

**Training
on
Forest Fire
in
Academies and Institutions**

Consultative Workshop on Forest Fire Management in India – 11 May 2022

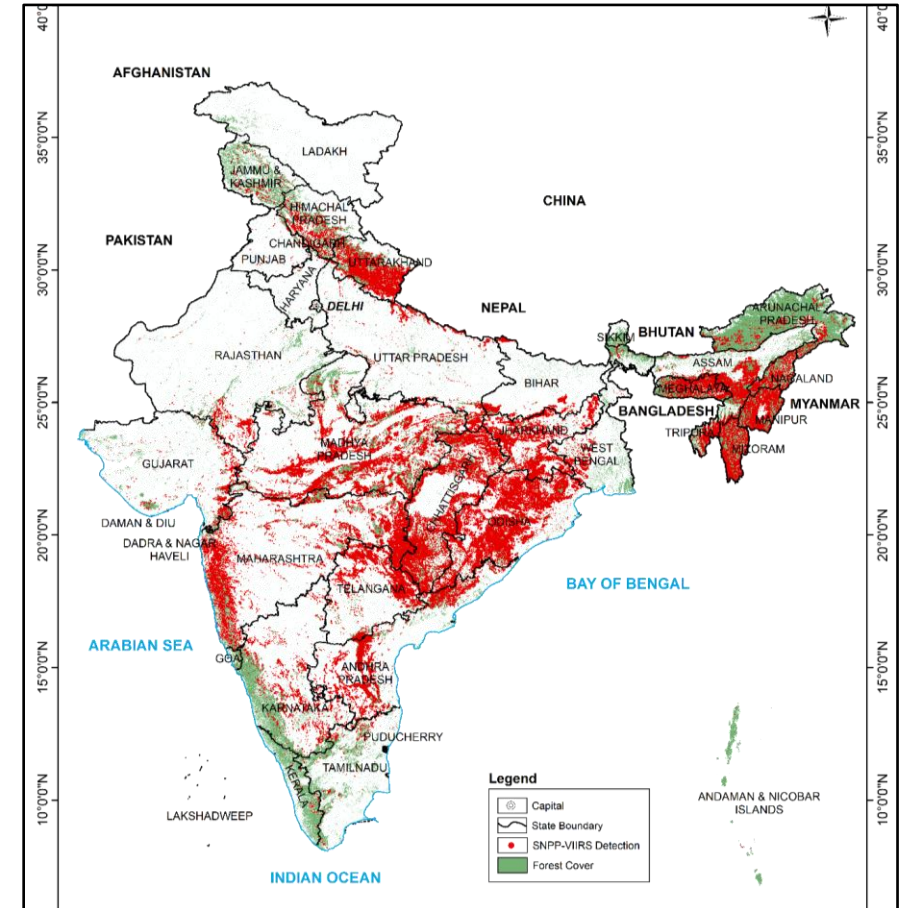
Director, IGNFA

Extent, Nature and Intensity of Forest Fire

- Contextualizing and Scoping of Capacity Building and Training Needs

- 35% of forest cover prone to frequent forest fires
- 10 states severely affected year after year:
 - Odisha, Jharkhand and Chhattisgarh in the East-Central zone
 - Madhya Pradesh and Maharashtra in Central and West zone
 - Telangana and Andhra Pradesh in South East zone
 - Uttarakhand in the North
 - Assam and Mizoram in the North-East
- 20 Districts in above 10 States –
 - 3% land area
 - 16% forest cover
 - 44% of all fire detections from 2003-16
- Other states and districts are moderately or lesser affected – Episodes of major fire incidents may occur in some pockets

SNPP VIIRS FOREST FIRE SEASON 2020-21



Extent, Nature and Intensity of Forest Fire

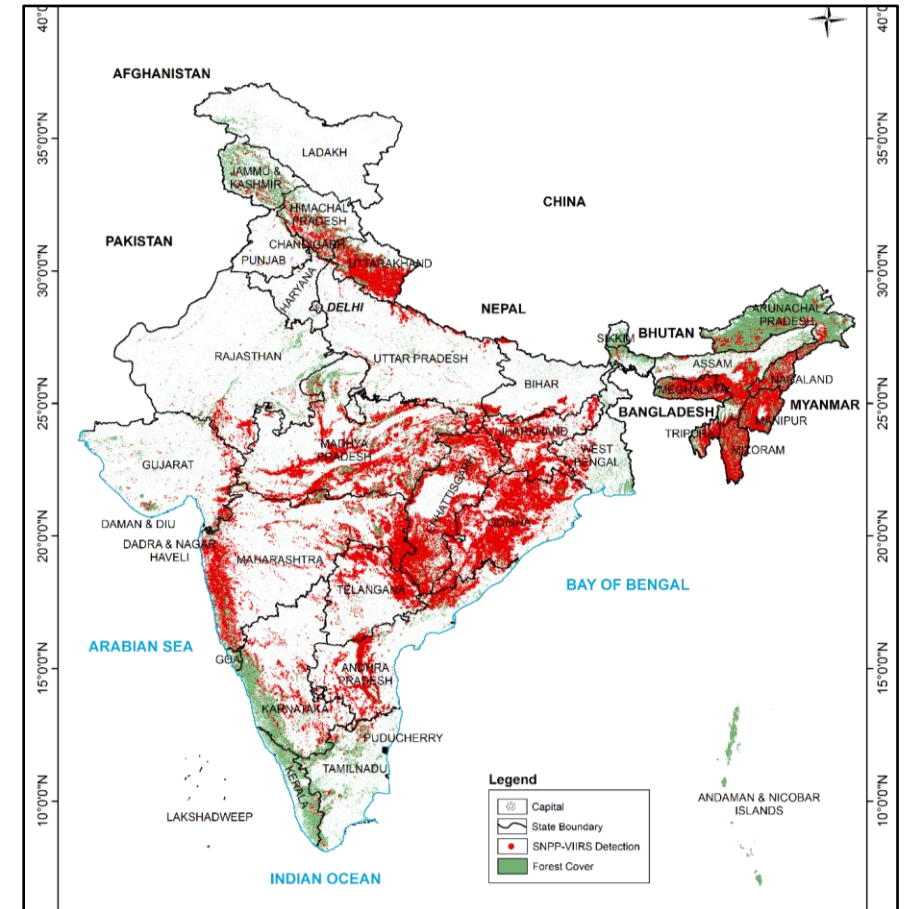
- *Contextualizing and Scoping Capacity Building and Training Needs*

Forest fire as Ecological Phenomena – Subject of Ecosystem Management

Forest fire as environmental -ecological degradational phenomena – cause as well as symptom

Forest fire as disaster phenomena in several states – Aggravating trend in view of CC and LD

SNPP VIIRS FOREST FIRE SEASON 2020-21



National Action Plan on Forest Fires, MoEF&CC 2018

7.1 Training for field staff, firewatchers, and community firefighters

Forest fires reckoned as:

- *As disaster incidents – with increasing extent and intensity due to climate change and ecosystem and land degradation*
- *As long-term adverse / degradation phenomena affecting forest landscapes – becoming drivers of fire disaster phenomena*

The capacity building and training frameworks have to incorporate both these perspectives

The following measures in NAPFF relate to mainly prevention, mitigation and containment of forest fire incidences requiring practice oriented training inputs and delivery.

- ✓ Adequate competent, trained, and equipped workforce on ground, ready to respond and take immediate action
- ✓ Training to field officers, seasonal firewatchers, and community volunteers involved in firefighting
- ✓ Training provided to firefighters tailored according to the landscape, nature of terrain, their level of responsibility and role in the command structure in responding to fires
- ✓ Other agencies involved in fire response: NDMA, NDRF, and the SDMA may be involved in a consultative role.
- ✓ Mock drills before fire season at various fire prone areas involving all the stakeholders for identification of gaps in the existing mechanism and better preparedness during crisis time
- ✓ Provision of training beyond state-managed forests to community institutions in regions such as the Northeast, where communities manage most of the forest estate.

National Action Plan on Forest Fires, MoEF&CC 2018

7.1 Training for field staff, firewatchers, and community firefighters

A modern and standardized training curriculum should be developed by the SFDs with the guidance of DFE of the MoEFCC, GoI –

- ❑ The curriculum standardization has to be in content and course / module design;
 - ❑ The curriculum also needs to be customized for the SFDs based on the nature, extent and intensity of forest fire and landscape and vegetation characteristics with calibrated inputs for:
 - ✓ Different tiers of different cadres
 - ✓ Induction trainings
 - ✓ In-service trainings
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- ✓ Community
 - ✓ Other State Stakeholder Agencies / Organizations – Administration, Police, CPMF, NDRF

S. No.	Academy / Institutions	Participants	Training Inputs
1	Central level Training Academy-IGNFA, CASFOS Dehradun, Coimbatore & Burnihat	IFS and SFS officers	<ul style="list-style-type: none"> Theoretical and field inputs on Forest Fire including prevention, detection and suppression related activities, Forest fire as management tool
2.	State level Training Institutes – SFTIs	RFO, Foresters, Forest Guard	<ul style="list-style-type: none"> Specialized Training: Use of pre fire & Near Real Time alerts, Large forest fire alerts, Forest danger rating etc) . Community members are registered with FSI forest fire alert service and making use of the alerts
3.	Training Institutions (MOEFCC) - FSI, ICFRE institutions,	<p><u>FSI</u></p> <ul style="list-style-type: none"> State Nodal Officers for forest fire / IFS/SFS Officers Webinars: Technology solutions for Remote sensing-based Forest fire monitoring (Senior Forest Officers at MoEFCC and SFDs) Customized trainings for SFD personnel (officers, staff & community firewatchers/volunteers) Both online and offline trainings <p><u>ICFRE Institutions</u></p> <ul style="list-style-type: none"> Training for IFS Officers Armed forces NDRF 	<ul style="list-style-type: none"> Modern fire fighting equipment, Eco-restoration of fire degraded/damaged landscapes and Invasive species etc.

S. No.	Academy / Institutions	Training
4.	Other Training Institutions	
	<ul style="list-style-type: none">• National Fire Service college, Nagpur• NIFSE India (National Institute of Fire and Safety Engineering, Gwalior)• National Institute of Fire Engineering & Safety management, Chandigarh• Central building research institute- Roorkee• Private institutions	<ul style="list-style-type: none">• BE Fire Engineering• 6 months to 1yr certificate and Diploma courses

Other Stakeholder groups to be trained

1.	Community based organisations	<ul style="list-style-type: none">• JFMCs• EDCs• Van Panchayat members• Forest Protection Committees• Fire watchers and other volunteer groups• Community forest under management of tribals councils <p>SFTIs have to scale up trainings of these community based organizations for effective fire management.</p>
2.	Other agencies	<ul style="list-style-type: none">• NDMA• NDRF• SDRF• SDMA• Fire services• Police• Armed Forces• Eco-Task Force etc..

Current Training Curriculum (Intra Department)

1. Central and State Academies / SFTIs

- **Theoretical aspects as component of basic systematic training of recruits to IFS, SFS, RFO and subordinate cadres:**
 - ✓ The ecological aspects and as ecosystem management tool;
 - ✓ Operational measures: Prevention, detection, fire suppression etc.
- **Basic practical aspects of forest fire control through field demonstrations**

2. Forest Survey of India

• **Technology solutions:**

- Remote sensing-based forest fire alerts system and Pre-fire alerts
- Large forest fire monitoring
- Forest danger rating system
- Van Agni geoportal
- Subscription based services for forest department personnel and community members for receiving forest fire alerts for quick response
- Technical inputs on above aspects are provided to forest officers, field staff and community members involved as fire watchers/fighters and volunteers through customized online and offline trainings

3. Forest Research Institute, Dehradun

- Information about modern fire fighting tools and gear
- Eco-restoration etc. and invasive species in fire-prone, fire ravaged tracts

4. SFDs state specific training curriculum developed for different levels by SFDs

Tamil Nadu SFD has in 2021 finalized training curriculum

Gaps / Deficits in training and training curriculum

- Updating of *forest fire related training courses and modules for different cadres of SFDs:*
(Theory, use of modern technology for detection & quick response, fire behaviour, fire fighting equipment, field strategies/activities in fire suppression) etc.
- Lack of institutionalised training at the level of seasonal fire watchers or community volunteers on basic fire suppression strategies.
- Personnel NDRF / SDRF / Police / Fire fighters not trained to deal in forest fire situations
- Different knowledge requirements based on terrain and other local conditions (location specific modules)
- Continued emphasis on forest fire management through mobilisation of funds for conduction of trainings for different tiers of different cadres and social mobilisation of communities
- Lack of exposure to international fire fighting standards(air controlled retardants, smoke jumpers, fire behaviour studies, burnt area assessment including economic estimation of losses, burnt area eco-restoration program, etc)

Way forward

- Institutionalized trainings with different modules catering to different level of personnel based on specific requirements
- Associating expert agencies working on forest fire related issues for updating the training modules
- “Forest Fire Management Operational and Planning Module” to be included in the On-job-training of IFS, SFS and RFOs in State cadres
- SFTIs to undertake or scale-up training of Local organisations, volunteer groups and seasonal fire fighters and other stakeholders
- Training of Trainers – By CFTIs (IGNFA, FRI, CASFOS, SFTIs)
- Adaptive revival of ***traditional knowledge system of forest fire mitigation and containment*** – NDMA project for compilation of traditional knowledge under way by FRI – Outcome to be incorporated in training curriculum
- “National Collaborative Scheme on Forest Fire Management” (earlier proposal on Centre of excellence on forest fire, proposal under consideration of ministry). *Proposed Scheme Implementation Unit (SIU) may consolidate and anchor all the above activities.*

Activities to be undertaken by DFE, Dehradun under proposed “National Collaborative Scheme on Forest Fire Management”

- Training of trainers (ToTs) and capacity building of forestry personnel, JFMCs, EDCs and other stakeholders (Training in fire suppression, prevention, detection, and post-fire reporting for field staff)
- Training of Trainers (ToTs) and Training Workshops to be organized in consultation with SFDs on various themes related to forest fire for different target groups.
- The trainings programs to be attended by trainers/mentors/faculty members representing State Forest Training Institutes (SFTIs), NDRF, NIDM, University scientists/ academicians and School Teachers.
- The SIU to provide financial support for conducting training programs by the **partner organizations** besides SFTIs in states.
- The SIU will develop training modules which will be provided to the participants.

Action Agenda for FRI, DFE, CASFOS and IGNFA

- Regional workshops (South, North East and North and Central & Western, East-Central) to be organized by DFE and CASFOS in coming months till December 2022 for expert consultation with SFDs and SFTIs and expert institutions (FSI, FRI, NIDM etc.) for *developing / updating training curriculum and modules* for different levels – Field force (RFOs and Foresters etc.)
Core training modules to be designed to be further customized/adapt to suit local State specific requirements.
- Utilizing one week of Training tour period as *Field Exercise in fire season in selected Forest Divisions* covering the theme of *forest fire management* as part of curriculum of Induction training courses of IFS, SFS and Range Officers.
- Training workshops at 3 CASFOS will be organized in consultation with the State Forest Department on priority themes related to forest fire for different target groups.
- Preparation / Revision of Training manuals and literature.

Thank You