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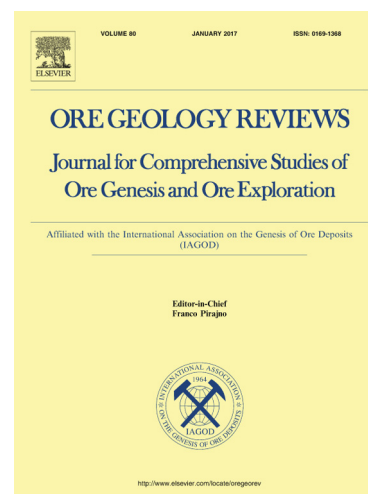
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Monitoring surface mining belts using multiple remote sensing datasets: a global perspective

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Abstract: Quantifying the spatiotemporal change of land cover and understanding their ecological, environmental, and socioeconomic impacts are important for sustainable development. Surface mining by the minerals industry is one driver of the changes in land cover, leading to loss of natural vegetation and top soils, and interruption of ecosystem service flows. This study investigates the effectiveness of remote sensing datasets to identify and map land cover changes, with the specific goal of understanding the impact of surface mining activities on land cover globally from 1980s to 2013. Diverse remote sensing datasets with long term observations are analyzed, including high-resolution images in Google Earth, Landsat Thematic Mapper (TM)/ Enhanced Thematic Mapper Plus (ETM+)/ Operational Land Imager (OLI), the Moderate Resolution Imaging Spectroradiometer (MODIS) Vegetation Index (VI) product and Defense Meteorological Satellites Program

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