

# Forest Fire and Sustainable Management of Chirpine Forests in Himachal Pradesh in Western Himalayas - India

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## Abstract

Forest fire is one of dangerous foes of the forests. It has deleterious effects on forest produces including timbers, younger regenerations, soils, vegetation cover, rate of evaporation and transpiration resulting in degradation of forests and ecosystem as a whole. Chirpine forest of western Himalayas is prone to forest fire because of accumulation of (resinous needles) inflammable fuel material in pine forests. Extreme fire danger develops during long period of dry spell and hot weather of the summer i.e. from 15<sup>th</sup> April to June 15 in this area. Studies were undertaken to evaluate the effect of forest fires in the zone of its occurrence (900 to 2200m) in Himachal Himalaya in fire prone areas along with control areas. Studies revealed significant differences in shrubs, herbs and grass species diversity. It was observed that in fire affected areas species diversity and natural regeneration of pine and its associated species were adversely affected. It was also observed that frequent fires play vital role in maintaining the sustainability of chirpine forests under natural conditions. Repeated and yearly occurrence of forests fire for long spell of 20 years reduces plant species diversity and regeneration potential of chirpine forests as compared to that of occurrence of forests fire after the gap of 5-6 years. The paper presents the effect of forest fires and its interval of occurrence on plant species diversity and natural regeneration trend and also strategies for the sustainable management of fire affected chirpine forests. The paper presents the effect of forest fires and interval of its occurrence on plant species diversity and natural regeneration trend and also strategies for the sustainable management of fire affected chirpine forests.

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