



PROCEEDINGS OF CONSULTATION WORKSHOP

NATIONAL PROGRAMME ON
FOREST FIREMANAGEMENT

Himalayan Forest Research Institute, Shimla

13th January 2023



NATIONAL DISASTER MANAGEMENT AUTHORITY
Government of India
NDMA Bhawan, A-1, Safdarjung Enclave,
New Delhi -110 029

Programme Schedule

09.30 AM – 10.00 AM	REGISTRATION		
INAUGURAL SESSION			
10.00 AM – 11.00 AM	10.00 – 10.10 AM	Participant Introduction	
	10.10-10.20 AM	Welcome Address - Dr. Sandeep Sharma Director-in -charge, HFRI Shimla	
	10.20-10.30 AM	Opening Remarks - Sh. Shivanand S. Talwar AIG (Forests) MoEF&CC	
	10.30-10.40 AM	Presidential address – Sh. Kunal Satyarthi, Joint Secretary, NDMA	
	10.40-10.50 AM	Inaugural address – Sh. Ajay Srivastava, PCCF & HoFF, HP	
	10.50-11.00 AM	Vote of Thanks – Dr. Sushil Kapta, APCCF (Finance), HPSFD	
11. 00 AM – 11.10 AM		High Tea	
SESSION I			
11.10 AM – 01.00 PM	Best Practices in Forest Fire Management: Innovation, Community Involvement and Livelihood		
	<ul style="list-style-type: none"> • Local level innovations carried out by states in forest fire management • Problems faced by field staff in fire management • Inputs for improving existing fire management scenario • Financial requirements for states to manage forest fire • Scope of community participation in fire management and addressing livelihood issues 		
	11.10 - 11.30 AM	Best Practices in Forest Fire Management- Uttarakhand	Sh. Nishant Verma, Nodal Officer (Forest Fire), Uttarakhand
	11.30- 11.50 AM	Best Practices in Forest Fire Management - Punjab	Sh. Mahavir Singh, Nodal Officer (Forest Fire), Punjab
11.50- 12.10 PM	Best Practices in Forest Fire Management- Jammu & Kashmir	Sh. Vivek Verma, Nodal Officer (Forest Fire), Jammu & Kashmir	

	12.10 - 12.20 PM	Best Practices in Forest Fire Management - Himachal Pradesh	Sh. Anil Sharma, Nodal Officer (Forest Fire), HP
	12.20 - 12.30 PM	Fire management experience sharing for the HP FD officials	
	12.30 - 01.00 PM	Discussion, Q & A and Summing up of the Open House Discussion	Project Drafting Committee
01.00 PM – 02.00 PM		Lunch	

SESSION II		
02.00 PM – 03.30 PM	Forest Fire Management: Early Warning, Response and Research & Training	
	<ul style="list-style-type: none"> • Proposals for incorporating in the project • Role of institutions in forest fire management • Early alert for forest fire • Response limitations faced by NDRF • Training for NDRF personnel regarding forest fire 	
	Presentations from stakeholders (10 minutes each)	<ul style="list-style-type: none"> • FSI • HFRI • UHF, Nauni • GBPNIHESD • NDRF • HP SDRF • HP SDMA • Fire Service, HP • HIMCOSTE
03.30 PM – 03.45 PM	Discussion and Q&A	
03.45 PM – 04.15 PM	Concluding Session	Project Drafting Committee (NDMA), Himachal Pradesh Forest Department and HFRI, Shimla

Proceedings of the Consultation Workshop on National Project on Forest Fire Management

Conference Hall, HFRI, Shimla

Forest Fire has been an indelible and growing challenge since decades, but in recent past, it has become a real serious issue for one and all. Besides the ecological degradation, economic loss incurred due to forest fires is enormous. Even though there are traditional systems in place to prevent, mitigate and respond to forest fire, India yet to make it fool proof. The involvement of stakeholders, especially fringe communities is a thing of the past today. The National Disaster Management Authority (NDMA), Ministry of Home Affairs in collaboration with Union Ministry of Environment, Forest and Climate Change (MoEF&CC) is in the process of preparing a National Programme on Forest Fire Management.



It was in this context that the one-day consultative workshop on **“National Programmet onForest Fire Management”** was organized by the NDMA and MoEFCC in collaboration with the Himachal Pradesh Forest Department (HPFD) and Himalayan Forest Research Institute (HFRI) at HFRI, Shimla on **13 January, 2023**. The Workshop being an initiative of the NDMA, New Delhi, the apex body for disaster management in India was jointly coordinated and facilitated by HPFD and HFRI, Shimla. It was a multi-disciplinary brainstorming of experts and professionals from over 17 organizations and agencies, which

included the MoEF&CC, NDMA, HFRI, Forest Departments of H.P., Jammu & Kashmir, Uttarakhand and Punjab, besides the University of Horticulture and Forestry (UHF), Nauni; GB Pant National Institute of Himalayan Environment and Sustainable Development (GBPNIHESD); Forest Survey of India (FSI); NDRF; SDMA; JICA HP; HP Police; HP Fire Service; UNDP, and more importantly the representatives of Panchayats and local communities. The discussions and deliberations by over 60 participants mainly focused, on the best practices in forest fire management, innovations, community engagement and issues of sustainable livelihoods. Another important aspect of discussion was the need for early warning, response, research and training. At the onset Dr. Sandeep Sharma, Director-in-charge HFRI, in his welcome address highlighted the role of communities to address the contentious issue of forest fire in the Himalayan region. Sh. Kunal Satyarthi, Joint Secretary, NDMA, highlighted the role of NDMA towards forest fires along with the innovative schemes and initiatives being developed and supported by the apex authority in the field of disaster management. He also informed that India is the first country among the developing nations, to have the alert systems, regarding disasters, in the form of Apps and other electronic media. He briefly, highlighted the context of the workshop.



In his inaugural address, Sh. Ajay Srivastava, PCCF & HoFF, HPFD flagged the basic problems related to forest fires. He emphasized that the response time to tackle the fire is very short, and is one major bottleneck for controlling forest fires, particularly in the difficult

Himalayan terrain. He further reiterated the essential role of communities in preventing and controlling forest fires.

The participants representing various organizations and agencies were all given an opportunity to share their opinions and experience, who also put in their interesting and innovative views, on this very sensitive issue of forest fire. It was heartening to see that the Programme Drafting Committee (PDC) involving members from NDMA and MoEFCC actively participated in all deliberations and ensured focused quality inputs. Sh. Mukund Shandil, representative of Rhazana Panchayat said that the forest track / bridle paths are not being maintained as it hinders timely reaching out to forest fire site and suppression. Sh. Nagesh Guleria, Chief Project Director, JICA Project and APCCF, HPFD was of the opinion to increase the incentives for fringe communities so as to ensure their active participation during fire incidences. He also added that cultivation of local/ medicinal plants with good economic value should be encouraged among local communities near forests to so as to limit their role /involvement in cause and prevention of forest fires.

Mr. Vaibhav Singh, from the Uttarakhand Forest Department joined the workshop in a virtual mode and presented his innovative idea/ project for forest fire alert, control and decision support system through development of google maps-based application and dashboard with GIS/ Mapping of the location of all assets, critical for decision making in forest fire management.

Dr. P.K. Mathur and Sh. Abhilash Damodaran, Conservator, Shimla informed the house that multiple agencies/ individuals are currently in the process of developing tools/ Mobile Apps for forest fire risk analysis, vulnerability, improved alert system with value addition, monitoring, etc. They recommended that the MoEFCC may constitute a core group of like minded professionals so as to an effective and comprehensive GIS/ google based application for forest fire management and monitoring. This way unnecessary confusion owing to duplication of efforts can be avoided and efficiency can be enhanced for developing a single mobile app and portal with a straight forward and consistent approach for the entire country. Sh. Satyarthi responded by nodding and stated that a core group would be established by integrating several creative and innovative solutions to deal the problems of forest fires at pan India level.



Sh. Nishant Verma, CCF & Nodal Officer (Forest Fire), Uttarakhand gave an online presentation on “Best Practices on Forest Fire Management” in the Himalayan state of Uttarakhand. In his presentation, he elaborated the forest fire scenario in Uttarakhand, adopted innovative strategies for fire management, forest fire risk zonation mapping and highlighted most affected forest divisions, forest fire Mobile App, gaps and challenges with wide range of innovations. Sh. Satyarthi, acknowledged that the state of Uttarakhand was way ahead in their fight on forest fires. He also pointed out the important role of fire lines, control burning, reduce response time and laid stress on the important duty of the forest guards and fire watchers during the season of forest fire. He was of the opinion that not much has been debated on effective and efficient field level equipment required during forest fire management. Sh. Ajay Srivastava, PCCF and HoFF emphasized that Himachal Pradesh being a Himalayan state, the equipment and clothing required for fire management, should be light in weight and also safe from fire.

The Forest Department of Jammu and Kashmir was represented by Sh. Vivek Verma, Conservator of Forests, Rajouri and he presented varied innovative measures taken during 2022 for the effective fire control in the Union Territory of J&K. He explained briefly the forest fire vulnerability categories of different forest divisions separately for Jammu Region and Kashmir Region. He also elaborated the efforts made by the Department so as to deal different aspects

of forest fire managements like loss of biomass, soil and moisture conservation works, forest fire risk zonation and vulnerability assessment mapping, modern equipment's for firefighting, FSI alert system, role of district administration, community involvement, firefighting cell, etc. The Punjab State was represented by, CCF & Nodal Officer (Forest Fire) who focused on the forest fire problems relevant to Punjab State, especially in the Shiwalik zone and stressed on the stubble burning problem in the state. He explained the role and efforts being made by the Department like fire risk zonation mapping with the help of Punjab Remote Sensing Centre (PRSC), Ludhiana, fire management plan, capacity building of field staff to DFOs, FSI alert system, awareness programmes for communities/ local stakeholders through JFMC, and were in regular contact with ICFRE. Additionally, he requested the PCCF & HOFF, HPFD to conduct a joint meeting of PFD and HPFD in February 2023, to examine and discuss the forest fires incidences in the Shiwalik region between the Punjab and H.P. state borders.



Sh. Anil Sharma, Nodal Officer (Forest Fire), H.P. highlighted the initiatives relevant to forest fire management in the state. He focused on administrative reforms, forestry initiatives, community mobilization and the state's effort to formulate a policy for collection and removal of chir pine needles, 2018. He also highlighted the initiatives taken by the state government towards 50% subsidy on setting up of pine needle-based industry with a maximum subsidy of Rs. 25 lakh per unit. He also computed the financial benefits from chir needle collections.

Dy. Comdt. Lalit Mohan Singh, representing the NDRF 14th Battalion H.P., provided

a brief overview of their operations and organizational structure like Regional Response Centre (RCC) in the state of HP, and further assured that, if necessary, training relevant to management of forest fires is provided to NDRF personnel, they would be of immense help during the outbreak of catastrophic forest fires.

Representing SDRF, Himachal Pradesh, Ms. Ilma Afroz, IPS shared her knowledge and deliberations with the disaster management cells of international organizations regarding efficient management of disasters. She provided data on the number of times forest fires occurred in Himachal Pradesh during the past three years. Stating that there were 5,280 forest fire incidents during 2022, which was 10-fold increase over the previous years. She also shared the findings of a study, according to which people take communications from official social media accounts more seriously. Hence, she suggested to strengthen the IT cell and increase the reach of social media accounts of the government to spread the information during pre and post disasters.

Dr. Garima Sharma, State Coordinator from SDMA, Shimla elaborated the fund allocation for the mitigation purposes. She informed that not many agencies/ organizations are approaching for funding, and as such a large part of the fund was unutilized and still available with them.

Dr. Renu Saijal, from the HPFD, emphasized the problems being faced by the Department in controlling forest fires, due to lack of trained field personnel. She also highlighted various causes of forest fires, and the lack of adequate research in the concerned field.

Mr. Mahesh Kumar, Chief Fire Officer, H.P., explained the working of his department and highlighted the issues like the lack of vehicles, inadequate staff, limited and traditional equipment's, no proper fire paths, etc.

Er. R.K Singh, Scientist-in-charge, GBPNIHESD P, Kullu proposed their contribution towards the assessment of air quality after forest fires, soil moisture level, their nutritional status, identification of forest fire prone zones through mapping, processing bio ethanol from pine needles, Geo-tagging of the springs near fire prone areas, identification of plant species for rehabilitation and soil moisture management.

Dr. D.R Bhardwaj, Head Silviculture, Dr. Y.S. Parmar UHF, Nauni, Solan ensured their participation through floristic studies and best use of pine needles with other broad leaves for mulch formation, which can be further utilized in field to boost the agricultural productivity.

Dr. Ranjeet Kumar, Scientist, HFRI briefly explained the findings of the recently completed research projects on forest fires. Further, Dr. Sandeep Sharma assured the meaningful contribution of the HFRI through the ongoing All India Coordinated Pprojects on forest fire and ecosystem services.

Dr. P.K. Mathur, Lead Consultant (UNDP-NDMA) summarized the outcomes of the consultative workshop and stated that this workshop focused on four states/UT of Punjab, HP, Uttarakhand and J&K, being biogeographically important for the country. The fires in the region are destroying the pristine biodiversity and drastically reducing ecosystem services vital for the local communities. He was of the opinion that, the traditional system of fire management, which once was the mainstay of fire control has been weakened so it is now ineffective. He emphasized that two major groups, the frontline staff of the SFDs, and the local communities, both will play the decisive role in controlling forest fires in the region. Thus, there is a priority need to strengthen physical infrastructure for fire suppression besides enhancement of capacity of frontline staff and other stakeholders including communities. Further, a provision of necessary incentives to communities is of utmost importance.

In the end Sh. Kunal Satyarthi thanked all the delegates for participating in the workshop despite their valuable time, and for sharing their in-depth knowledge and experience on the subject. He concluded that the frontline staff of the forest department along with the active involvement of local communities are the main players forcontrolling forest fires. He also said that the preparedness was the mantra to deal with the situation. He called for the creation of new fire lines and maintenance of the already existing fire lines in different forests, and also stressed the importance of controlled burning. Need was also felt to reduce the response time and more emphasis is to be given to the optimum use of modern equipment during firefighting.

Sh. Anil Sharma, Nodal Officer (Forest Fire) formally proposed Vote of Thanks.

The main outcomes of this workshop focused on the Awareness and Sensitization, Capacity Building of Stakeholders, Community Engagement and Incentives to Community,

Mitigation Guidelines and post burn restoration and recovery of forests. There were also meaningful inputs for enhancing the use of modern tools and techniques, like chain saws, blowers, drones, mobile alert system besides, ensuring effective role and involvement of social media.

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List of Participants

Sl. No.	Name	Designation	Department/Organization
1	Shri Ajay Srivastava, IFS	PCCF & HoFF	Forest Department, Himachal Pradesh
2	Shri Anil Kumar Sharma	CCF & Nodal Officer (Forest Fire)	Forest Department, Himachal Pradesh
3	Shri Kunal Satyarthi	Joint Secretary (PP Division)	NDMA
4	Dr. P K Mathur	Lead Consultant	UNDP-NDMA
5	Dr. D K Sharma	Lead Consultant	NDMA
6	Shri Shivanand S Talwar	AIG (Forests)	MoEFCC
7	Shri Vivek Verma	Conservator of Forests (West)	Forest Department, Jammu and Kashmir
8	Shri Mahavir Singh	CCF (WP), Nodal Officer (Forest Fire),	Forest Department, Punjab
9	Shri Nishant Verma	CCF (Nodal Officer (Forest Fire)	Forest Department, Uttarakhand
10	Er. Rakesh Kumar Singh	Centre Head	Himachal Regional Centre, Mohal (GB Pant NIHE)
11	Scientist 1		Himachal Regional Centre, Mohal (GB Pant NIHE)
12	Scientist 2		Himachal Regional Centre, Mohal (GB Pant NIHE)
13	Dr. Sandeep Sharma	Director in-charge	HFRI

14	Dr. Vaneet Jishtu	Scientist -E	HFRI
15	Shri Lalit Mohan Singh	Deputy Commandant	14th Bn NDRF, Himachal Pradesh
16	Shri Mahesh Sharma	Chief Fire Officer	Fire Service, Himachal Pradesh
17	Shri Ashwani Kumar	Assistant Director	Forest Survey of India, Regional office, Shimla
18	Shri Nikhil S	Consultant Grade II (Forest Fire)	NDMA
19	Shri Ronald Debbarma	Consultant	MoEFCC
20	Smt. Bhavna Sharma	Technical Assistant	MoEFCC
21	Dr. Garima Sharma	C.B & D Coordinator	SDMA, HP
23	Ms. Ilma Afroz, IPS	SP	SDRF, HP
24	Shri Sushil Kapta	APCCF (Finance), H.P.F.D.	Forest Department, Himachal Pradesh
25	Shri Anil Thakur	APCCF (Wildlife), H.P.F.D.	Forest Department, Himachal Pradesh
26	Shri Dev Raj Kaushal	CCF Dharamshala	Forest Department, Himachal Pradesh
27	Shri K. Thirumal	CCF Shimla	Forest Department, Himachal Pradesh
28	Dr. D.R Bhardwaj	Head	Silviculture & Agroforestry, UHF, Nauri
29	Dr. R. K. Verma	Head of Office	HFRI, Shimla
30	Dr. Ranjeet Kumar	Head	Forest Ecology & Climate Change, HFRI Shimla

31	Representative		HIMCOSTE, Shimla
32	Shri Nitin Patil	DFO, Palampur	Forest Department, Himachal Pradesh
33	Shri Krishan Kumar	DFO, Shimla	Forest Department, Himachal Pradesh
34	Shri Sushil Kumar Rana	DFO (HQ) O/o CCF (FP &FC) H.P, Bilaspur	Forest Department, Himachal Pradesh
35	Shri Sanjeev Kumar Sharma	DFO Dharmshala	Forest Department, Himachal Pradesh
36	Dr. Renu Saizal, HPFS	DFO (Policy & Law), H.P.F.D.	Forest Department, Himachal Pradesh
37	Shri Sunny Verma, HPFS	DFO Dehra	Forest Department, Himachal Pradesh