

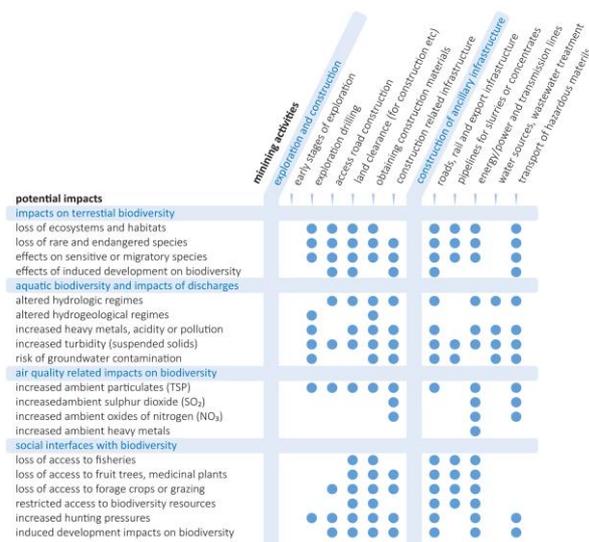


executive summary

Environmental and other effects of mining and transport

Mining practices have the potential to cause devastating damage to local communities and landscapes and this is why some new mine proposals are refused funding or are subject to public protests. For example, protests are still happening at operational coal mines in Germany and a new coal mine in Australia is struggling to locate investors in the face of public objections. However, extensive regulations and policies ensure that modern mining practices are carried out in a sustainable and environmentally responsible manner and that, where possible, they provide overall benefits to the ecosystem and to the local community. In developed regions, mining cannot commence without a full environmental impact assessment and a financially guaranteed plan for the reclamation of the land following completion of mining works. This report summarises the minimum requirements for environmentally sound mining but also looks at how some coal companies demonstrate excellence in corporate and social responsibility. Coal companies such as SUEK, Peabody and even Coal India are now receiving awards and recognition for their work to improve the environment and communities around existing and closed mines.

It is imperative that new mining projects, especially those in emerging regions, learn from past mistakes, build on current progress, and continue with the establishment of excellence in environmental best practice within the sector.



The intersection between mining activities and the environment

Minimising the impact of mining

National approaches to coal mining vary but the major coal producing nations, including China, the USA, India, Australia, Indonesia, Russia, South Africa, Germany, Poland and Kazakhstan, have stringent requirements for land and water preservation. The Berlin Guidelines, produced by the United Nations and thus voluntary, list the minimum performance standards of any organisation involved in mining activities. International organisations such as the ICMM (International Council on Mining and Metals) publish guidance documents on best practice in mining. These include recommendations for consultation with local communities, highlighting that early and effective engagement reduces the risk of negative reactions and provides a significantly greater potential for

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Environmental and other effects of mining and transport

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community engagement. Modern mining activities can leave a valuable legacy for the local community in the form of reforestation, industrial plots, new commercial areas, leisure facilities and even land art.



Hawks Nest Mine, VA, USA during mining and after reclamation

Coordinating transport fleets and minimising dust

In addition to potential impacts on the local landscape and wildlife, mining activities can affect local communities along the transport corridor. Delivery vehicles produce greenhouse gas emissions as well as creating noise and dust issues. Reducing the effects of coal transport requires a holistic approach to the entire coal chain and companies now manage their whole transport fleet to be as efficient and clean as possible. For example, larger trucks can be more effective than smaller ones in at reducing levels of dust and emissions (from lower fuel use). Well-loaded train wagons can move coal with less dust and fuel emissions and less disruption to communities than road transport. Dust can be produced any time that coal is picked up and moved. Coal companies such as Port Waratah Coal Services in Australia now restrict the number of times coal is physically moved by machine or vehicle and, where movement is unavoidable, dust production is minimised and controlled with well-designed vehicles and buildings, and, where necessary, with tactical dust reduction equipment such as water cannons and extraction systems. SUEK, Russia's largest coal producer, controls dust emissions at its Vanino transport terminal in real time. Like other forward-thinking mining companies, SUEK has also installed mine water cleaning systems and methane extraction and utilisation technologies

Stepping up

Coal mining companies take pride in their environmental performance and their annual reports include details of corporate and social responsibility commitments as well as details of awards both offered and won for best environmental practice. The public's opinion of a mining company can be influenced by its corporate and social responsibility performance. Individual companies can demonstrate higher standards of performance and it is often in an organisation's commercial interest to establish an above-average standard of practice. For example, Coal India, the state-owned coal mining corporation of India, is working with its subsidiary companies to reinvest a proportion of the company profits into activities focusing on eradicating hunger and malnutrition as well as promoting education and gender equality in the country.

The coal mining industry has matured in recent years, with many companies demonstrating that the application of best practice across the coal production chain can not only reduce environmental damage but can create an industry with positive effects on local communities. As coal mining becomes more prevalent in emerging nations and economies in transition, it is important that these new mining activities adopt this environmentally sound, mining ethos, making the most of published information and guidance on best practice options.