

FOREST DEPARTMENT, HIMACHAL PRADESH

FOREST FIRE MANAGEMENT



HP Forest Department

Introduction HP

- Geographical area = 55673 SqKm
- Forest area = 37033 Sq Km
- Area under Forests = 15443 Sq Km
- Population density = 123per sqkm
- Chir forests (about 17.8%) are prone to forest fire
- Dry/Mixed deciduous forests (about 12 %) are also prone to forest fires.

9. Areas Vulnerable to Forest Fires in the State

The following 26 Forest Divisions, having Chir Pine forests, are highly sensitive to Forest Fires:

Name of the Forest Circle	Name of the Forest Division				
Chamba	Dalhousie	Chamba	-	-	-
Dharamshala	Nurpur	Dharamsala	Palampur	-	-
Mandi	Joginder Nagar	Mandi	Sundernagar	Nachan	Karsog
Kullu	Parvati	Banjar	-	-	-
Bilaspur	Bilaspur	Kunihar	-	-	-
Shimla	Shimla	-	-	-	-
Nahan	Nahan	Renuka	Paonta	Rajgarh	-
Solan	Solan	Nalagarh	-	-	-
Rampur	Rampur	Ani	-	-	-
Hamirpur	Hamirpur	Dehra	Una	-	-

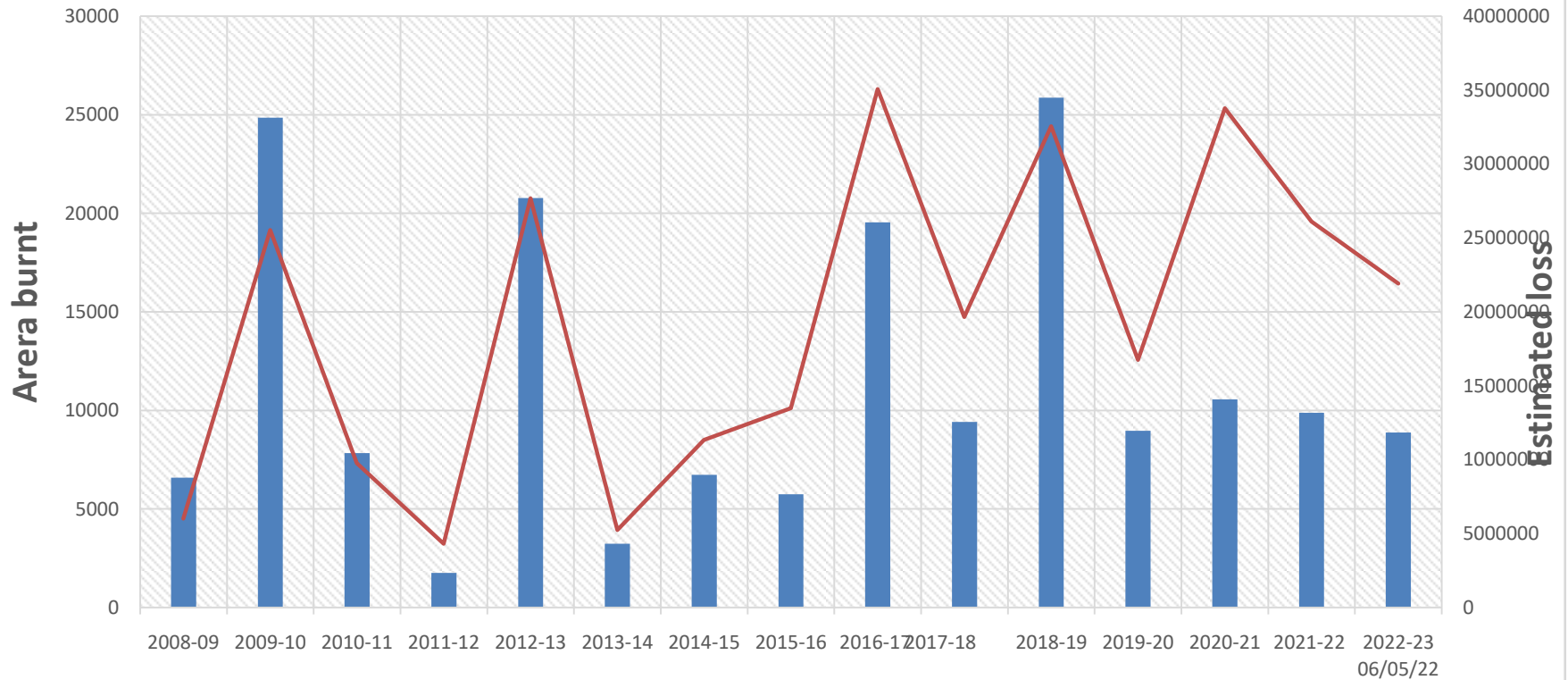
FIRE SENSITIVE BEATS

Name of the Forest Circle	Level of Sensitivity to Forest Fires			Total
	High	Medium	Low	
Bilaspur	17	69	27	113
Chamba	18	50	123	191
Dharamsala	37	122	41	200
Hamirpur	9	118	64	191
Kullu	12	44	84	140
Mandi	82	60	150	292
Rampur	35	26	89	150
Nahan	32	50	134	216
Shimla	49	41	141	231
Solan	10	30	61	101
WL Dharamsala	17	8	32	57
WL Shimla	12	0	72	84
GHNP, Shamshi	9	49	2	60
Grand Total:	339	667	1020	2026

The year-wise Forest fire scenario in HP

Year	No. of Fire cases	Kind of area Affected by Fire (in ha.)				Total area (in ha.)	Estimated loss (in Rs.)
		Natural	Plantation	Regenerated	Others.		
2008-09	572	2768.89	2015.73	68.1	1733.39	6586.12	6005064
2009-10	1906	13602.21	4054	1896.34	5296.97	24849.52	25522928
2010-11	870	4308.93	1446.15	0	2082.55	7837.63	9769363
2011-12	168	1198.95	207.04	0	351.08	1758.15	4307878
2012-13	1798	8025.04	4996	0	7802.57	20773.97	27682589
2013-14	397	1258.38	687.34	0	1291.80	3237.52	5231011
2014-15	725	3058.30	1167.73	0	2500.46	6726.49	11326522
2015-16	672	2914.75	1105.05	0	1730.15	5749.95	13477730
2016-17	1832	9046.10	3863.75	0	6625.91	19535.76	35067790
2017-18	1164	4804.30	2038.19	0	2565.60	9408.09	19641124
2018-19	2544	14742.95	3517.74	0	7598.47	25859.16	32548385
2019-20	1445	4952.63	1659.04	0	2350.04	8961.70	16739692
2020-21	1045	6465.02	2269.87	0	1827.84	10562.73	33776117
2021-22	1275	7510.88	2359.36	0	4.00	9874.24	26115960
2022-23 06/05/22	1077	7290.92	1515.48	0	65	8871.4	21911908

Forest Fires in HP

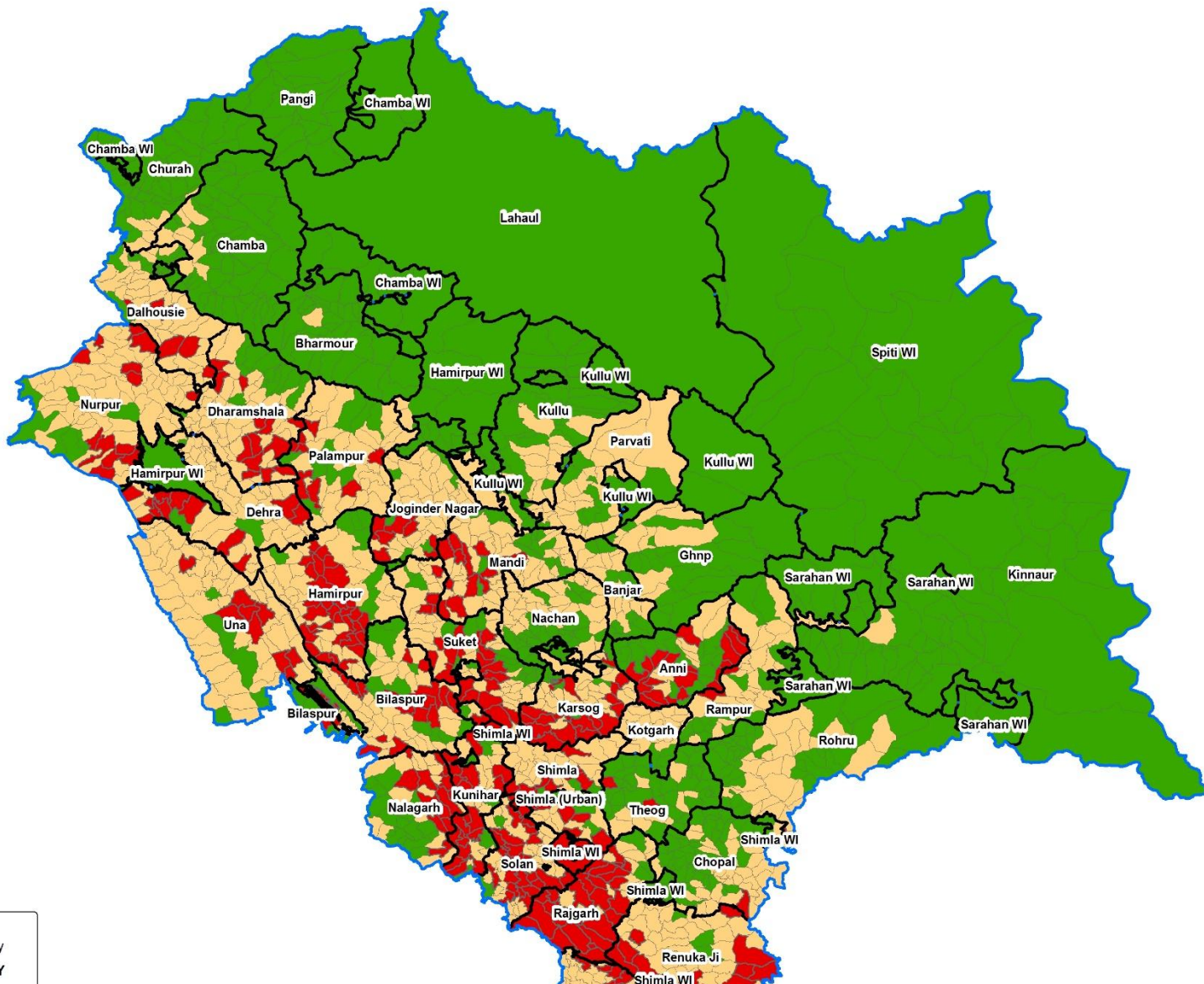


year



Area burnt Estimated loss

FIRE VULNERABILITY MAP OF HIMACHAL PRADESH (2021-22)



33°0'0"N
32°30'0"N
32°0'0"N
31°30'0"N
31°0'0"N

75°30'0"E 76°0'0"E 76°30'0"E 77°0'0"E 77°30'0"E 78°0'0"E 78°30'0"E 79°0'0"E 79°30'0"E

LEGEND

- State Boundary
- Division Boundary

FIRE VULNERABILITY

Fire Casualties

Year	Total casualties	Forest Circle				
		Chamba	HamirPur	Nahan	Rampur	Shimla
2118-19	08	03	1	1	1	2
2019-20	00					
2020-21	00					
2021-22	00					
2022-23 Upto 7/5/2022	02			02		
Grand total	10	03	01	03	01	02

CALENDAR OF ACTIVITIES DURING THE FIRE SEASON

Month	March	April		May	June	July
Period	15-31	1-7	8-30	1-31	1-30	1-15
Detail of the Activities to be adhered to	<ol style="list-style-type: none"> 1. <i>Establishing of Control Rooms & Mobile/ Wireless Communications.</i> 2. <i>Issue of orders regarding duties of the staff to be deployed on Forest Fires.</i> 					
	<ol style="list-style-type: none"> 1. <i>Got the “Thikri Paras” invoked from the respective Deputy Commissioners.</i> 2. <i>Deployment of the Mobile Fire Fighting Units on the Sensitive Places.</i> 3. <i>Meetings by the CFs/ DFOs with field staff.</i> 					
	<ol style="list-style-type: none"> 1. <i>Mass Contact (Awareness Campaign) i.e. Contact with the Local People, Panchayats, School Children, JFMCs/ VFDCs, NGOs, Tourists, etc. to make them aware about the damages by the Forest Fires to the Forest Resources, Wild Life & the Environment.</i> 2. <i>Distribution of Pamphlets for appeal as part of the awareness campaign. These should also contain the names contact of the Control Rooms, CFs, DFOs, ROs, etc.</i> 3. <i>Visit of the Publicity Staff to the field for Mass Contacts/ organising the Film Shows, Workshops and wide publicity through Electronic/ Print Media.</i> 					
			<ol style="list-style-type: none"> 1. Patrolling by the Mobile Units in the Sensitive Areas and contact/ helping the Field Staff. 2. Daily reporting of the Fire Incidences to the Control Rooms, CCF (FP & FC), Bilaspur, PCCE, HP, Shimla by the Field Staff through DEOs & CFs. 			

List of Activities

Procurement of fire-fighting equipment's

Control burning fire line creation and maintenance

Creation of infrastructure (Communication system, development management information system watchtowers, water storage structure, control rooms at division & range level FG barracks and inspection huts etc)

Soil and moisture conservation work in high risk areas

Engagement of fire watchers

Awareness campaign

Training and capacity building on fire fighting methods frontline staff students youths and village communities

Incentivizing village/ communities for protection against forest fires, under participatory forest management approach

Short term research/Survey on Forest Fire related issues

Methodology for Fire Damage Assessment

Forest fires, depending upon their nature, result in different grades of damage to different types of forests. A broad two-stage methodology to assess such damage caused by the forest fires i.e. (a) immediately after fire (Stage-I) and, (b) after rains (Stage-II) is given below:

S. No.	Type of Loss	Method of Assessment (Loss calculated in Rs.)	
		Immediate Assessment after Fire (Stage-I)	Final Assessment after Rains (Stage-II)
1.	Plantation Areas 1 st year	(Area affected in ha) x (no. of plants planted/ ha x survival %) x (current planting cost/ plant)	(Actual no. of plants dried due to fire) x (current planting cost/ plant)
2.	Plantation Areas 2 nd to 10 th year	(Area affected in ha) x (no. of plants planted/ ha x survival %) x (current planting cost/ plant + cumulative maintenance cost/ plant worked on <i>prorata</i> basis) viz. (cumulative cost of maintenance/ per ha) ÷ (no. of plants planted/ ha x survival %).	(Actual no. of plants dried due to fire) x (current planting cost/ plant + cumulative maintenance cost/ plant)
3.	Area under natural regeneration/ coppice	(Area affected in ha) x (current planting cost/ ha)	(Area affected in ha reassessed) x (current planting cost/ ha)
4.	Area consisting of pole crop and above	(No. of trees completely burnt) x (market rate for the species) Damage to partly burnt trees to be assessed after rains	(Actual no. of trees dried due to fire) x (50% of royalty rates for the species) + Loss assessed at Stage-I

5.	Resin Blazes	(No. of Resin blazes damaged x average annual yield/ blaze in kg.) x (current resin royalty rate/ kg.)	Reassessment of no. of Resin blazes damaged due to fire x average annual yield/ blaze in kg.) x (current resin royalty rate/ kg.)
6.	Fodder & Grasses	(No. of head loads of grass/ tree leaf fodder lost based on ocular assessment) x (Rs. 100/ head load)	Same as loss assessed at Stage-I
7.	Beneficial herbs, shrubs & wild fruits	(Volume, in qtls., of medicinal plants/ wild fruits damaged based on	Same as loss assessed at Stage-I
8.	Environmental and wildlife loss	Notional value / ha	Notional value / ha
9.	Domestic losses	The loss caused due to forest fire to the private property viz. house, cattle sheds, domestic animals, human life to be assessed separately in each case	Same as loss assessed at Stage-I

Note:

- (i) Fire Assessment report shall be prepared by concerned Range Officer.
- (ii) In case of damage area >5 ha concerned DFO will check the area.
- (iii) In case of damage area >10 ha concerned CF will check the area.

Expenditure on Forest Fire Management

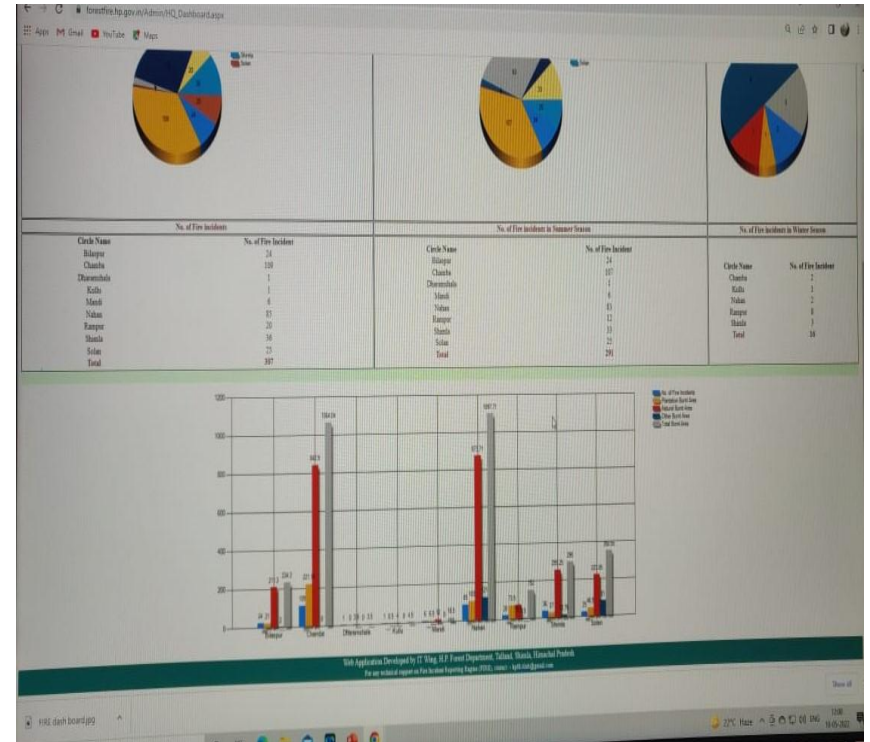
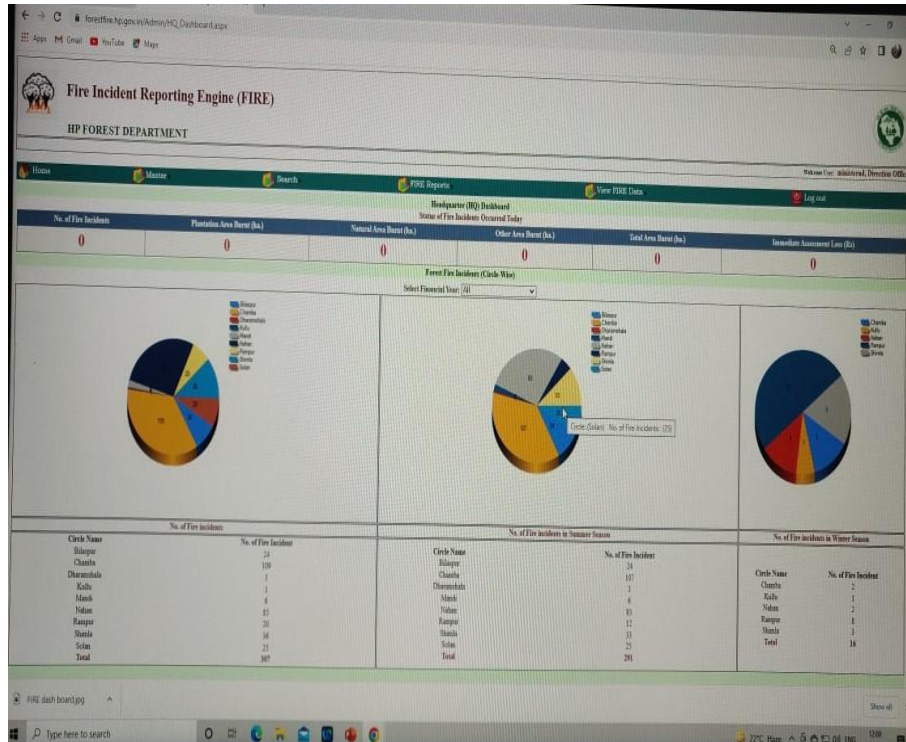
Sr. No.	Name of Scheme	Budget/ Expenditure (Rs in Lakhs)			Remarks
		2020-21	2021-22	2022-23	
1	Forest Fire Management Scheme (STATE PLAN) FMS	149/149	214/214	214	Stand distributed to DFOs
2	Forest Fire Prevention and Management Scheme [CSS: FPM]	262.24/ 111.86	287.67/ 118.72	00	In principle approval awaited.
3	SDMA	00	20	00	
4	CAMPA (NPV-3G)	47.99 / 47.99	300 / 300	545	APO approval awaited from Gol.

Budget position(C90+S10) under CSS

Year	Funds releasee		Total	Funds utilized	Balance	Remarks
	1 st	2 nd				
2020-21	262.24	0	262.24	111.86	150.38	Balance revalidated during 2021-22
2021-22 Revalidated			150.38	113.49	36.89	
	137.29	0	137.09	5.23	132.06	Revalidation awaited
2022-23	0	0	0	0	0	

Fire Incident Reporting Engine (FIRE)

For better reporting of fire incidences FIRE has been put in place from this year



Forest Fire campaign in Schools 2022



Forest Fire Door to Door campaign 2022



Forest Fire Door to Door campaign 2022



Important Issues

- Fragmented landscape.
- Heavy biotic pressure.
- Inaccessible areas, steep slopes- limiting the use of modern fire fighting tools.
- Adequate man power not available particularly at short notice.
- Community co-operation near urban areas is missing.
- Excessive and non responsive tourism.

A photograph of a dense forest of trees with white blossoms, likely cherry blossoms, set against a dark green background. The word "THANKS" is overlaid in the center in a bold, pink, sans-serif font.

THANKS