

## Elevating Environmental Impact Assessment through Remote Sensing in Engineering

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**Abstract :** Environmental Impact Assessment (EIA) stands as a critical engineering application facilitated by Earth Resources and Environmental Remote Sensing. Employing advanced technologies, this process enables a systematic evaluation of potential environmental impacts arising from engineering projects. Remote sensing techniques, including satellite imagery and geographic information systems (GIS), play a pivotal role in providing comprehensive data for assessing changes in land cover, vegetation, water bodies, and air quality. This abstract delves into the significance of EIA in engineering, emphasizing its role in ensuring sustainable and environmentally responsible practices. The integration of remote sensing technologies enhances the accuracy and efficiency of impact assessments, contributing to informed decision-making and the mitigation of adverse environmental consequences associated with engineering endeavors.

**Keywords :** environmental impact assessment, engineering applications, sustainability, environmental monitoring, remote sensing, geographic information systems, environmental management

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