culture, we are addressing a wide range of social and developmental needs. The range of impact across the projects defines the on-ground efficacy of our aim of transforming communities.

Q. What is your view on the existing policy and legislation pertaining to CSR? Is there any scope for improvement, and how can companies like yours make the most of it?

- A. Businesses have been encouraged to support social and environmental issues thanks to the implementation of Section 135 of the Companies Act, 2013, which requires some corporations to dedicate a part of their income to CSR efforts.

First and foremost, it's crucial to see CSR as an essential component of the corporate strategy rather than just a legal requirement. Second, we may make use of the policy's potential for collaboration.

Our CSR initiatives can be made more effective by collaborating with other businesses, non-profits, and regional communities. Our initiatives are built on theme areas related to the most relevant SDGs of social empowerment, such as women's empowerment, education, health, water, sanitation, and sustainable livelihoods, among others.

We believe in transforming communities through our initiatives and go beyond the 2% requirement, as it is through these initiatives that we gain the social licence to operate and benefit the nation at large. Our approach has been to focus on and implement CSR initiatives that are impact-centric and community-centred. We have worked hard to strengthen our social performance, thereby ensuring the social licence to operate and sustain our stronghold in the community and creating an economy that not only brings in development at the village level but also contributes to the building of the larger nation and our vision of *#TransformingForGood* for an Atmanirbhar Bharat.

Q. Innovation and technology is going to be the cornerstone of commercial evolution in the days to come, enabling businesses to be more sustainable and environment friendly as it goes about its quest for growth. What are



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some of the steps that companies can take to imbibe and promote the culture of innovation and disruptive technology?

- A. We believe fostering a culture of innovation and disruptive technology is crucial for driving sustainability and growth. To imbibe and promote this culture, organisations can take several steps. Firstly, encourage open communication and collaboration, creating an environment where employees are empowered to share ideas and experiment with new technologies. Secondly, invest in research and development, allocating resources towards exploring innovative solutions for sustainable mining practices. Thirdly, establish partnerships with technology companies, start-ups, and research institutions to leverage external expertise and access cutting-edge technologies. Lastly, provide training and development opportunities for our workforce, ensuring they have the skills and knowledge to embrace and implement disruptive technologies.

One of the key steps to imbibe and promote innovation is to learn from the past and from peers. Peer benchmarking exercises become a great tool to promote an innovative culture, which is also enforced by having an open-door policy for seamless communication and feedback mechanisms. We have embraced this culture by having open portals, forums, and discussions on various new-age technologies and by also having familiarisation trips for our people. With this, we can drive continuous improvement, enhance sustainability, and stay at the forefront of the industry's evolution.

Q. Boards are increasingly dealing with new aspects of business that were previously disregarded, such as social responsibility, environment, emissions, and sustainability. What, according to you, will be the structure and scope of future boards, and what are some of the changes that are required?

- A. Environmental, Social and Governance—between these three words lies our hope for today and tomorrow. ESG

creates sustained outcomes that drive value and fuel growth while conserving our environment and strengthening societies.

As a result, the structure and scope of future boards are likely to change in several ways. First, boards should become more diverse, with a wider range of skills and experience. Second, they will be more engaged with stakeholders to get their input on how to address these challenges. Third, boards will become more proactive in setting and monitoring environmental and social performance targets.

The future board should be embedded with a sustainable, purpose-driven mechanism wherein the performance indicators of the top-level are closely monitored with the sustainability goals. This will help in creating a top-to-bottom approach. The interdependence of corporate risks will also drive this, making the board proactive rather than reactive.

The boardrooms of today will shape the future of tomorrow for us all and have the power to make decisions whose fruits will be borne by our future generations. ■

