

PREFACE

Forest fires have been on the rise in recent years, having a devastating impact on the Himalayan Forest ecosystem and landscapes. The study utilised remote sensing and GIS technology, as well as statistical tools, to develop forest fire risk models in two major Himachal landscapes, namely the Chamba and Kangra districts. To derive and delineate the forest fire-risk map, a multiparametric weighted index model was used, with risk variables such as vegetation, topographic factors, land surface temperature, and proximity to drainage, roads, and settlements. Collinearity between variables was checked and validated using Moderate Resolution Imaging Spectroradiometer (MODIS) hotspots and the Kernel Density Estimation (KDE) method to improve the use of a fire risk map. MODIS hotspot data from 2000 to 2018 was also analysed, revealing that the number of fires has a strong relationship with the burned area. The study's findings could help planners implement preventive measures by reducing the risk and impact of forest fires.