

# Udhagamandalam | The Nilgiris on high alert

The Nilgiris is under threat with an increased incidence of forest fires. Till May 2024, 37 forest fires were recorded

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Forest fire trees burning in night | Photo Credit: Getty Images/iStockphoto

As a child, Sobha Madhan, 39, remembers her *ajji* (grandmother) talking about the Kurumba community setting fire to their parcels of land every few years. “When large tracts of forest went up in flames, our elders would tell us that fires are natural and helpful for biodiversity,” says Madhan, an *adivasi* from the Kurumba tribe in Pandalur. Fires can help reduce competition (allowing existing trees to

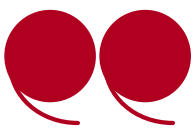
grow larger), recycle nutrients bound up in litter, and clear out dead organic matter.

Today, after years of being targeted by the forest department, who insist the community not start fires to clear their lands, it has become clearer to Madhan why they are important. Without it, invasive species such as the common lantana, yellow cassia and boneset grow unchecked. Lantana, for instance, tends to spread voraciously, especially in the lower altitudes, limiting biodiversity and creating ready biomass to fuel any fires. “Moreover, what we see around us today are not forests, but plantations of eucalyptus, teak, rosewood, sandalwood and others, which are more prone to turn a small fire into an uncontrollable inferno. If you study any fire in the Nilgiris, you will see that the [native species] *sholas* almost never burn down,” says Madhan, explaining how most native plants are more fire resistant — evergreens that have adapted over many millions of years to cope with the stresses of harsh winters and high summer temperatures. “The evergreen forests of Gudalur are long gone, only existing sporadically in small patches surrounded by vast tracts of tea, coffee and planted hardwoods. The management of these monoculture farms will be imperative in the years to come,” she adds.



Sobha Madhan, an *adivasi* from the Kurumba tribe in Pandalur

Forest officials state that measures are already being taken to remove vast tracts of invasive flora, alongside wattle trees and dense stands of broom and gorse shrubs that were introduced in the Nilgiris by British colonists looking to replicate home. “However, this is a difficult battle,” admits the official. The process is slow and often unsuccessful due to the lack of government funding for such projects.



*“Higher temperatures will invariably lead to more chances of fire breaking out. There needs to be better use of technology and scientific techniques to mitigate the effects of forest fires across the country.”*

**N. Mohanraj**  
Conservationist

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## Firestorm alert

In March, a forest fire in Forest Dale, Coonoor, which spread from an adjoining tea estate, raged for more than seven days. The forest department staff, aided by Indian Air Force helicopters fitted with bambi buckets, battled the blaze that destroyed more than 30 acres of forest. Though the trees destroyed were primarily exotic species such as cypress, the forest was home to a variety of endemic wildlife, including the endangered Nilgiri *sholakili* (blue robin), the Nilgiri flycatcher, as well as Indian gaur, spotted chevrotains, and leopards, says Antony Grossy, a wildlife and photography enthusiast who visits the forest to document its biodiversity.

According to the State forest department records, the Forest Dale fire was among 37 that were recorded in the Nilgiris forest division in 2024, as the heatwave that affected most parts of India swept through the district. In fact, Udhagamandalam (Ooty) town recorded its highest ever temperature of 29°C since records began in 1951 — it was 5.4°C above the average temperature for the hills, stated officials from the Regional Meteorological Center, Chennai.



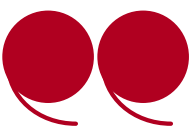
Adding to the threat of human error is the rising mercury. As per the Forest Survey of India's 2021 report, 45% of India's total forest cover is set to witness higher temperatures by 2030. "Higher temperatures will invariably lead to more chances of fire breaking out," says conservationist N. Mohanraj, who has been calling for better use of technology (drones, satellites, thermal imaging) and scientific techniques to mitigate the effects of forest fires across the country. Since 2023, more than 90 hectares (the size of approximately 222 football fields) of forests in the Nilgiris' division have been affected by fires.

Abi T. Vanak, director of the Centre for Policy Design at Ashoka Trust for Research in Ecology and the Environment (ATREE), Bengaluru, says that as summers get hotter and the weather drier, the chances of firestorms — more intense fires accompanied by higher winds — will increase. Fire seasons (usually from November to June, with April-May being the worst) will be longer, too.



Abi T. Vanak

Mohanraj feels it is high time that India invests in dedicated real time monitoring of forest fires like the NASA's Fire Information for Resource Management System (FIRMS). "Our forest staff still use sticks and branches to fight fire, lacking equipment such as fire suits, assisted breathing apparatuses and portable firefighting equipment."



*“In most Indian forests, which are either fire adapted or fire derived [in the former, the flora is largely fire resistant, and in the latter, fires actively play a role in shaping forest cover], it is the lack of fire that is destroying them and changing their intrinsic nature. It is imperative that the media learns to report on natural occurrences in a more nuanced manner”*

**Abi T. Vanak**

**Director, Centre for Policy Design, ATREE**

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## **Need for indigenous know-how**

Mohanraj is among a growing number of conservationists who have begun advocating “controlled burning” of forests and grasslands to reduce biomass. “This will ensure that when fires do break out, they can be more easily controlled, as they will be of lesser intensity due to having a lesser amount of fuel to burn,” he says.



N. Mohanraj, a senior environmentalist from Udhagamandalam |  
Photo Credit: M. Sathyamoorthy

Fellow conservationist and an expert on the Todas, Tarun Chhabra reiterates how fire has been used as a tool over millennia by indigenous communities to manage ecosystems. “In comparative studies, it was found that in wetlands that were affected by fire, though they had lesser diversity, they were populated more by endemic species,” he says, adding that endangered animals such as the Nilgiri Tahr prefer to graze on grasslands that are rejuvenated after a fire.

The Tamil Nadu forest department, as part of ‘Project Nilgiri Tahr’, has begun a scientific study into

reestablishing native grasslands. Supriya Sahu, the State government's additional chief secretary of Environment, Climate Change and Forests, says that such efforts will "in the long run, help to reduce the spread of invasive species too".



Project Nilgiri Tahr

Unfortunately, the perception that forest fires are catastrophic to the environment skews policy initiatives of governments and forest departments towards actively preventing fires, ensuring a build-up of biomass over a period, rather than burning them away, say experts. According to a forest department official, the lack of awareness of the utility of forest fires manifests in unnecessary panic among the public. "In some instances, when small patches of fire burn down highly degraded forests — where it actually benefits biodiversity — the media's and public's constant barrage of complaints has forced us to intervene and put them out," he says. The forest department and government, however, are now re-analysing their approach. "This shift has been clearly visible with the utilisation of firelines and controlled burns in tiger reserves across southern India. However, there needs to be wider adoption of these techniques," says Mohanraj.

## Annual checks

Every year, the forest department steps up patrolling along the fringes of the protected areas of the Mudumalai Tiger Reserve (MTR), Mukurthi National Park, Gudalur and Nilgiris forest divisions, to ensure that farmers and herdsmen do not set fires too close to reserve forests. “The department also establishes fire lines [20-30 feet gaps of land cleared of foliage, leaves and weeds to ensure wildfires run out of fuel when they reach it],” says an MTR official, adding that these measures can help control a fire quickly.

Meanwhile, Madhan says that decades of conflict between the forest department and *adivasi* communities has resulted in most of them staying away from traditional farming and resource collection techniques. Only a small minority of the 27,000 *adivasis* in the Nilgiris follows the practices of their ancestors. “Unless the skills of forest management are passed down to our youth, this traditional knowledge will be lost forever, just like the forests,” she concludes.