

Report of the
Webinar
On
Forest Fire – Ecology and Management

28th September, 2020

INSTITUTE OF FOREST GENETICS & TREE BREEDING

Forest Campus, Cowley Brown Road, R.S. Puram, Coimbatore – 641002 (T.N)

Background

Sustainable development of natural vegetation systems, land-use systems and rural populations in the country are at risk due to forest fires that devastate valuable vegetation resources (forests and other natural ecosystems, farmlands, pastures, plantations, etc.), in both the short-term (disruption of ecosystem processes, economic losses, humanitarian problems due to destruction of crops and other values at risk, including human health due to impacts of smoke) and the long-term (degradation of stability and productivity of ecosystems and land- use systems). The fire-affected sites are often degraded by high winds and rainfall, increased surface runoff, disastrous floods and landslides, affecting drinking water availability and quality, or even leading to siltation of reservoirs. The longer-term impacts of the current pattern of forest fires on India's forest ecology and the wider economy are still poorly understood. A webinar was conducted to understand the issues of forest fire in the country and develop research-based strategies to combat the negative impact of the forest fires on ecosystem services. The Webinar on **“Forest Fire – Ecology and Management”** generated knowledge and capacity building to minimize the devastating impact of forest fires.

The Objectives of the webinar were:-

1. To discuss Forest Fire Research and Knowledge Management to emphasize the sustainability of forestry activities in vulnerable landscapes across the country.
2. To discuss the ecological dynamics of Forest fire for sustainable development of the Forest by Identification, mapping and categorization of fire prone areas.
3. To discuss the Fire management plans, Socioeconomic factors, Fuel Characteristics, Forest types and Goods and Services.
4. To discuss the existing Forest Fire Fighting Tools and new innovations for forest fire prevention and control.
5. To discuss anthropogenic activities which regulates the forest fire and to involve the stakeholders in planning and restoration activities of the forest and also to explore strategy for awareness campaign.

Mr. J.Sriram, I.F.S. Assistant Silviculturist (Experiment) and also the co-ordinator of the webinar welcomed the participants and the subject experts. Mr.S.Senthilkumar I.F.S., Group coordinator research and HoD SFM Division delivered his welcome address and Dr.Kunhikannan, Director, IFGTB has delivered inaugural speech and shared his valuable experiences in forest fire.

Presentation by the resource persons.

Dr. Amit Kumar Verma, Scientist & Faculty, Forest Research Institute, Dehradun delivered his speech on ***Existing Forest Fire Fighting Tools and new innovations for Forest Fire prevention and control through learnings from South Korea***. He explained the tools developed and used in FRI and State Forest Departments and the

need for upgrading and developing new tools and equipment. Also explained the modification needed for the present tools. The field experiences of fire fighting have been explained through videos. The forest fire management in South Korea was nicely documented and presented to the participants.

Dr. Ravi, Forest Range Officer, Hosur Division, Tamilnadu Forest Department delivered his speech on ***Forest fire – Management and its ecological significance***. He discussed the general introduction on fire ecology, the basics of forest fire environment, types, causes, fire behaviour, fire spread and fire management. He also explained the fire scenario of Cauvery north wild life sanctuary, the management issues and the constraints in prevention of forest fire.

Mr. Akash Kumar Verma, I.F.S., District Forest Officer, Garhwal, Uttarakhand Forest Department delivered his speech on ***Forest fire Management in Uttarakhand*** and shared his valuable experiences regarding the forest fire management, vulnerability, fire environment, fire occurrence and detections and their management in hilly terrain of Uttarakhand forest areas.

Dr. C. Vidyasagar, I.F.S., Lecturer, CASFOS, Coimbatore delivered his lecture on ***Community Action in Forest fire management in the state of Mizoram***. He explained in detail about the basic facts about Mizoram, forests in Mizoram, dependency on forest land by Mizo's for their self-sustenance, threat related to forest fire, community strategies to balance the threat and their dependency and the Government measures for harmonizing the balance and facilitate the strategies. He also discussed in detail about the jhum cultivation and fire management with various multibody functionaries.

Dr. Abdul Qayum, I.F.S., Deputy Conservator of Forests, Chandigarh delivered his speech on ***Forest Fire modelling and strategic allocation of resources: e-ForestFire***. He started the discussion with e-forestfire in Himalayan forest fire prediction through YouTube video and followed by the presentation on forest fire modelling. He discussed about GIS mapping to integrate direct/ indirect factors of forest fire to find initial hotspot and its correlation with FSI data. Also the need to develop predictive model by integrating socio-economy, climatic, environmental, geographical factors & FSI data to extract hotspots and allocation and optimal utilization of resources discussed. Also discussed the model developed for prediction of forest fire and the information dissemination to deal with fire data.

Mr.R.Arun Kumar, I.F.S., Deputy Director, Forest survey of India, Dehradun discussed about ***Forest fire and Jhum cultivation***. He delivered about causes, status of shifting cultivation in India and about the various landscapes and the fire occurrence and their mitigation. Also discussed about controlling, EWS, more awareness, fire prone area detection and management by using advanced technologies to mitigate forest fire damages.

Mr.V.Karthik, I.F.S., Lecturer, CASFOS, Coimbatore spoke about on ***Forest fire – Control and prevention strategies in Odisha***. He discussed about administrative units, strategies for prevention and control of forest fire, SOP on combating forest fire, calendar of activities, fire atlas, module on forest fire, QGIS, action plan and forest fire App for mobile monitoring.

Dr.K.A.Sreejith, Senior Scientist, Forest Ecology Department, Kerala Forest Research Institute, Peechi delivered presentation on ***Impact of prescribed burning in Grasslands***. He discussed about the ecosystem wise fuel loads, invasive weeds, habitat management for herbivores, maximizing ecological benefit of fire, prescribed burning, transformation in soil parameters, effects on micro flora and micro fauna. He

also concluded with the need of the holistic approach for fire management including soil, flora and fauna.

The total number of participants was around 43 and they were from state forest departments, field staff, scientific institutions and general public. Every presentation was followed by discussion and a valuable and healthy articulation was effected on the webinar platform throughout the session. The conclusion remark was delivered by Mr.S.Senthilkumar I.F.S., Group coordinator research and HoD, SFM Division. Dr.Kunhikannan, Director, IFGTB addressed during the valediction the webinar. Finally, Mr. J.Sriram, I.F.S. has delivered vote of thanks and the webinar was concluded.

One Day Webinar Programme on Forest Fire – Ecology and Management		
28.09.2020 - Monday		
Sessions	Scheduled Time	Program details
Schedule of Webinar 09.30 - 10.45 AM 10.45 - 10.55 AM 10.55 - 11.05 AM 11.05 - 11.15 AM 11.15 - 11.25 AM 11.25 - 11.55 PM 12.00 - 12.30 PM		
Registration & Moderator on Platform	09.30 - 10.45 AM	Registration: Moderator on Platform Welcome address: Mr. S. Senthilkumar, I.F.S., GCR, IFGTB, Coimbatore
Invited address: Dr. C. Kunhikannan, Director, IFGTB, Coimbatore	10.55 - 11.05 AM	Invited address: Dr. C. Kunhikannan, Director, IFGTB, Coimbatore
Forest fire - Management and its ecological significance	11.05 - 11.15 AM	Dr. Ravi, Forest Range Officer, Holar Division, Tamil Nadu, Forest Department
Forest fire Management in Uttarakhand	11.15 - 11.25 AM	Dr. Abhishek Kumar Verma, I.F.S., District Forest Officer, Garhwal, Uttarakhand Forest Department
Tea Break	11.25 - 11.55 AM	Tea Break
Existing Forest Fire Fighting Tools and new innovations in Forest Fire prevention and control through trainings from South Korea	12.00 - 12.30 PM	Dr. Anil Kumar Verma, Scientist II, Faculty, Forest Research Institute, Dehradun
Community Action in Forest fire management in the state of Karnataka		Dr. C. Mahalingam, I.F.S., Lecturer, CAS/OS, Coimbatore

Schedule of Webinar		
Sessions	Scheduled Time	Program details
Session IV	12.30 - 01.30 PM	Forest fire modelling and strategic allocation of resources of forest fire Dr. Abhishek Kumar, I.F.S., Deputy Commissioner of Forests, Chudargah
LUNCH break (01.30 PM to 02.15 PM)		
Session V	02.15 - 02.45 PM	Forest fire and climate change Dr. S. Senthilkumar, I.F.S., Deputy Director, Forest Survey of India, Coimbatore
Session VI	02.45 - 03.20 PM	Forest fire - Control and prevention strategies in Odisha Dr. Ravi, Lecturer, CAS/OS, Coimbatore
Session VII	03.20 - 03.55 PM	Understanding the Forest Fire Regime in western and tropical forests of southern India using Remote Sensing and GIS Dr. Mahalingam, I.F.S., Lecturer, CAS/OS, Coimbatore
Tea Break (03.55 - 04.15 PM)		
Session IX	04.15 - 04.45 PM	Impact of prescribed burning in Grass lands Dr. A. Senthilkumar, I.F.S., Senior Scientist, Forest Ecology Department, Kerala Forest Research Institute, Ponnithurai
04.45 - 04.55 PM		Conclusion remarks: Mr. S. Senthilkumar, I.F.S., GCR, IFGTB, Coimbatore
04.55 - 05.05 PM		Vote of thanks: Mr. J. Sriram, I.F.S., GCR, IFGTB, Coimbatore

RESOURCE PERSONS

Dr. Ravi
Forest Range Officer, Holar Division, Tamil Nadu, Forest Department

Dr. Abhishek Kumar Verma, I.F.S., District Forest Officer, Garhwal, Uttarakhand Forest Department

Dr. Anil Kumar Verma, I.F.S., District Forest Officer, Garhwal, Uttarakhand Forest Department

Dr. S. Senthilkumar, I.F.S., Deputy Commissioner of Forests, Chudargah

Dr. Mahalingam, I.F.S., Lecturer, CAS/OS, Coimbatore

Dr. A. Senthilkumar, I.F.S., Senior Scientist, Forest Ecology Department, Kerala Forest Research Institute, Ponnithurai

Dr. C. Mahalingam, I.F.S., Lecturer, CAS/OS, Coimbatore

Dr. J. Sriram, I.F.S., GCR, IFGTB, Coimbatore



