

ABSTRACT

Urban areas and natural ecosystems are at serious risk from forest fires, especially in locations where urbanization and climate change are occurring quickly. Given its vast forest cover and rapidly expanding urban areas, Chhattisgarh is in a pivotal position where efficient risk assessment and integration of urban planning are crucial. The goal of this research is to use cutting-edge geospatial tools to close the gap between urban planning and forest fire risk assessment.

This research offers a thorough assessment of the dangers associated with forest fires throughout Chhattisgarh by utilizing remote sensing, geographic information systems (GIS), and spatial modelling. Urban planning procedures can be improved and informed to reduce the risk of fire by identifying and mapping high-susceptibility regions. These spatial studies must be incorporated into urban development plans.

The purpose of this research is to provide information to environmental managers, urban planners, and policymakers so they can make decisions that balance development with environmental stewardship. This study aims to help Chhattisgarh construct safer, more resilient communities by integrating forest fire risk assessments into the urban planning framework. In light of the rising danger of forest fires, our research emphasizes the significance of an aggressive, spatially aware approach to urban development.

Furthermore, the approaches and information shared here are meant to act as a template for other areas dealing with comparable problems. This project aims to advance our knowledge of how environmental risk assessments might be integrated into urban planning using geospatial tools.