

STATUS OF FOREST FIRES IN ANDHRA PRADESH

(Extracted data from Andhra Pradesh state of Forest Report 2012, A.P, Forest Department)

1.1 Introduction

There is unanimous opinion that the forest fires are to be controlled if not completely eliminated. For last several decades attempts have been made to prevent forest fires but the success was to a limited extent. Andhra Pradesh has an area of about 63,814 square kilometres of forest land under the control of Forest Department. Out of the above, excluding an area of about 350 square kilometres of mangrove vegetation, the rest of the forest area is prone to fires. The fires occurring in Andhra Pradesh (AP) are only ground fires in nature. The ground fire or surface fire occur between November and May in the state as seen from MODIS satellite images. March is the most susceptible month for the forest fires. The ground fire cause wide spread damage to the ground flora and fauna. The young regeneration is seriously affected by the fire. There are no two opinions that elimination of forest fire, which is mostly manmade, is a pre requisite for a healthy forest in the state.

1.2 Forest Fire Losses

National Level:

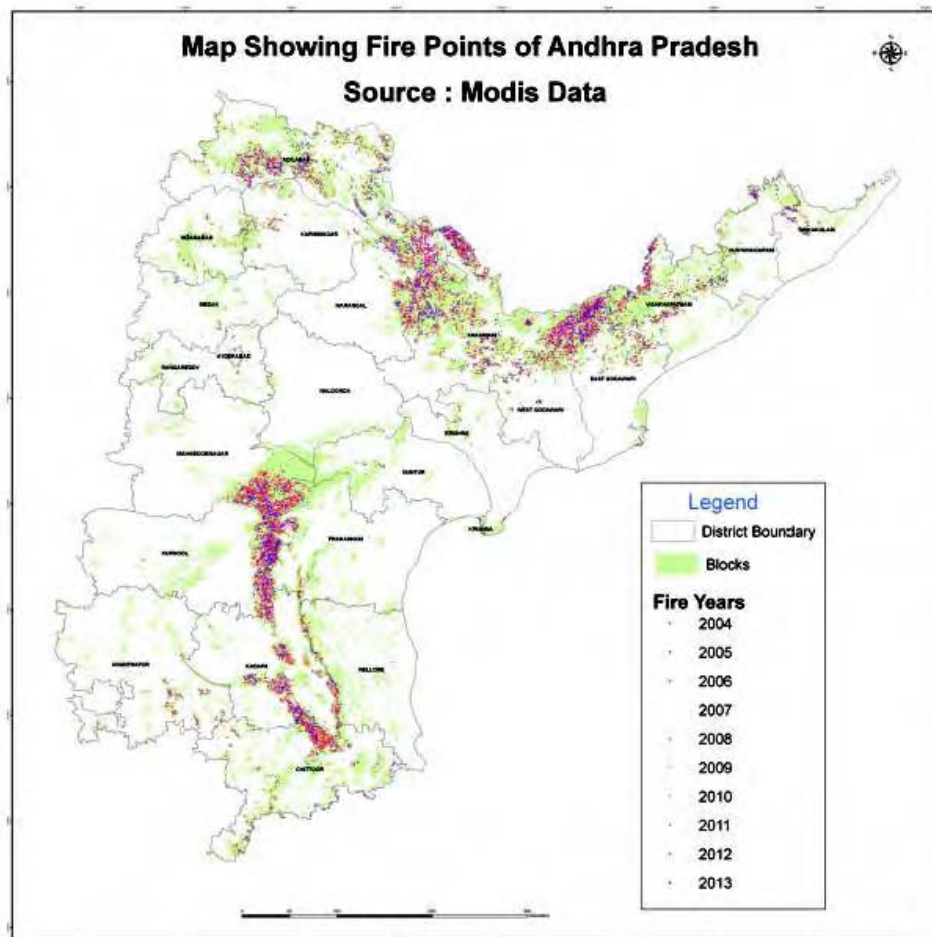
There are several papers about the forest fire in India. It is reported that during the Sixth Five-Year Plan (1980-85) 17,852 number of fire incidents were reported affecting an area of 5.7 million Ha at an annual average of 1.14 million Ha (Srivastava, 1989). Extrapolations of fire data in two representative areas, i.e. Chandrapur and Haldwani indicate that the total area burnt annually in the country may range between 2.66 and 13.95 million Ha (Saigal, 1989). As per Ministry of Environment and Forests, the forest area that is affected by annual fires could be as much as 37 million Ha.

State Level:

No definite study has been done in A.P. to estimate the extent of forest fires and consequent damages. After the MODIS satellite data was made available by FSI, it was found that 24 percent of the compartments (of the total number about 18,000) are prone to fire damage to various degrees in the state leaving balance 76% compartments unaffected. Total number of fire incidents in AP reported through MODIS satellite since 2004 is shown in Table 1.1. The details of Circle wise fire occurrences in Andhra Pradesh are given in Table 1.2. The Division wise details of fire occurrence in various years in Andhra Pradesh are given in Table 1.3

1.1 Table showing the Number of Fire

Sl. No.	Year	Forests Fires
1	2004	33
2	2005	1084
3	2006	1581
4	2007	1929
5	2008	1444
6	2009	2454
7	2010	1840
8	2011	1113
9	2012	2357
10	2013	2021



Incidents observed through MODIS Data.

The causes of most of the forest fires in AP are deliberate or incidental caused by persons for collection of NTFP including Beedi Leaf and to some extent for encroachments for cultivation purpose etc. The most severely forest-fire affected areas in the State are Khammam, Visakhapatnam, Warangal and Rajmundry circles and parts of Srisailem Project Tiger area. The Boda grass (*Cymbopogon coloratus*) is the main cause of forest fires in NSTR and Rayalaseema regions and the production of Tendu leaves (*Diospyros melanoxylon*) is major cause of forest fires In Telangana region.

Another NWFP contributing to the forest fire is the Mahua (*Madhuca indica*). Local people in tribal belt collect Mahua flowers to produce a popular beverage or to boil with Sal seeds (*Shorea robusta*) as a seasonal grain substitute; by clearing the growth below the trees by burning which may spread to adjoining forests.

1.3 Forest Fire Pattern in Andhra Pradesh

Andhra Pradesh has mostly dry deciduous forests and trees start drying up from January - February onwards. Rainy season is mostly by South-West monsoon from June to September except for little area in South East Andhra Pradesh covering Chittoor, Nellore and parts of Prakasham and Kadapa districts where North East monsoon comes between October and December. Because of this character, forest fire occurs in Post monsoon period when ground contains certain materials for burning. As analyzed from MODIS data, maximum forest fire occurs in March followed by February and April.

1.4 Effects of Fires

The most important ill effect of fires is on the young regeneration, which is killed or dies back, thereby delaying the establishment of a new crop and extending the rotation. Mortality may result from intense fires in older crops, although the trees develop thick bark that protects them. Eucalyptus appears to suffer more than the indigenous species by way of reduced stocking and lower yields at maturity. Repeated burning leads to site deterioration, changes in soil nutrient status and accelerated erosion due to the destruction of the ground flora; these also reduce the rate of growth. Not only do uncontrolled fires burn down the vegetation but the organic matter is adversely lowered, increasing the frequency of flooding and causing soil erosion. In addition, wildlife patterns and habitat may be disrupted. The situation is exacerbated by a lack of fire protection planning knowledge and incentive.

Table 1.2: Details of Circle wise Fire occurrences in Andhra Pradesh

Sl. No.	Circle	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
1	Khammam	1	96	220	240	227	490	286	115	319	305	2299
2	Fdpt Srisailam	15	175	182	298	211	307	202	173	313	194	2070
3	Warangal	2	119	197	198	224	359	253	86	352	257	2047
4	Rajahmundry	1	96	197	221	218	248	254	149	306	255	1945
5	Kurnool	1	163	175	191	107	227	213	124	204	180	1585
6	Visakapatnam	3	114	182	204	85	172	224	43	191	254	1472
7	Tirupati	0	145	141	185	91	178	113	205	159	132	1349
8	Adilabad	5	27	70	156	142	270	142	71	309	197	1389
9	Guntur	0	93	137	151	76	130	106	99	130	192	1114
10	Ananthapur	3	51	59	47	37	45	35	31	53	23	384
11	Nizamabad	0	4	16	28	22	26	9	13	21	29	168
12	Hyderabad	2	1	5	10	4	2	3	4	0	3	34
	Total	33	1084	1581	1929	1444	2454	1840	1113	2357	2021	15856

Table 1.3: Details of Division wise Fire occurrences in Andhra Pradesh

Sl. No.	Circle	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
1	Kakinada	1	85	178	189	199	214	228	141	279	1745
2	Giddalur	0	83	122	132	63	109	94	72	104	949
3	Warangal North	0	60	92	91	91	155	107	47	131	926
4	Achampet	12	52	59	124	89	128	49	52	141	751
5	Rajampet	0	83	71	92	62	93	64	105	102	770
6	Badrachalam North	0	29	89	83	77	142	90	39	87	739
7	Markapur	1	58	69	89	68	80	74	75	76	649
8	Atmakur	2	65	54	85	53	99	79	46	96	669
9	Narsipatnam	1	59	54	98	27	80	84	22	91	599
10	Kadapa	0	89	45	50	40	74	79	39	60	532
11	Nandyal	0	24	73	75	35	80	81	35	68	544
12	Proddutur	1	50	56	66	30	73	53	50	76	505
13	Wlm Tirupati	0	52	55	80	19	73	33	82	42	460
14	Kothagudem	1	23	41	26	32	136	38	15	77	466
15	Badrachalam South	0	20	23	45	46	59	82	27	46	386
16	Karimnagar East	1	15	13	22	27	60	66	6	108	353
17	Warangal South	0	22	44	30	41	73	27	12	55	350
18	Nirmal	3	8	12	48	42	87	32	27	44	364
19	Wlm Warangal	0	18	35	43	49	52	42	15	42	308
20	Paderu	1	27	49	45	20	30	49	10	44	321

21	Paloncha	0	13	24	44	31	53	44	11	49	307
22	Bellampally	0	1	22	20	30	50	40	15	73	302
23	Khammam	0	7	20	20	32	58	16	16	31	241
24	Ananthapur	2	24	41	13	27	24	24	17	16	188
25	Vissakhapatnam	0	14	38	28	21	21	24	5	28	179
26	Kagaznagar	0	6	8	40	7	35	16	6	59	177
27	Mancherial	2	2	10	14	14	32	25	9	65	173
28	Chittoor west	1	27	18	34	10	21	11	14	37	173
29	Jannaram	0	9	13	21	12	44	24	6	39	168
30	Eluru	0	7	13	31	18	34	23	8	23	160
31	WLM Paloncha	0	4	23	14	9	42	16	7	29	144
32	Vizianagaram	0	6	21	19	7	27	37	4	18	139
33	Adilabad	0	1	5	13	37	22	5	8	29	120
34	Nellore	0	9	13	18	13	16	10	21	19	119
35	Srikakulam	1	8	20	14	10	14	30	2	10	109
36	Chittoor East	0	10	15	13	10	12	16	18	15	109
37	Karimnagar West	1	4	13	12	16	19	11	6	16	98
38	Kamareddy	0	1	3	10	8	8	4	1	11	46
39	Nizamabad	0	0	6	11	8	14	2	3	1	45
40	Medak	0	3	7	5	5	4	3	8	8	43
41	Guntur	0	1	2	1	0	5	2	6	7	24
42	Hyderabad	0	0	5	7	3	2	2	3	0	22
43	Vijayawada	0	4	3	1	1	0	3	0	4	16
44	Mahboobnagar	2	1	0	3	1	0	1	1	0	9

45	WLM Medak	0	0	1	0	2	0	0	0	0	3
46	Kurnool	0	0	1	0	2	0	0	0	0	3
47	WLM NSagar	0	0	0	0	1	0	0	0	0	1
48	Nalgonda	0	0	0	0	0	0	0	0	0	0