



## PRESS NOTE

### Digital India Ask Our Experts

- Explore how AI and High-Performance Computing are helping safeguard Sikkim's forests from wildfires
  - 49th episode highlights the role of satellite imagery, weather data, supercomputing and community participation in strengthening forest fire preparedness

**New Delhi:**The 49th episode of Digital India's flagship knowledge series 'Ask Our Experts' showcased how advanced technologies are transforming forest fire management through the Sikkim Wildfire Spread Forecasting and Monitoring System (SWFMS).

The session, held on June 19, 2026, featured Shri Karma Legshey, IFS, Principal Chief Conservator of Forests, Government of Sikkim, and Dr. Manish P. Kale, Scientist-F, C-DAC Pune, who discussed how cutting-edge digital technologies are enabling faster, more accurate and proactive wildfire management in ecologically sensitive Himalayan regions. Watch the episode on [https://www.youtube.com/live/01vqYebRHik?si=4dnE\\_QqxJNiQkuPI](https://www.youtube.com/live/01vqYebRHik?si=4dnE_QqxJNiQkuPI)



The experts explained that the SWFMS integrates satellite-based fire detection, real-time weather information and terrain data to forecast the probable direction and intensity of wildfire spread. The predictive system provides forest authorities with valuable lead time to deploy resources, create strategic fire lines and take timely preventive action before fires escalate.

Highlighting the importance of computational power, Dr. Kale explained how High-Performance Computing (HPC) enables complex fire behaviour modelling by processing multiple environmental variables simultaneously, significantly improving the accuracy of wildfire spread forecasts. He noted that advanced digital technologies are increasingly becoming indispensable tools for environmental conservation and disaster preparedness.

Sharing field experiences from Sikkim, Shri Legshey described how the forecasting system has already supported forest officials in making informed operational decisions, helping prevent large-scale damage by enabling strategic resource deployment and targeted firefighting interventions.

The discussion also underscored the critical role of community participation in forest conservation. Shri Legshey highlighted Sikkim's 'Mero Rukh Mero Santati' (My Tree, My Legacy) initiative, which encourages citizens to develop a lifelong bond with trees and actively participate in protecting forest ecosystems. He emphasised that sustainable conservation efforts can succeed only when local communities become active partners in safeguarding natural resources.

The experts also shared practical guidance for citizens and tourists visiting forest areas, particularly during the wildfire-prone season from October to June. They advised visitors to avoid lighting fires in undesignated areas, exercise caution while trekking or camping, and immediately report any signs of forest fires to the nearest forest authorities, preferably with GPS coordinates wherever possible.

The session further highlighted Sikkim's long-term ecological strategy of promoting indigenous, climate-resilient tree species such as oak in place of monoculture plantations to improve the natural resilience of forests against wildfires.

During the discussion, Shri Karma Legshey observed, "Unless and until the public is made a part of the conservation efforts, we foresters also realize that we cannot protect the forest", reinforcing the importance of community-driven conservation. Dr. Manish P. Kale remarked, "High performance computing, supercomputers, can also save forests", highlighting the growing role of advanced computing in environmental protection. He further noted, "If you can stop a forest fire, you are also stopping pollution", underscoring the broader environmental benefits of effective wildfire prevention.

The episode demonstrated how Digital India-enabled technologies, scientific innovation and collaborative governance are strengthening India's environmental resilience while promoting sustainable management of natural resources through data-driven decision-making.

The Digital India Ask Our Experts is a live interactive programme streamed on Digital India's YouTube channel. For more information on upcoming episodes and Digital India initiatives, visit [www.digitalindia.gov.in](http://www.digitalindia.gov.in) and [www.negd.gov.in](http://www.negd.gov.in).