



MONITORING PADDY RESIDUE BURNING IN NORTH INDIA USING SATELLITE REMOTE SENSING DURING 2018



Summary report issued on 20-Nov-2018
(Period: 30-Sep-2018 to 19-Nov-2018)

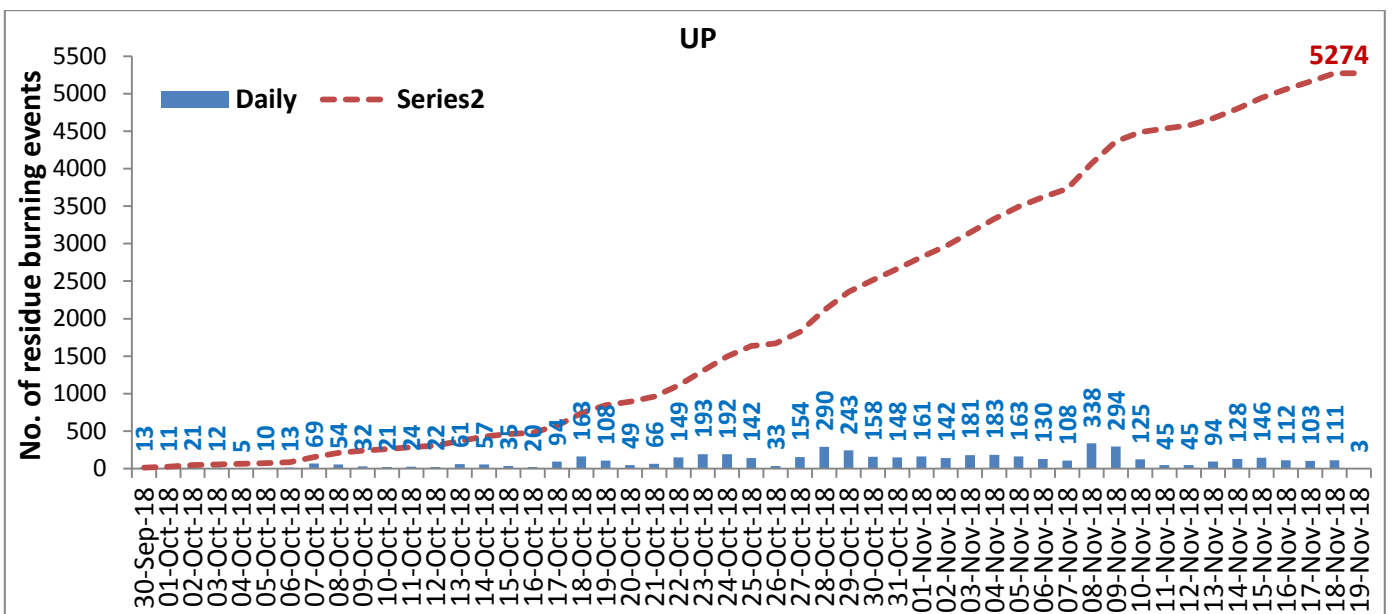
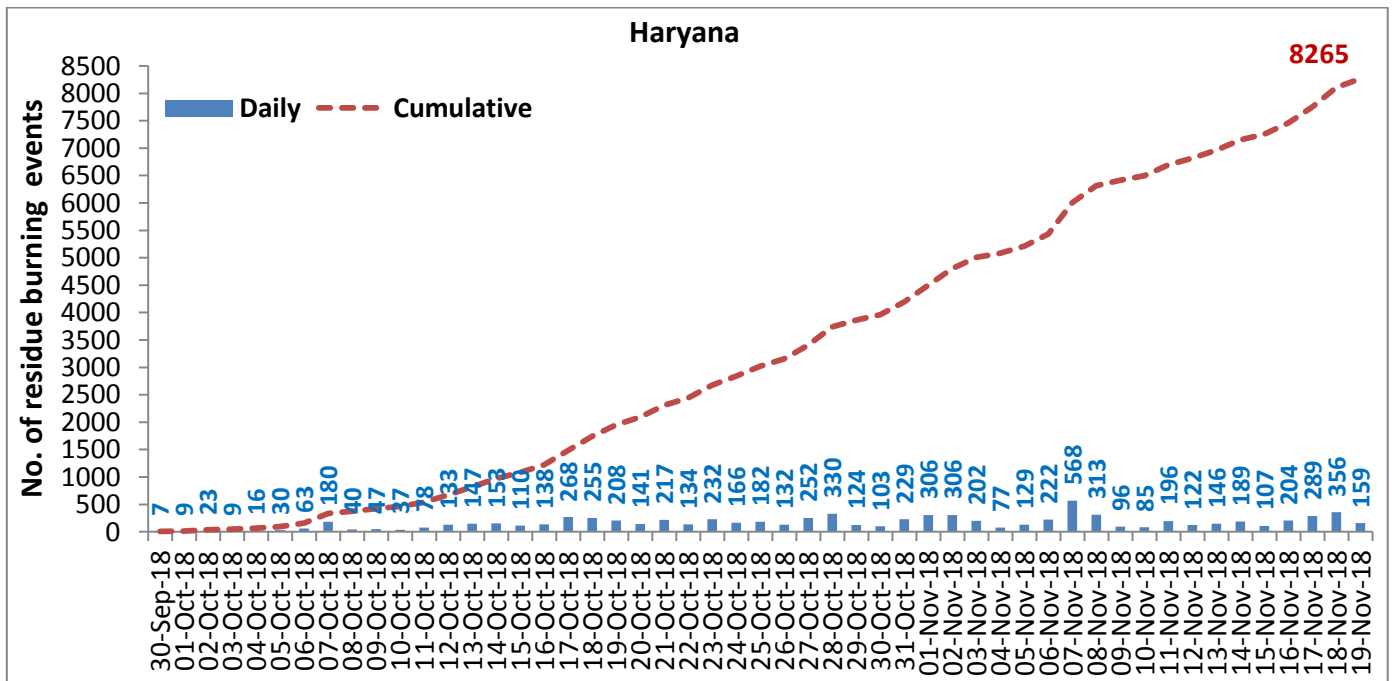
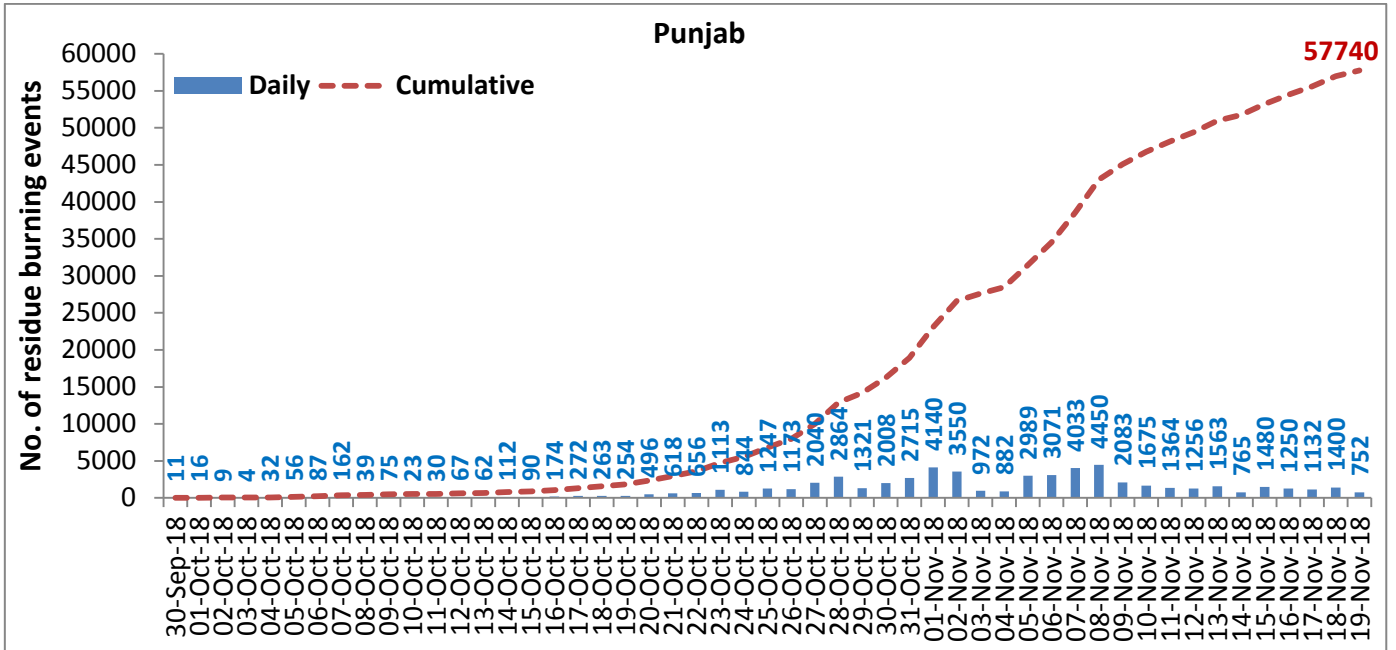
Highlights

- Satellites detected **914** residue burning events in the three States (Punjab, Haryana & UP) on **19-Nov-2018**.
- The burning events detected on **19-Nov-2018** are **759**, **159** and **3** in Punjab, Haryana, and UP, respectively.
- The detection of fire events was hampered by presence of thick clouds over central and eastern UP on **19-Nov-2018**.
- The number of events has decreased from **1867** on **18-Nov-2018** to **914** on **19-Nov-2018** in the three States.
- Total **71279** burning events were detected in the three States between **30-Sept-2018** and **19-Nov-2018**, which are distributed as **57740**, **8265** and **5274** in Punjab, Haryana and UP, respectively.
- Till **19-Nov-2018**, the burning events in the current year are about **92.1%** of the events detected in 2017 and about **57.1%** of the events detected in 2016.
- Overall, about **8%** and **43%** reduction in burning events are observed in the current year (2018) till date as compared to that in 2017 and 2016, respectively.

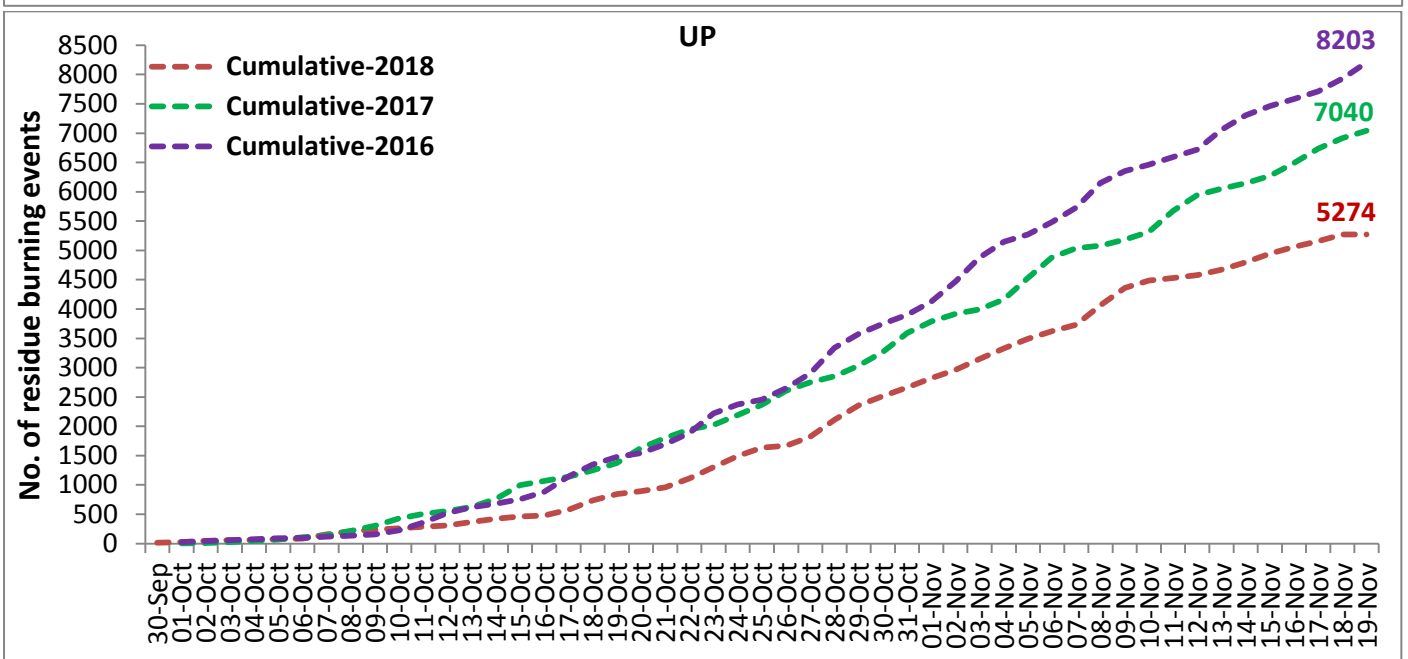
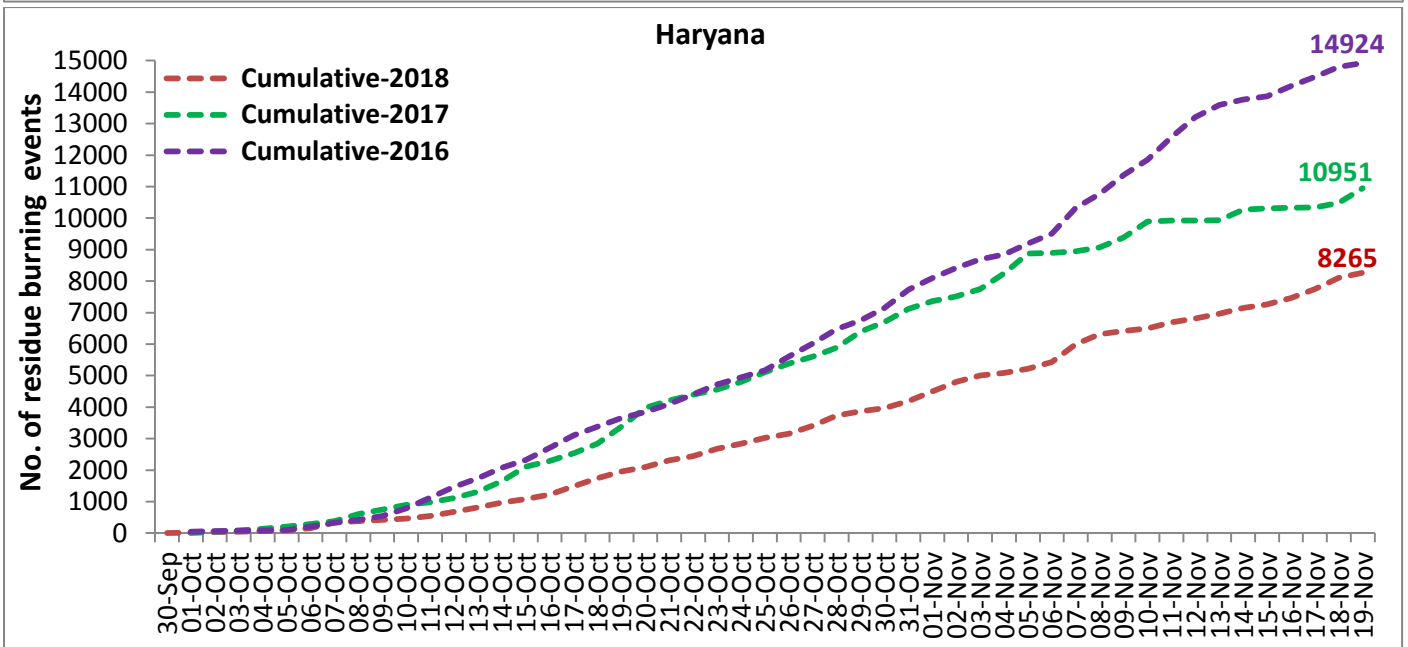
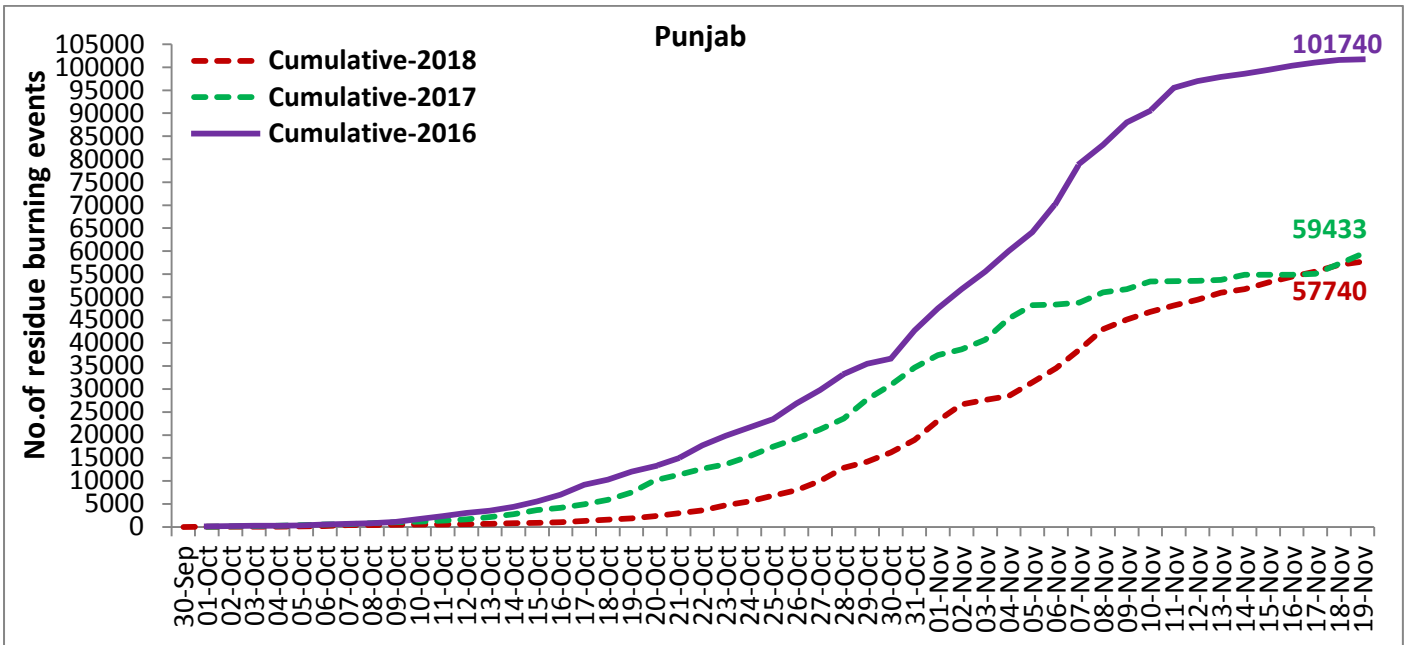
State wise and date wise number of residue burning events detected in 2016, 2017 and 2018

Date	Punjab			Haryana			UP			Total		
	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018
30-Sep	--	--	11	--	---	7	--	---	13	--	---	31
1-Oct	109	54	16	46	13	9	23	2	11	178	69	36
2-Oct	51	50	9	16	27	23	20	8	21	87	85	53
3-Oct	66	62	4	16	40	9	16	17	12	98	119	25
4-Oct	37	103	32	7	60	16	15	22	5	59	185	53
5-Oct	95	106	56	15	68	30	14	20	10	124	194	96
6-Oct	152	138	87	105	75	65	6	39	13	263	252	165
7-Oct	171	105	162	126	97	180	24	31	69	321	233	411
8-Oct	166	215	39	94	218	40	14	75	54	274	508	133
9-Oct	270	163	75	121	148	47	22	87	32	413	398	154
10-Oct	597	164	23	242	151	37	74	126	21	913	441	81
11-Oct	652	177	30	336	87	78	128	74	24	1116	338	132
12-Oct	694	342	67	338	123	133	164	51	22	1196	516	222
13-Oct	467	470	62	284	207	147	102	69	61	853	746	270
14-Oct	812	582	112	328	333	153	60	137	57	1200	1052	322
15-Oct	1215	943	90	248	458	110	76	237	35	1539	1638	235
16-Oct	1478	465	174	385	186	138	125	71	20	1988	722	332
17-Oct	2173	807	272	399	244	268	261	69	94	2833	1120	634
18-Oct	1065	970	263	270	306	255	204	108	163	1539	1384	681
19-Oct	1762	1591	254	276	541	208	132	128	108	2170	2260	570
20-Oct	1175	2653	496	188	597	141	62	255	49	1425	3505	686
21-Oct	1726	1139	618	257	233	217	152	168	66	2135	1540	901
22-Oct	2837	1356	656	309	186	134	194	151	149	3340	1693	939
23-Oct	2040	994	1113	313	155	232	331	72	193	2684	1221	1538
24-Oct	1836	1714	844	221	244	166	152	171	192	2209	2129	1202
25-Oct	1813	2104	1247	229	303	182	83	175	142	2125	2582	1571
26-Oct	3390	1715	1173	434	276	132	195	240	33	4019	2231	1338
27-Oct	2904	2069	2040	417	224	252	255	145	154	3576	2438	2446
28-Oct	3493	2318	2864	458	292	330	435	99	290	4386	2709	3484
29-Oct	2258	4184	1321	278	502	124	237	180	243	2773	4866	1688
30-Oct	1076	3152	2008	395	307	103	175	238	158	1646	3697	2269
31-Oct	6132	3743	2715	575	413	229	153	321	148	6860	4447	3092
01-Nov	4843	2736	4140	362	250	306	223	199	161	5628	3185	4607
02-Nov	4183	1246	3550	332	145	306	345	131	142	4860	1522	3998
03-Nov	3806	2109	972	275	240	202	409	75	181	4409	2424	1355
04-Nov	4477	4603	882	146	499	77	265	168	183	4888	5270	1142
05-Nov	4137	2876	2989	345	625	129	125	367	163	4607	3868	3281
06-Nov	6303	171	3071	322	26	222	215	357	130	6840	327	3423
07-Nov	8575	420	4033	821	46	568	244	149	108	9640	615	4709
08-Nov	4129	2256	4450	432	128	313	419	43	338	4874	2427	5101
09-Nov	4857	675	2083	608	311	96	205	107	294	5670	1093	2473
10-Nov	2468	1642	1675	484	509	85	109	131	125	3061	2282	1885
11-Nov	5040	103	1364	716	29	196	129	358	45	5885	490	1605
12-Nov	1477	33	1256	634	3	122	129	269	45	2240	305	1423
13-Nov	885	237	1563	389	7	146	338	109	94	1612	353	1803
14-Nov	692	1101	765	171	340	189	247	95	128	1110	1536	1082
15-Nov	871	5	1480	107	40	107	154	123	146	1132	168	1733
16-Nov	911	8	1250	318	17	204	123	218	112	1352	243	1566
17-Nov	638	217	1132	299	12	289	130	249	103	1067	478	1524
18-Nov	568	2147	1400	312	139	356	217	180	111	1097	2466	1867
19-Nov	168	2200	752	125	471	159	273	122	3	566	2793	914
Total	101740	59433	57740	14924	10951	8265	8203	7040	5274	124867	77424	71279

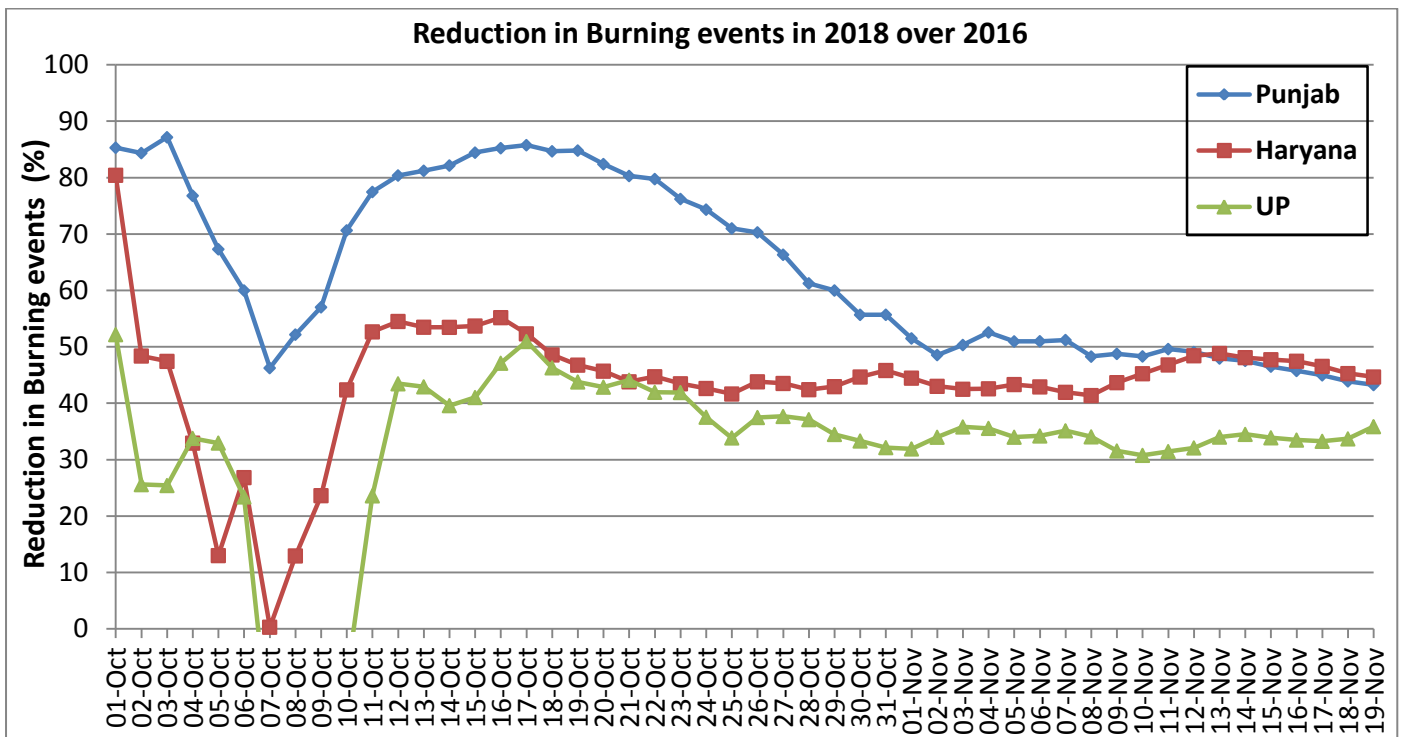
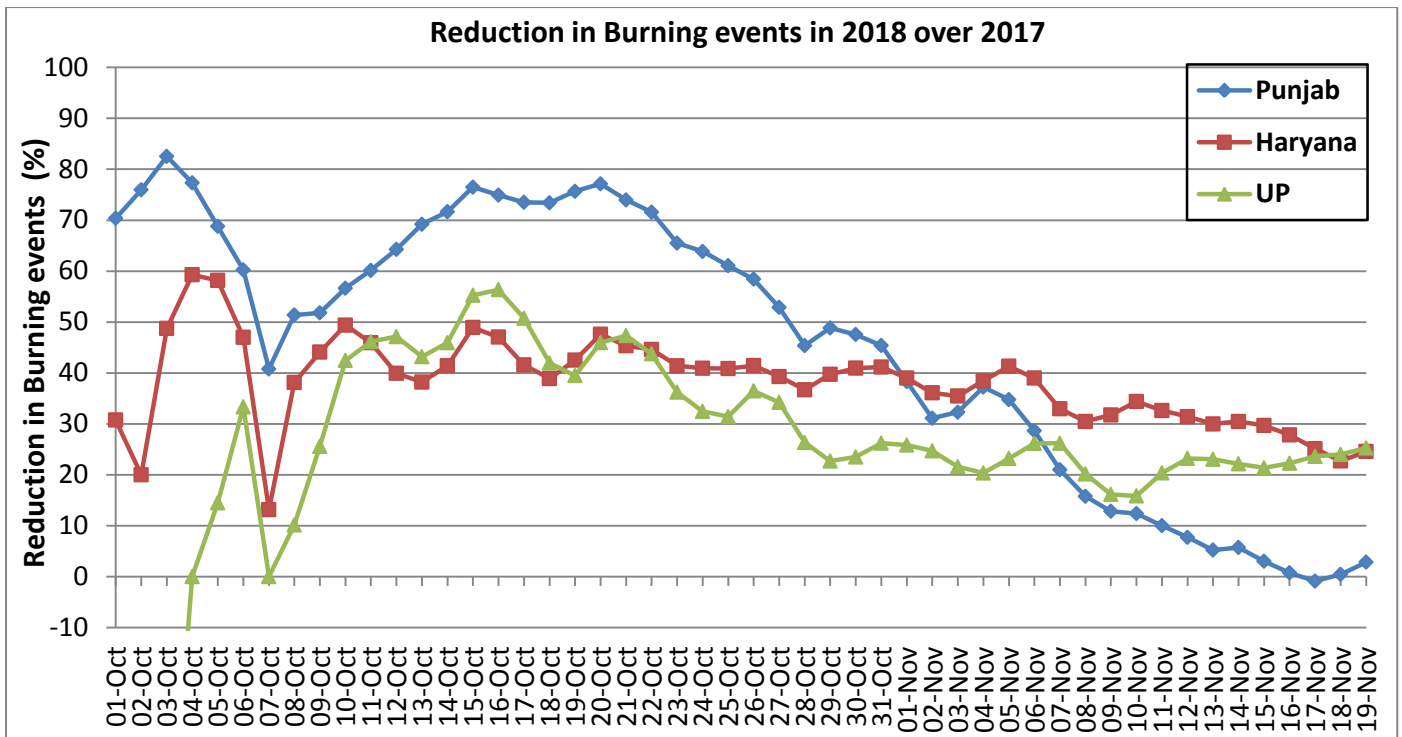
Daily and cumulative Graphs for 2018



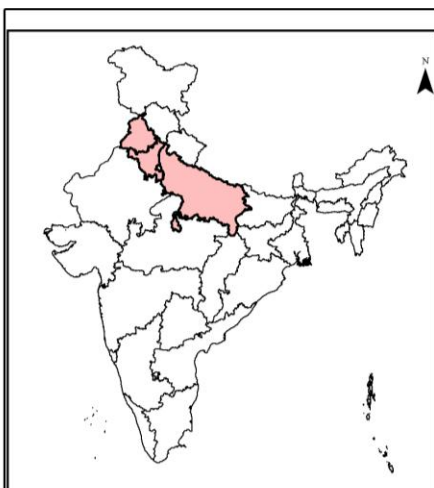
Comparison of burning events of 2018 with events in 2016 and 2017



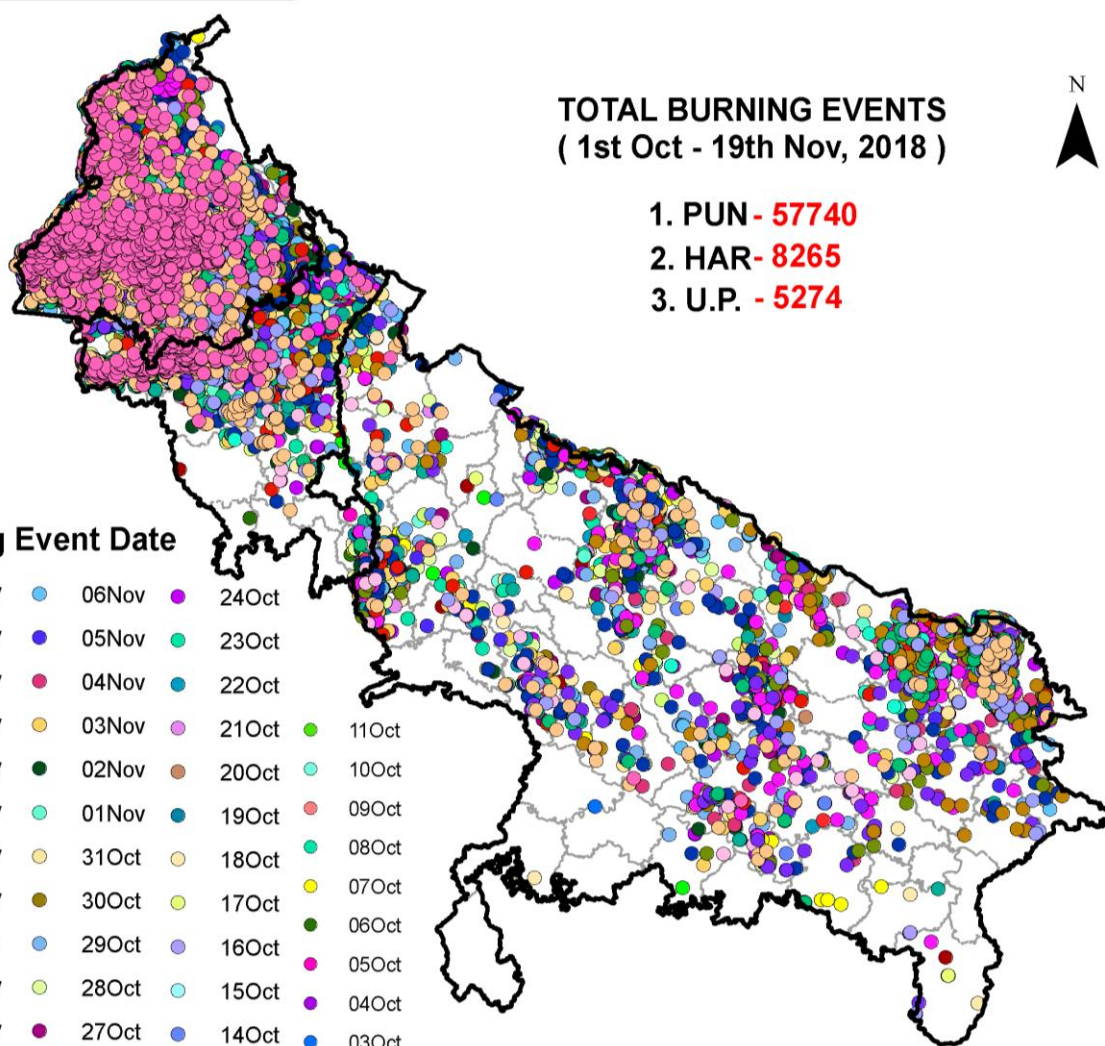
Percent Reduction in Burning events in 2018 over 2017 and 2016 (Daily Cumulative)



Map of Events in 2018



Monitoring Residue Burning in Punjab, Haryana & UP using Satellite Remote Sensing



**TOTAL BURNING EVENTS
(1st Oct - 19th Nov, 2018)**

- 1. PUN - 57740**
- 2. HAR - 8265**
- 3. U.P. - 5274**

Burning Event Date

● 19Nov	● 06Nov	● 24Oct
● 18Nov	● 05Nov	● 23Oct
● 17Nov	● 04Nov	● 22Oct
● 16Nov	● 03Nov	● 21Oct
● 15Nov	● 02Nov	● 20Oct
● 14Nov	● 01Nov	● 19Oct
● 13Nov	● 31Oct	● 18Oct
● 12Nov	● 30Oct	● 17Oct
● 11Nov	● 29Oct	● 16Oct
● 10Nov	● 28Oct	● 15Oct
● 09Nov	● 27Oct	● 14Oct
● 08Nov	● 26Oct	● 13Oct
● 07Nov	● 25Oct	● 12Oct
		● 11Oct
		● 10Oct
		● 09Oct
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		● 03Oct
		● 02Oct
		● 01Oct

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GIS Maps of burning events can be visualized online: <http://geoportal.icar.gov.in:8080/geoexplorer/composer/>