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In a first, Uttarakhand monitors forest fires with drones

New Delhi/Nainital, 24 April 2017 (IANS) In a first, the Uttarakhand Forest Department has launched a drone for real-time monitoring of the forest fire and to take preventive measures, officials said here

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New Delhi/Nainital, April 24 (IANS) In a first, the Uttarakhand Forest Department has launched a drone for real-time monitoring of the forest fire and to take preventive measures, officials said here on Monday.

The drone was launched by the state's Forest and Wildlife Minister Harak Singh Rawat from a remote location in Nainital district that falls under the western circle — a big part of the vast Terai region of the state located outside the tiger and forest reserves.

The Forest Department has dedicated three drones for monitoring the forest fire, according to the officials.

"We are using drones for real-time monitoring of the forest fires. This is for the first time in India," Dr Parag Madhukar Dhakate, Conservator of Forests, western circle and in-charge of the monitoring and usage of the unmanned aerial vehicle, told IANS.

Already in field, the drone on Sunday and Monday did the real-time aerial monitoring and showed the department workers developing a fire-line in the western circle forest to check fire from spreading. Uttarakhand faces maximum incidents of forest fires in the country.

This year, 236 cases of forest fires affecting 333.34 hectare area has already been reported by the government officials.

"Uttarakhand is very sensitive in terms of forest fire. Forest Department tries to take preventive measures and tackle it using the traditional methods and with the help of satellite images. But it's very difficult to know about the forest fire in the Terai and Bhabar regions," Dhakate told IANS.

The Terai region includes the fertile lowlands of the southern Himalayan, Shivalik foothills and north of Indo-Gangetic plains, while the Bhabar region lies along the foot of the Shivaliks and runs parallel to the north side of Terai.

Dhakate added that besides the real-time monitoring of fire, drones are already being used in wildlife conservation for nest status, aviation ethology, crocodile and water birds counting and monitoring. In 2016, about 4,500 hectares of forest land was destroyed in 2,000 incidents of forest fires in Uttarakhand. Himachal Pradesh — the second most forest fire-prone state — in 2016 lost 3,500 hectare forest land.

According to official figures, in both states taken together there were 20,667 incidents of forest fires in 2016 compared to 15,937 incidents in 2015.

The Forest Survey of India (FSI) estimates that 1.45 million hectares of forest land is affected by fires annually, with 6.17 per cent of the forests prone to severe fire damage.

Uttarakhand has about 71 per cent of total geographical area (38,139 square km) under forest cover.

Source: <http://www.india.com/news/agencies/in-a-first-uttarakhand-monitors-forest-fires-with-drones-2062694/>

Forest Fire destroys more than 57,000 sq km of India's woods in 2014

Kalyan Ray, New Delhi, DHNS
26 April 2017



The total burnt area under vegetation cover (forest, scrub and grasslands) was 57,127.75 sq km, which in 2014 accounts for almost 7% of India's forest cover. DH File Photo

India lost more than 57,000 sq km of jungles – an area larger than Himachal Pradesh - in forest fire in 2014, says India's first scientific estimation of forest fire losses.

The total burnt area under vegetation cover (forest, scrub and grasslands) was 57,127.75 sq km, which in 2014 accounts for almost 7% of India's forest cover.

The highest burnt area was recorded in the Deccan zone followed by North East and Western Ghats. No fire was seen in the Himalayas and the islands in that year.

State wise, the maximum burnt area was recorded in Odisha (9502 sq km) followed by Andhra Pradesh (7850 sq km), Maharashtra (6843 sq km), Chhattisgarh (4923 sq km), Tamil Nadu (4613 sq km), Madhya Pradesh (3963 sq km), Telangana (3493 sq km), Jharkhand (2719 sq km), Manipur (2497 sq km) and Karnataka (2254 sq km), says space scientists who carried out the analysis using satellite images.

The area of woods under fire increased by almost four times in the last two decades. A 1995 research estimated that about 14,500 sq km of forests were affected by fire in that area.

Notwithstanding the conservation measures, fires continue to be an annual phenomenon in Indian forests. Even though the 1988 National Forest Policy calls for forest protection against encroachment, grazing and fires, there was little action on the ground.

About 10 days ago, two such forest fires at Mount Abu and Mukundra hills in Rajasthan were doused by the Indian Air Force with support from the Army and state administration.

More than 79% of the burnt area is from the Deccan states, followed by the North East, Western Ghats and the semi arid zones. The maximum fire takes place in jungles having dry deciduous forests, followed by moist deciduous forests.

“The Eastern Ghats are more prone to fires because of having mostly dry deciduous forests,” space scientist C Sudhakar Reddy from Hyderabad-based National Remote Sensing Centre, who led the study told DH.

The fire season spreads from February to June, when the temperature hovers above the 40 degrees

Celsius mark in several parts of India.

The scientists, however, pointed out that most of the fires in India are ground fire, which does not lead to loss of canopy cover. The 2015 India State of Forest report pegged the total area under forest and tree cover at 7,94,245 sq km.

Of the 640 districts in India, 387 (60.47%) districts show forest fires. Burnt area of more than 000 sq km was recorded in 10 districts of India. They are Cuddapah, Prakasam, Chittoor and Kurnool of Andhra Pradesh; Gadchiroli of Maharashtra; Sambalpur of Odisha; Khammam of Telangana; Vellore and Dharmapuri of Tamil Nadu and Raipur of Chhattisgarh.

Burnt area class of 500 – 1000 sq km was distributed in 17 districts, which include Chamrajnagar (Karnataka).

The analysis by NRSC, Indian Space Research Organisation, Bengaluru and Indian Institute of Space Science and Technology, Thiruvananthapuram has been reported in the journal Current Science, published by the Indian Academy of Sciences, Bengaluru.

Source: <http://www.deccanherald.com/content/608339/forest-fire-destroys-more-57000.html>

Fire charred 18,128 spots in Maharashtra forests in ten years, reveals ISRO study

Researchers stress need to include local residents to control fires in protected areas

01 May 2017



The forest fires also contributed to one-sixth of the carbon emissions in India

Satellite data have revealed that almost half of India's protected areas reported incidents of fire between 2006 and 2015. Maharashtra stands fourth when it comes to the number of locations that reported fires in this time — 18,128.

Between 2006 and 2015, fires occurred in 281 of the 614 protected areas in India, largely in March and April when conditions are dry. There were 2,28,667 forest fires between 2006 and 2015.

The forest fires also contributed to one-sixth of the carbon emissions in India.

An analysis by the Indian Space Research Organisation (ISRO) and the Indian Institute of Space Sciences, Kerala, based on satellite images has found that forest fires from protected areas emitted 16 million metric tonnes of carbon dioxide in 2014 —17.1% of the total emission.

National parks, wildlife sanctuaries, conservation reserves and community reserves in the country are protected areas. They comprise 1,10,596.89 sq km (11.46%) of the total natural vegetation – forests, scrubs and grasslands. “Carbon emissions released from forest fires increase global warming and so, it is an environmental concern. Strict fire management policies have to be considered for protected areas to mitigate climate change and biodiversity conservation,” said the study led by C Sudhakar Reddy, a scientist from the forest and ecology division, National Remote Sensing Centre, ISRO, Hyderabad.

Of India’s forests, 55% is prone to recurrent fires. Scientists have recommended fire maps using medium and high-resolution satellite data, which could be used to analyse the extent of burnt forest area in the past 10 years, and also predict forest ecosystems that are vulnerable to fires.

Ecologist Madhav Gadgil, however, said that “bureaucratic fire management” would not work and locals who live in these areas must be given their rights under the Forest Rights Act. This will motivate them to protect the forest. “The land belongs to them. But these locals have been denied their rights for the past 10 years . If their rights are protected, they will help in controlling fires, among other things,” said Gadgil.

Of the total burnt area (9881.10 sqkm) in protected areas, 90% was reported from forests, which releasing an estimated 13 million metric tonnes of carbon dioxide, followed by scrubs (5.3%) and grasslands (4.2%). Nagarjunasagar–Srisailem Tiger Reserve in Andhra Pradesh gave out most of the carbon dioxide — at two million metric tonnes, followed by Gundla Brahmeswaram Wildlife Sanctuary, Andhra Pradesh, Kaimur Wildlife Sanctuary, Bihar and Indravati Tiger Reserve, Chattisgarh.

“Fire prevention policies must be considered with great care, including the use of prescribed fire to maintain a fire regime in the ecosystems. To develop practical policies in protected areas, it is essential to integrate information with human population and socio-economics,” said the study that was carried out as part of ISRO’s National Carbon Project.

Forest fires are a result of both natural and man made factors. They can occur when temperatures are high and humidity is low. For instance, there was a rise in the number of places that witnessed forests fires – 32,828 in 2009 and 28,466 in 2012 – because of above normal temperature these two years the warmest since 1901. Forests are set on fire for shifting cultivation, largely practised in the north-eastern parts of the country. Mizoram alone had 30,384 forest fires, also the highest in India, between 2006 and 2015. Other reasons include flush growth of grass for grazing and tendu leaves, burning cigarettes or bidis, and tree felling.

Professor Raman Sukumar, Centre for Ecological Sciences, Indian Institute of Science, Bengaluru, said India needs a programme for management of forest fires. “We need a system to prevent fires. For this, the forest department must burn small patches of forests to minimise fuel load (fallen dry leaves) early in the season. This will help control more intense fires later. Carbon emissions from forest fires is not as bad as it is made out to be. When it rains, carbon gets back to the vegetation. Our studies at the Mudumalai Tiger Reserve show that despite fires, carbon helps make good forests.”

The highest emissions were caused by dry and moist deciduous forests. Dense forests emitted more carbon dioxide than open forests. This was because of litter and dry grass, that catch fire easily.

Source:

<http://www.hindustantimes.com/mumbai-news/fire-charred-18-128-spots-in-maharashtra-forests-in-ten-years-reveals-isro-study/story-GezrWAzvfqSlgVmXbWgetO.html>
<http://www.hindustantimes.com/mumbai-news/fire-charred-18-128-spots-in-maharashtra-forests-in-ten-years-reveals-isro-study/story-GezrWAzvfqSlgVmXbWgetO.html>
