

The contribution of South African mining companies to the sustainable development goals: A knowledge synthesis from text mining

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Abstract

This study examines how the United Nations Sustainable Development Goals (SDGs) are prioritised and integrated within South Africa's mining sector through an analysis of sustainability and integrated reports from the top 13 Johannesburg Stock Exchange-listed mining companies between 2020 and 2023. Using the SDG Mapper, a text-mining tool that quantifies direct and indirect references to all 17 SDGs, the research identifies focus areas and reporting gaps. Findings show a steady rise in SDG references over time, with SDG 13 (climate action), SDG 12 (responsible consumption and production), and SDG 8 (decent work and economic growth) dominating corporate disclosures. SDG 7 (affordable and clean energy) also features strongly, reflecting responses to climate risks and regulatory pressure through emissions reduction and renewable energy adoption. In contrast, SDG 6 (clean water and sanitation) and SDG 15 (life on land) have only recently gained traction, exposing uneven sustainability practices. SDG 3 (good health and well-being) receives moderate attention despite its prominence in global mining frameworks. The study highlights the need for a more balanced, integrated approach that addresses environmental, social, and governance dimensions, and advocates systems thinking to strengthen sustainable mining in South Africa and other emerging economies.