

Geospatial Data and Remote Sensing for Enhancing ESG Reporting

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Abstract

The aim of this presentation is to explore how geospatial data and remote sensing technologies can enhance the assessment and reporting of Environmental, Social, and Governance (ESG) performance, providing more reliable, transparent, and comparable information for corporate decision-making and sustainable finance. The study employs a review and synthesis of recent research to identify practical methods for integrating geospatial data into ESG reporting. The approach involves mapping environmental indicators such as land use changes, vegetation cover, water resources, and soil conditions, and combining these measurements with existing ESG metrics to generate more robust and verifiable assessments. Results from case studies demonstrate that geospatial analysis can reveal previously unreported environmental impacts, improve the accuracy of corporate ESG reporting, and support decisions. This presentation will provide concrete examples of how GIS and remote sensing are applied in practice, discuss challenges and limitations, and propose a pathway for wider adoption of geospatial approaches in ESG reporting.

Keywords: ESG reporting, geospatial data, remote sensing, environmental impact