

## **PREFACE**

India's woods, with their rich biodiversity and critical ecological processes, are a vital part of the country's natural legacy. From the dense Sal forests in the east to the green Western Ghats, these habitats are critical for carbon sequestration, biodiversity protection, and ecological balance. However, these irreplaceable resources are under serious threat, particularly from forest degradation and the rising occurrence of forest fires. This study is conducted against the backdrop of these difficulties, focusing on the state of Chhattisgarh, which is particularly vulnerable to forest fires due to its extensive forest cover and dry deciduous forests.

This study investigates the development and implementation of sophisticated forest fire risk control measures in Bijapur District, Chhattisgarh. The study aims to generate a complete forest fire risk zonation map using technologies such as weighted overlay analysis and Geographic Information Systems (GIS). This map, when combined with an integrated forest fire alert system, aims to improve the early detection and quick response to forest fires, thereby reducing their impact.

We aim to contribute to the larger initiatives for sustainable forest management and disaster risk reduction. This study aims to provide actionable insights and practical solutions for managing forest fire risks by conducting a thorough analysis of the factors influencing forest fires and applying modern risk assessment methods, ultimately protecting both the environment and the communities that rely on it.