



STEENCORE
MINING & ENERGY

SUSTAINABLE MINING

POLICY

2022/23



STEENCORE

POWERING A SUSTAINABLE FUTURE

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Effective from January 2021

Last Reviewed in July 2022

Sustainable Development of Mining Mineral Resources

Sustainable Mining

Sustainable mining covers the environmental, economic, and social aspects of mining operations and is indispensable for the sustainability of mining projects. In recent years, the necessity of keeping the industry abreast, especially mining, with sustainable development goals has received much attention in many countries. In modern mining, the mining industry can achieve sustainable development goals by focusing on environmental protection and socio-economic considerations in the mine project life cycle. Key approaches to increasing the acceptability of the mining activities by promoting sustainability such that mining activities will be more sustainable, and their negative impacts will be reduced.

As a top commodity trading company Steencore Group leverages their experience to develop a responsible business. The company has the goal of becoming a leader in the field of managing corporate responsibility. The management board and shareholders of Steencore Group support this commitment and know that it is important to earn and sustain a social license in many of the communities and countries the company is active in. As a company that specializes in transporting large volumes of materials worldwide, Steencore takes a rigorous approach to risk management and operates to the highest standard.

We achieve this through our global footprint, conservative risk management culture, expert market intelligence, and deeply experienced and innovative trading desks. Steencore's central business is complemented by our strength in building strategic relationships across the industry, allowing us to provide customers with access to a diverse and steady supply of resources.

Our HSEC Policy maintains conduct business that will protect the environment, to promote health and safety for its employees. Our code of conduct demands Steencore to act with transparency and integrity. To comply with all HSEC regulations and legislation domestically and internationally. and Business Principles contain the company's approach to corporate responsibility.

Furthermore, our principles are incorporated in the areas of environment, health, and safety together with labour practices, human rights, and community relations. Our principles for sustainable mining are when we conduct essential resource extraction while improving social, economic, and environmental outcomes are the foundation principles.

Mining is one of the principal and influential factors in the global economy as well as the first place in the supply chain for industrial and agricultural products for human needs. Minerals have a vital role in the supply and transmission of the energy sector, chemical fertilizers in agriculture, medical and pharmaceutical industry, transportation, communication, construction, and other industrial products. There is a demand for a wide range of minerals in peacetime and also wartime (weapons production). Mining activity is one of the main requirements of development and economic growth. Hence, it is referred to as a catalyst for economic growth (Osanloo, 2016). The standard of living can be addressed by the Gross Domestic Product (GDP) and per capita consumption of minerals. The portion of the resulting revenue of mining activities that belongs to the government can be used to finance public spending on physical capital (e.g., infrastructures such as roads and railroads, etc.) and human capital (e.g., education, public health investments, etc.). These public investments can lead to achieving a promising future.

Indeed, it's difficult to answer the question, "*what happens to the world if we take away mining?*" The positive aspects of mining activities are summarized in Table 1. In addition to all of these benefits, mining activities have negative impacts such as water, air, and soil pollution, damage to flora and fauna, climate change, subsidence, social disorder, community displacement, ergonomic injuries, child labor, as well as abandoned and unreclaimed mine sites. However, some of these impacts will remain even after the mine closure.

No.	Positive Aspects Of Mining Activities
1	Creating job opportunities
2	Infrastructure development and urbanization expansion
3	Supplying the needs of the secondary industries
4	Wealth creation and human development
5	Improvement of the knowledge and skill levels
6	Positive role in GDP
7	Attracting foreign wandering capital
8	Establishing tertiary industries

Table 1. Positive Aspects of Mining Activities

Future Mining Challenges

The growing population of the world has resulted in increasing mineral consumption and thus expanding the number of mining activities. In this regard, most of the easy access and high-grade ore deposits are mined, and what will remain in the ground is low grade and difficult-access ore deposits. Therefore, during the next decades, following the technology improvement and commodity price increases, the cut-off grade will decrease, leading to the rise in mining depth and stripping ratio. According to statistics released in 2019, every child born in a developed country (i.e., USA), on average, consumes 29.83 kilograms of different minerals (except oil and natural gas) per day (MEC, 2019).

This daily mineral consumption means that every human with an average of 78 years of life expectancy will consume more than 849.42 tons of minerals during his/her lifetime. Historical data of the world's population from 2000 to 2019 reveals a growing rate of 1.10%. Accordingly, the world's population could reach 9.7 Billion in 2050. Similarly, by considering a constant rate of mineral consumption, there is a need for 3274.69 billion tones (Bt) of minerals until 2050. By assuming the average stripping ratio of 1:1, by 2050, a total of 3274.69 Bt solid wastes should be stripped as overburden. Besides, due to the decreasing trend of minerals cut-off grade (especially base/precious metals), a considerable amount of wastes will also be produced in the form of tailings and will be transferred to the tailings dam.

Furthermore, the expansion of mining activities in the future will be accompanied by an increase in energy consumption (water, electricity, and fossil fuels), which will lead to imbalances between the supply and consumption of energy sources. These features actuate more adverse effects on Sustainable Development indexes and enhancing the need for efficient use of resources and social and environmental responsibility of mining companies and all stakeholders for keeping mining activities in the Sustainable Development path.

Our key approaches to answer these challenges:

1. Comprehensive Mine Planning and Design
2. Impact Assessment of Mining Activities
3. Mine Closure Risk Management
4. Conducting Progressive Mine Reclamation
5. Mine Waste Management
6. Using Renewable Energy Sources
7. Innovation and Technology
8. Academic Educational Program Modification
9. Research and Development
10. Health and Safety Improvement

These approaches are to be considered to increase the acceptability of the mining activities by promoting sustainability. Sustainable mining solutions do not end up with these approaches alone, but they are the most important ones that can facilitate and guarantee the achievement of sustainable mining. These approaches cover most of the aspects of mining activities and are also related to the entire life-cycle of the mining activities.



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