



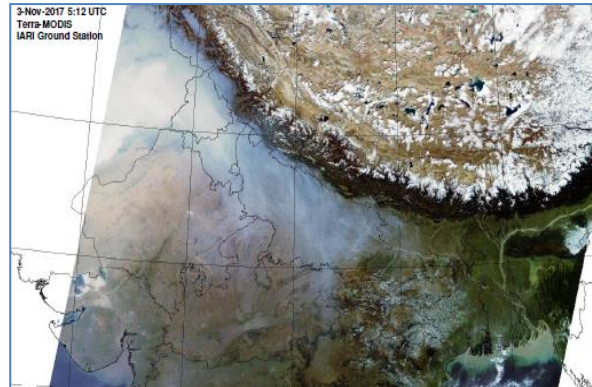
Bulletin No. 53

Events Date:
22-Nov-2020

Issued on:
23-Nov-2020



MONITORING PADDY RESIDUE BURNING IN NORTH INDIA USING SATELLITE REMOTE SENSING DURING 2020



Prepared by:

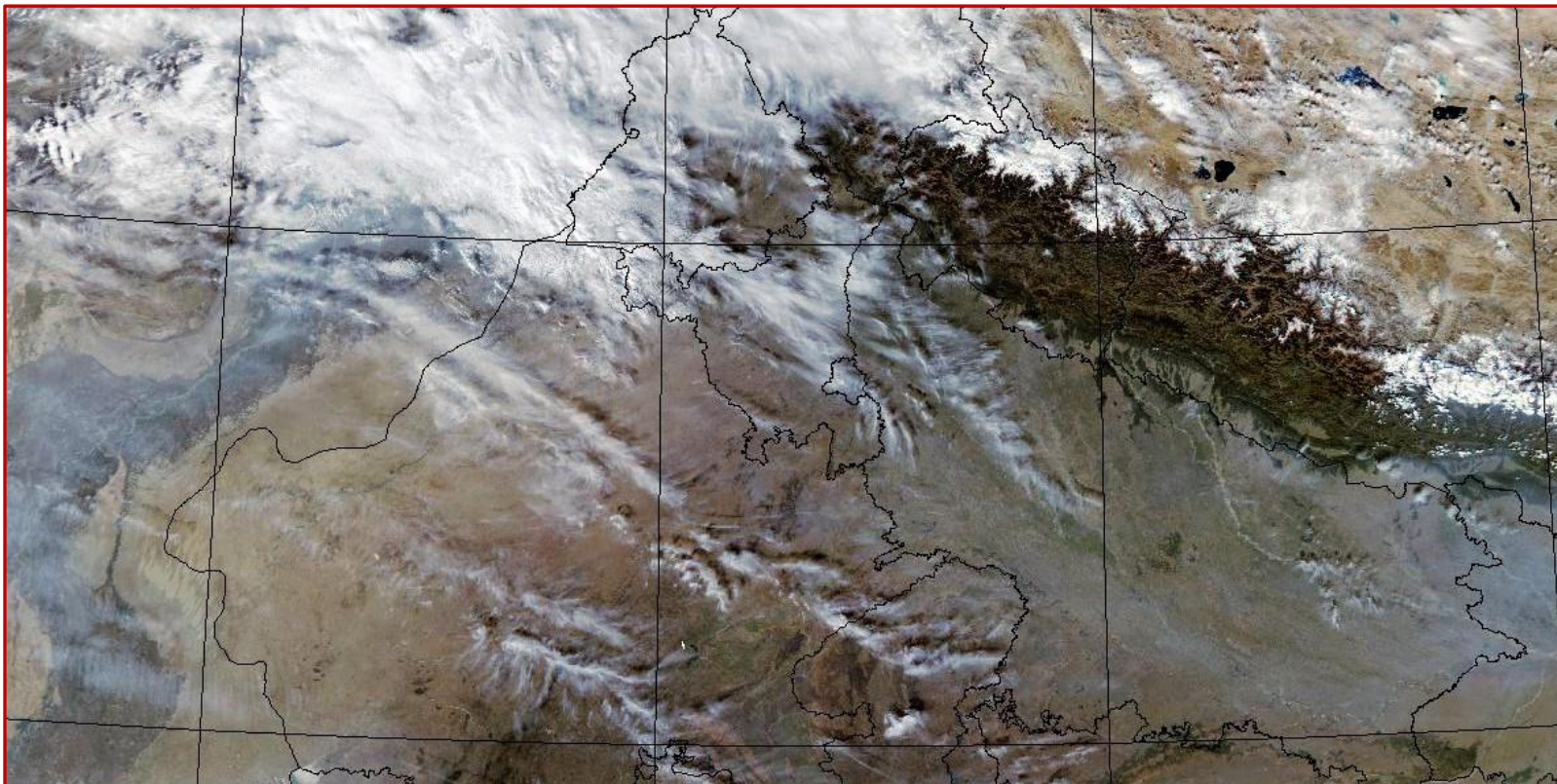
Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory,
Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012

<http://creams.iari.res.in>

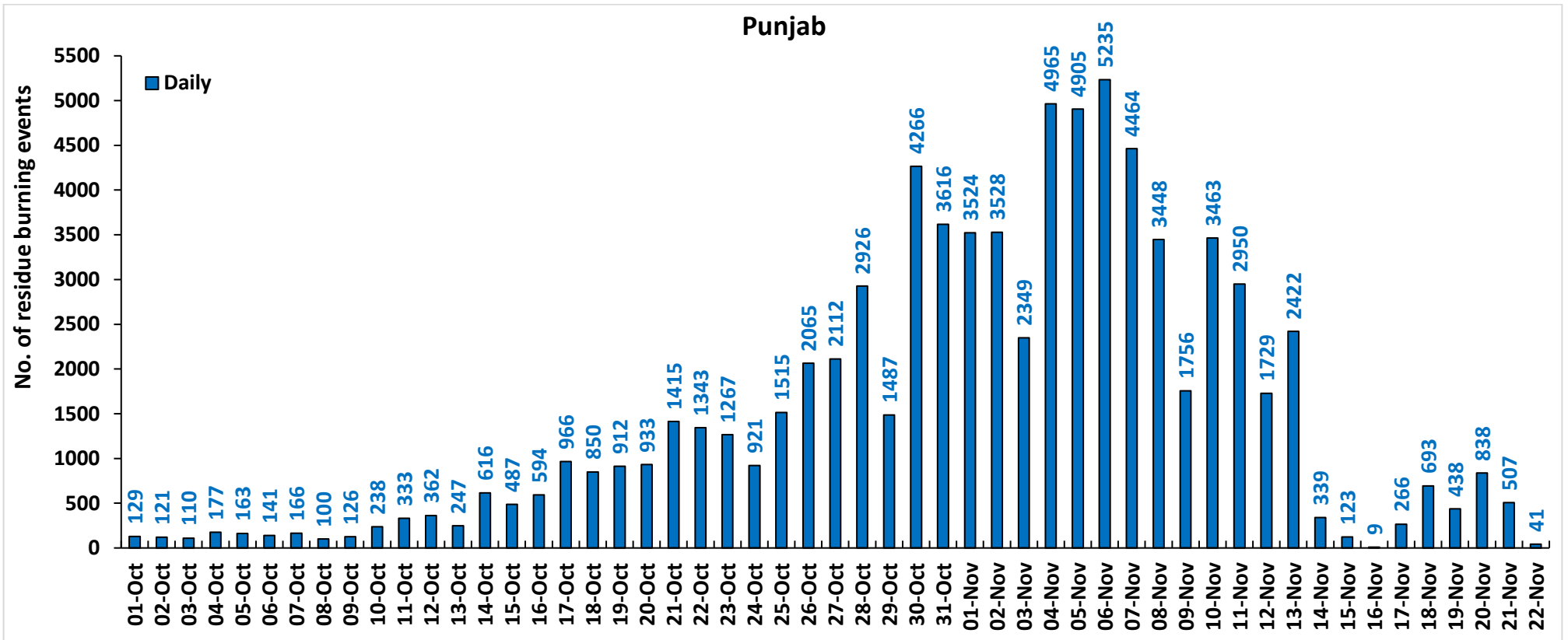
Highlights for 22-November-2020

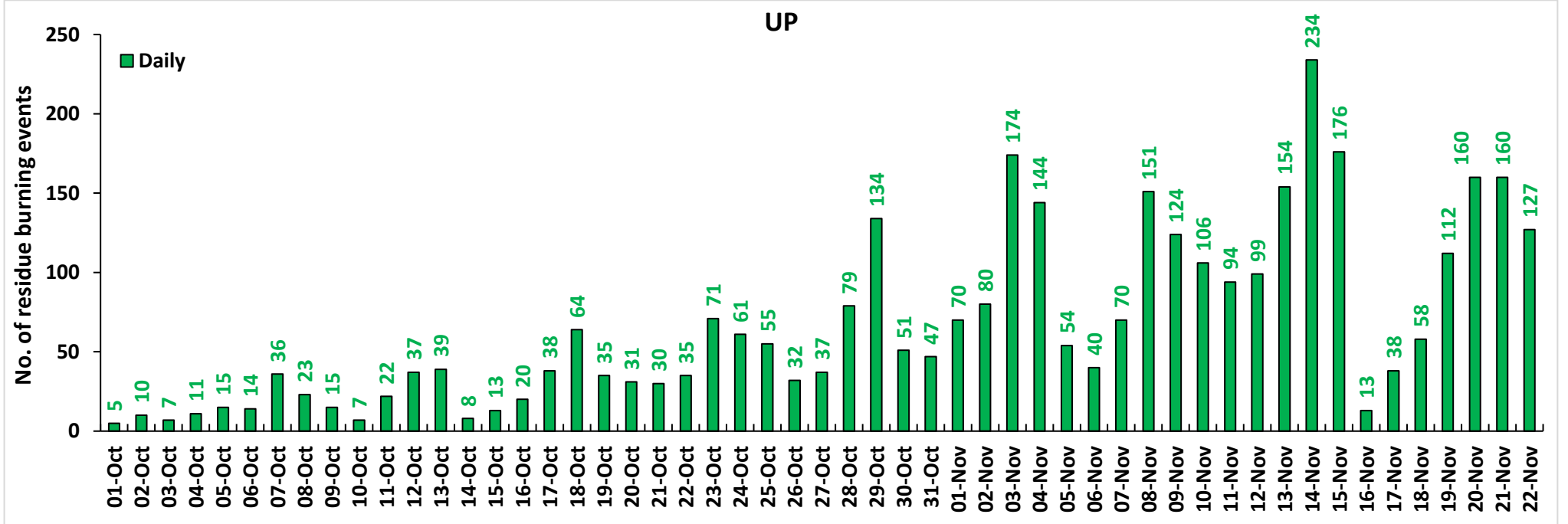
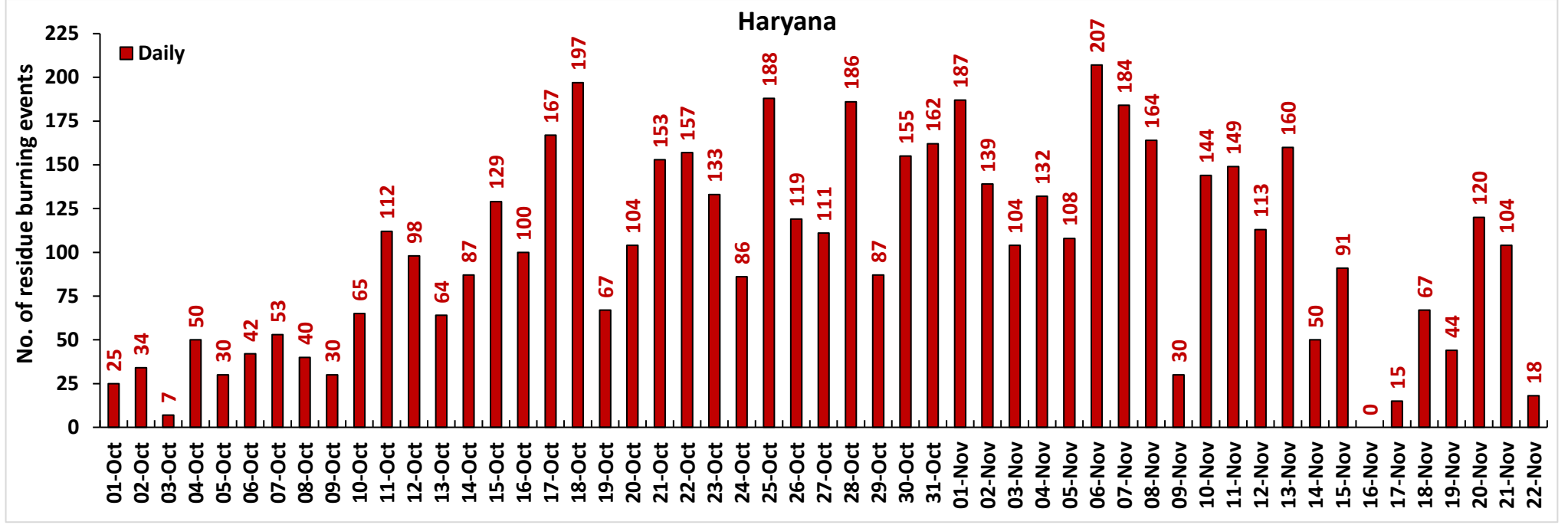
- Satellites detected **186** residue burning events in the three study States on **22-Nov-2020**.
- The state wise events detected on **22-Nov-2020** were **41** in Punjab, **18** in Haryana and **127** in UP.
- The number of events has decreased from **771** on **21-Nov-2020** to **186** on **22-Nov-2020** in the three states.
- The states of Punjab and Haryana were covered with clouds which prevented fire event detection by satellites.
- Bathinda in Punjab, Fatehabad in Haryana and Jhansi in UP reported the highest number of events on **22-Nov-2020**.
- Total **87584** burning events were detected in the three States between **01-Oct-2020** and **22-Nov-2020**, which are distributed as **78696**, **5368** and **3520** in Punjab, Haryana and UP, respectively.
- In Haryana and UP, the cumulative number of burning events between **01-Oct** and **22-Nov 2020** were lower than in **2019**, while in Punjab the cumulative number of events were significantly more than in **2019**.

[AQUA \(MODIS\) Satellite image of North India Acquired on 22-Nov-2020 at 13:40 IST by IARI Ground Station](#)



Temporal distribution of residue burning events for the three study States in 2020.

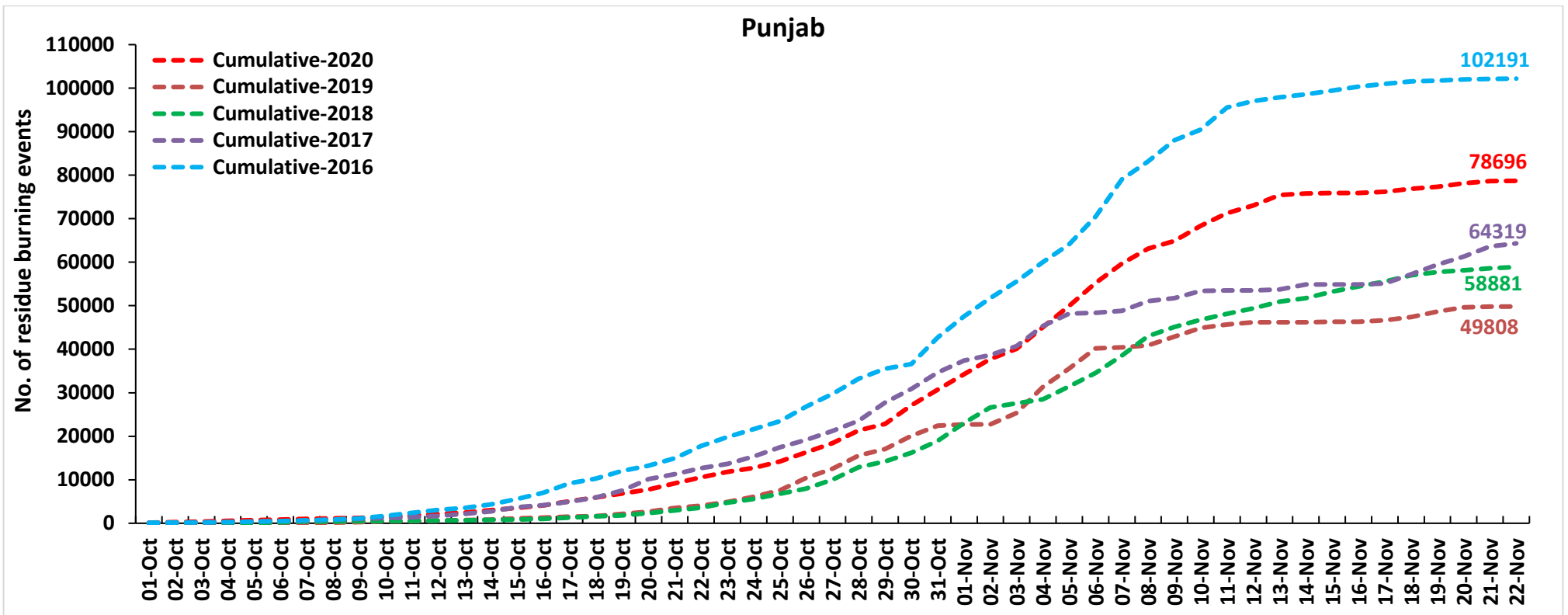




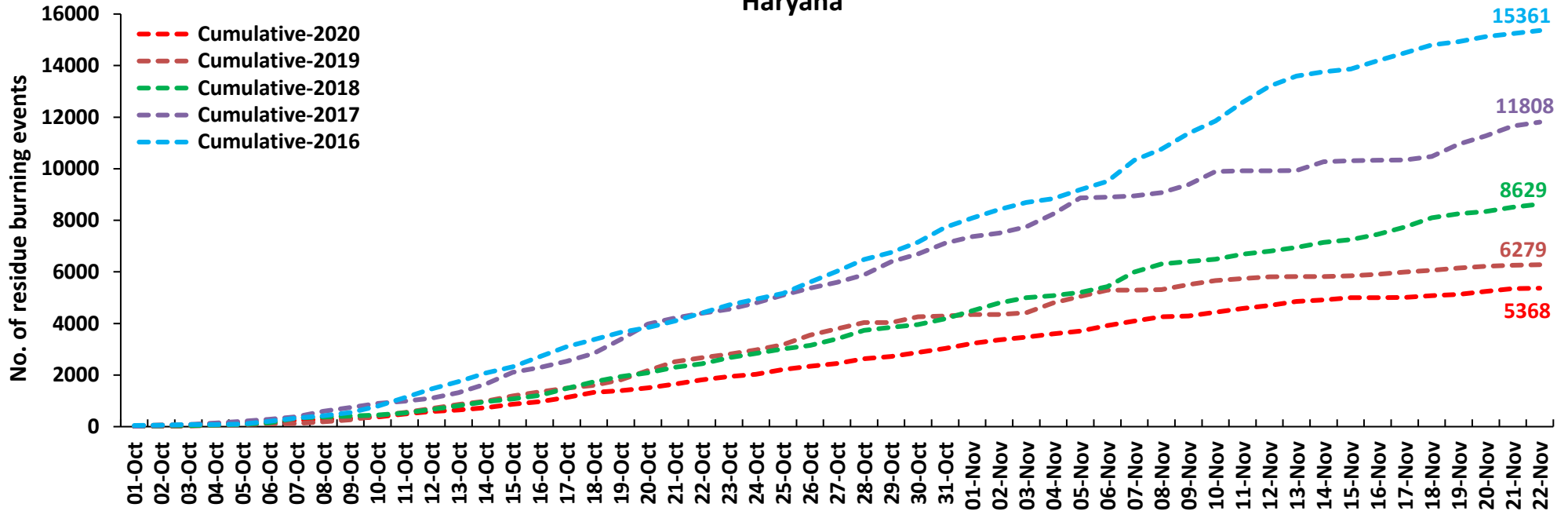
Comparison of residue burning events in current year (2020) with previous years (2019, 2018, 2017 & 2016) for the three study States

(01-Oct to 22-Nov)

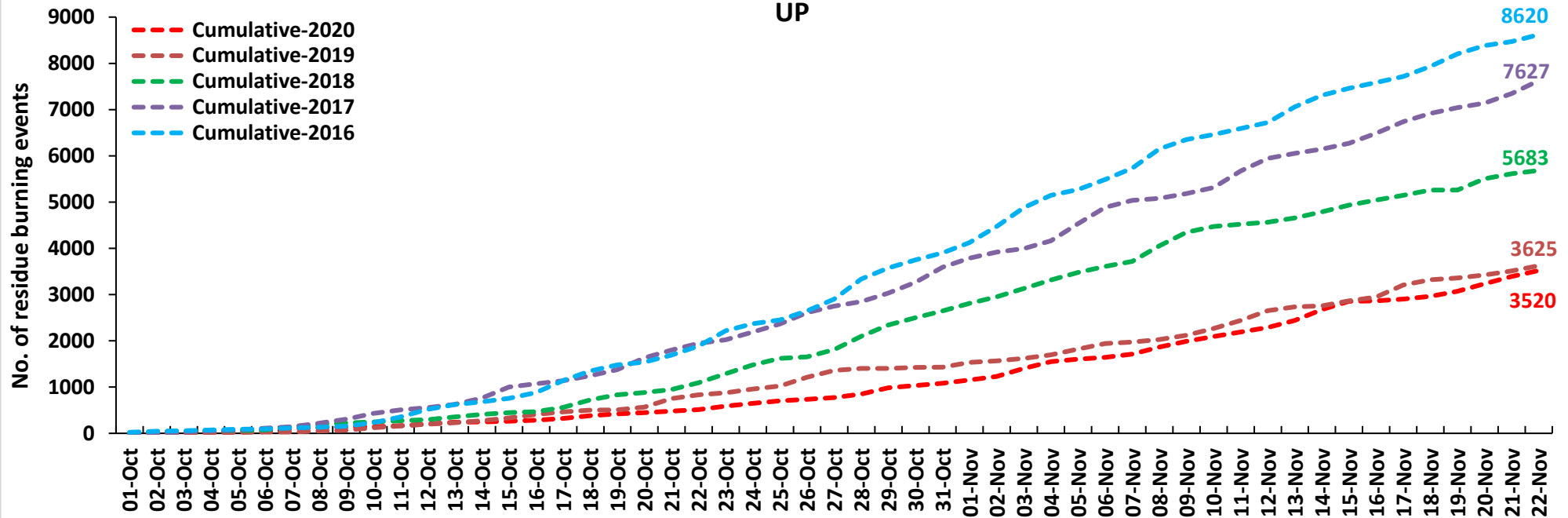
Punjab



Haryana

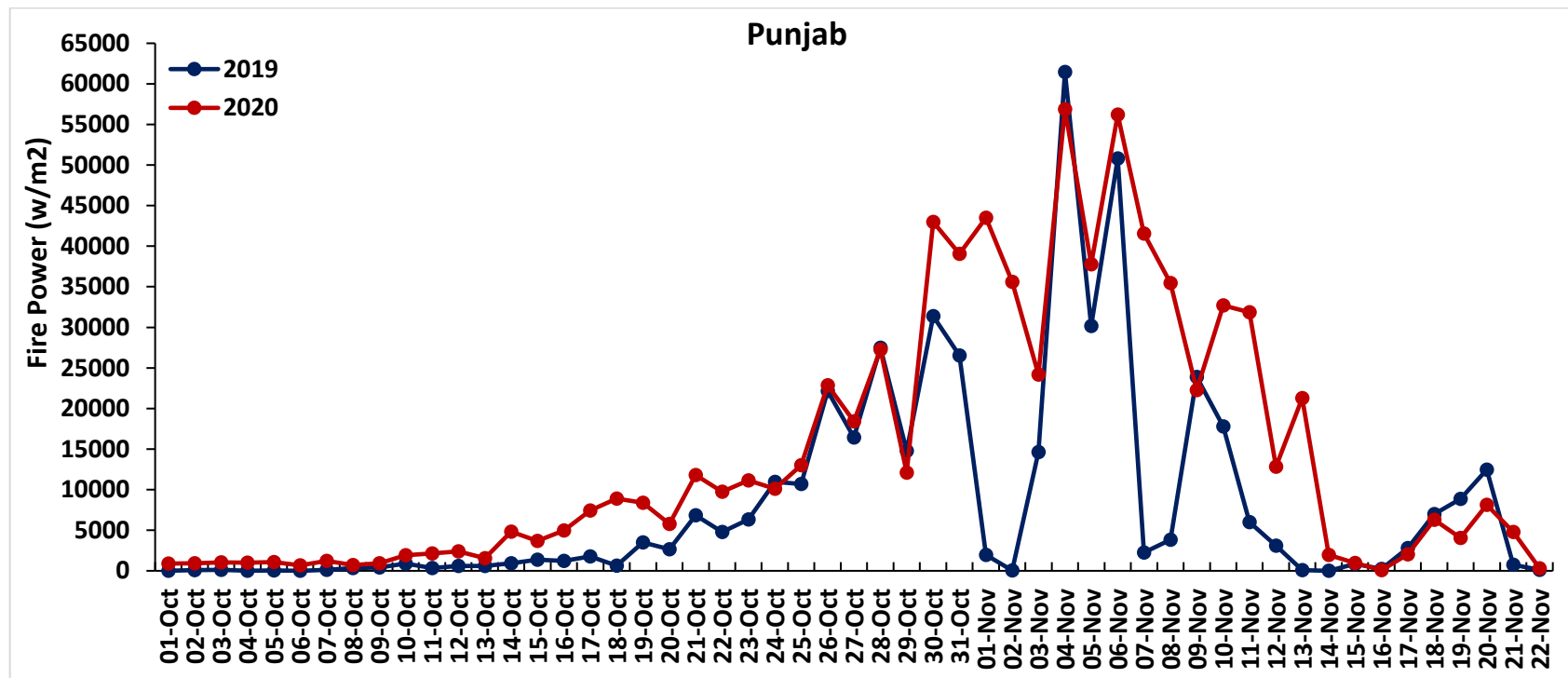


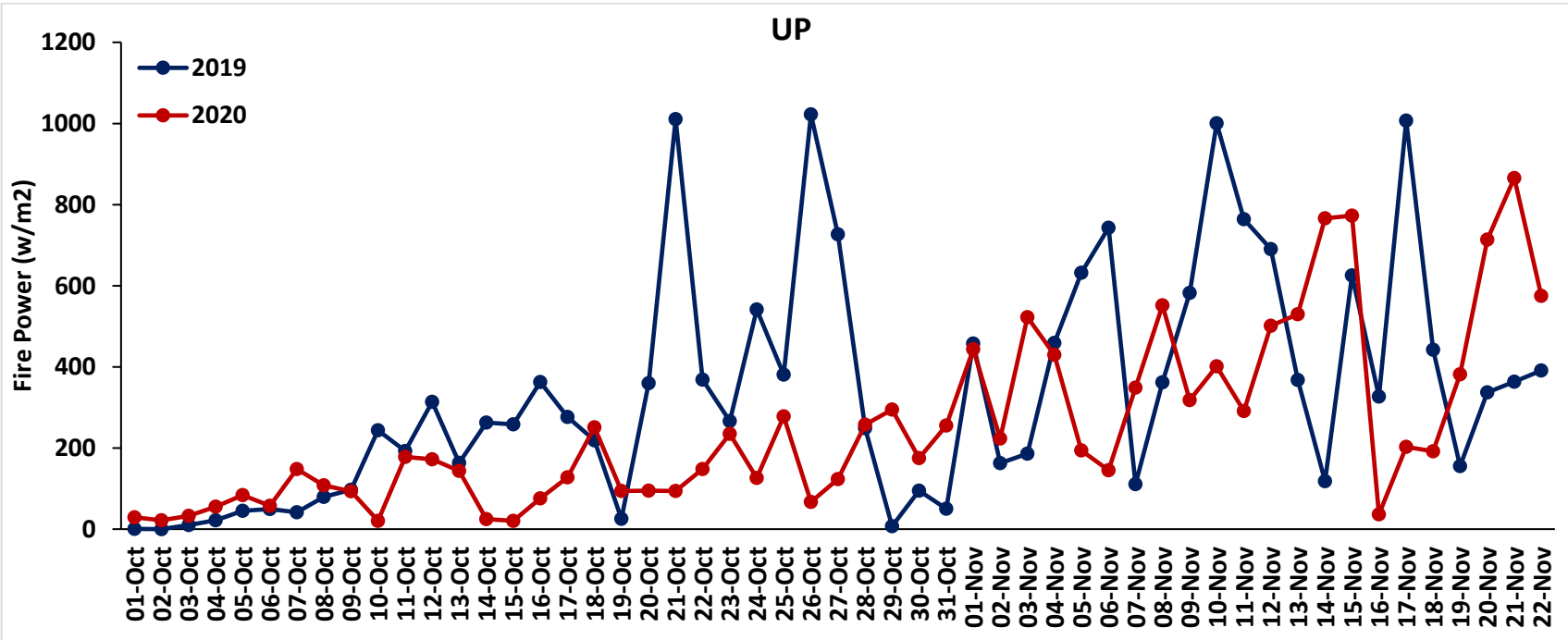
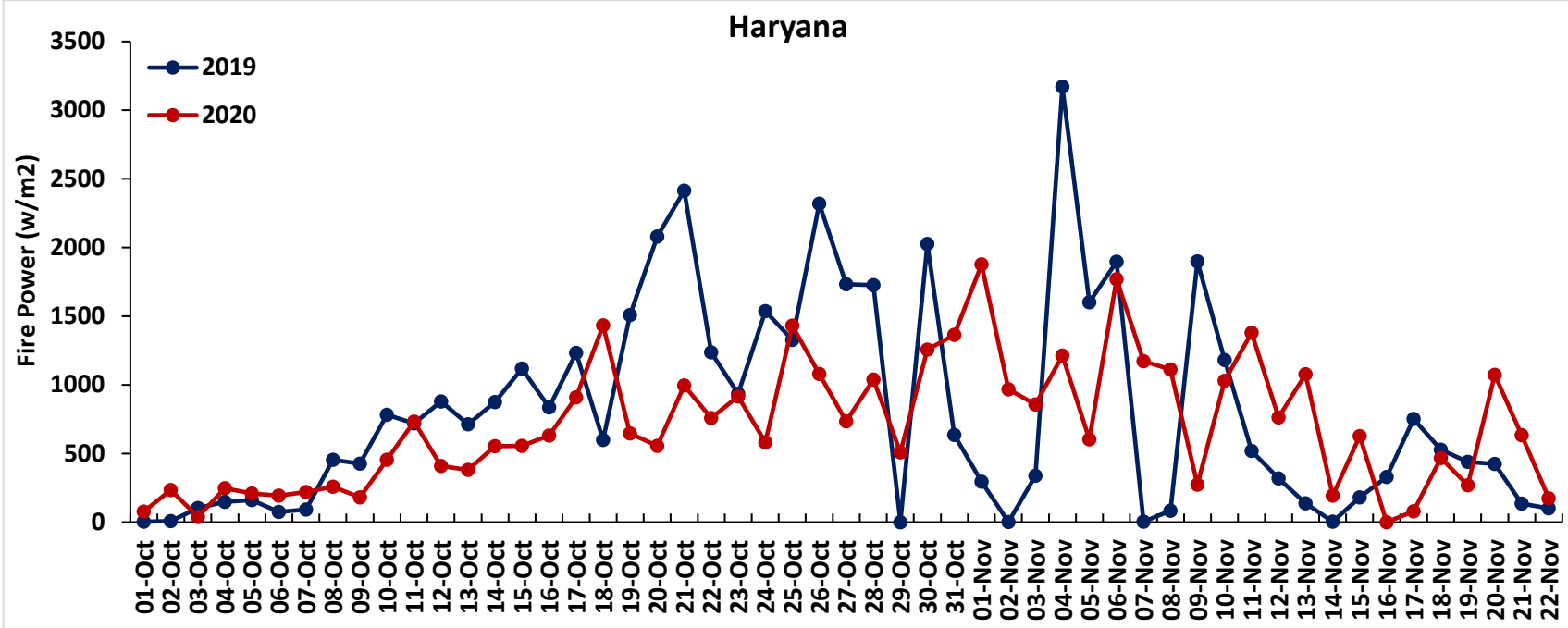
UP



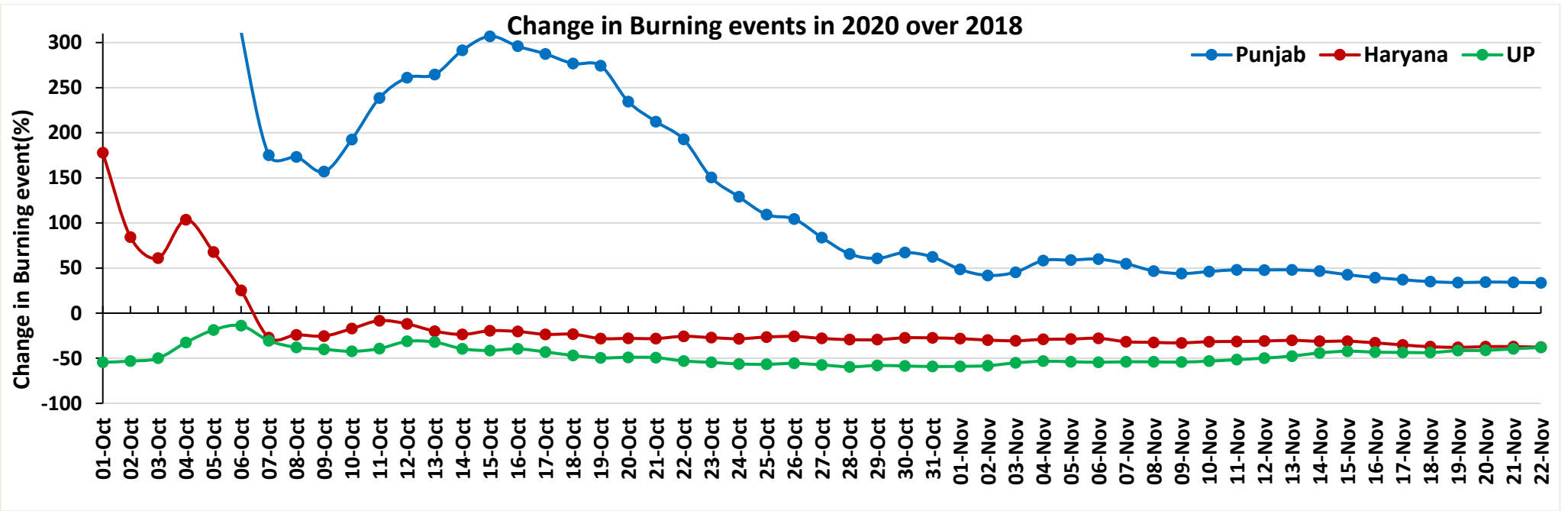
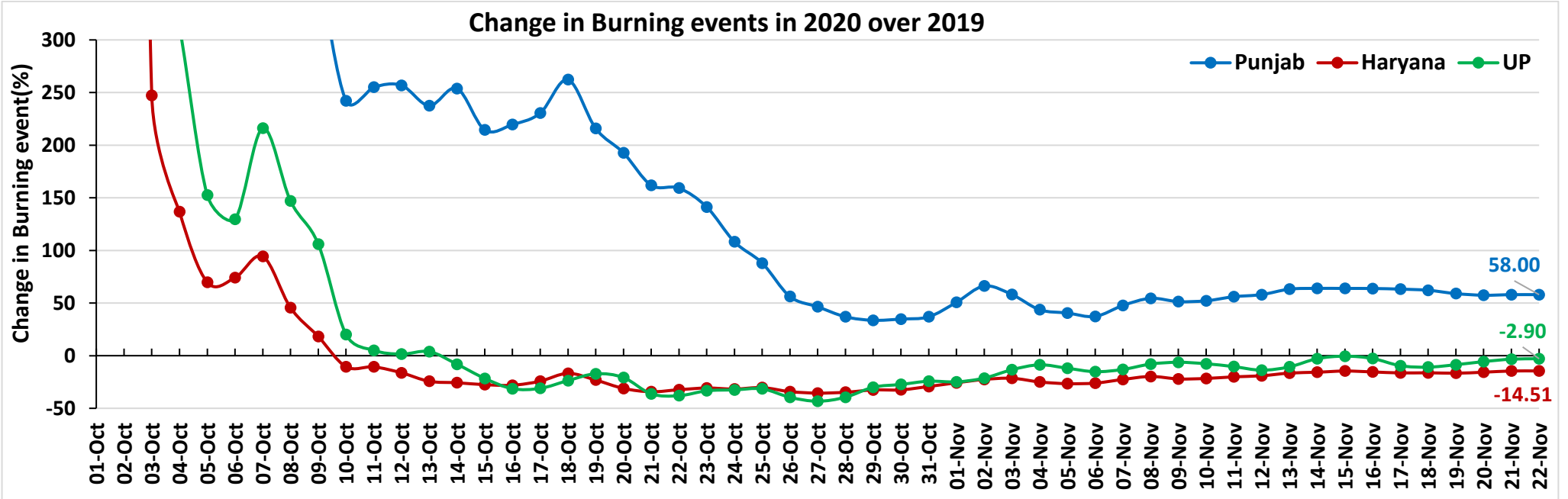
Comparison of Fire Intensity of residue burning events in current year (2020) with previous year (2019)
For the three study States

(01-Oct to 22-Nov)

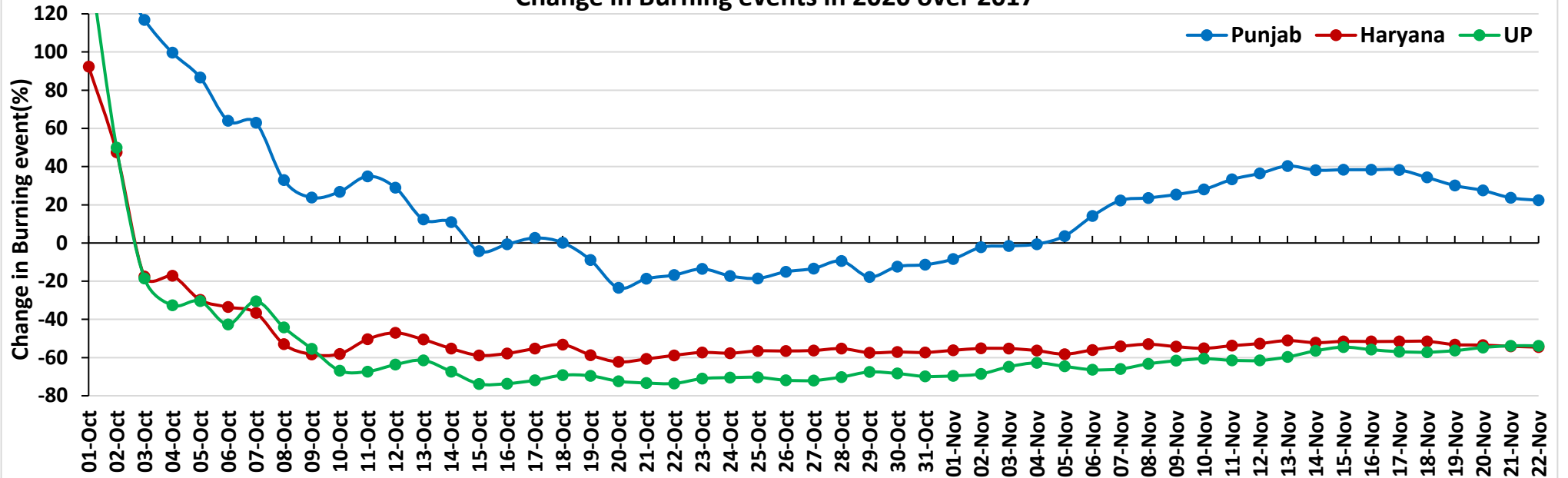




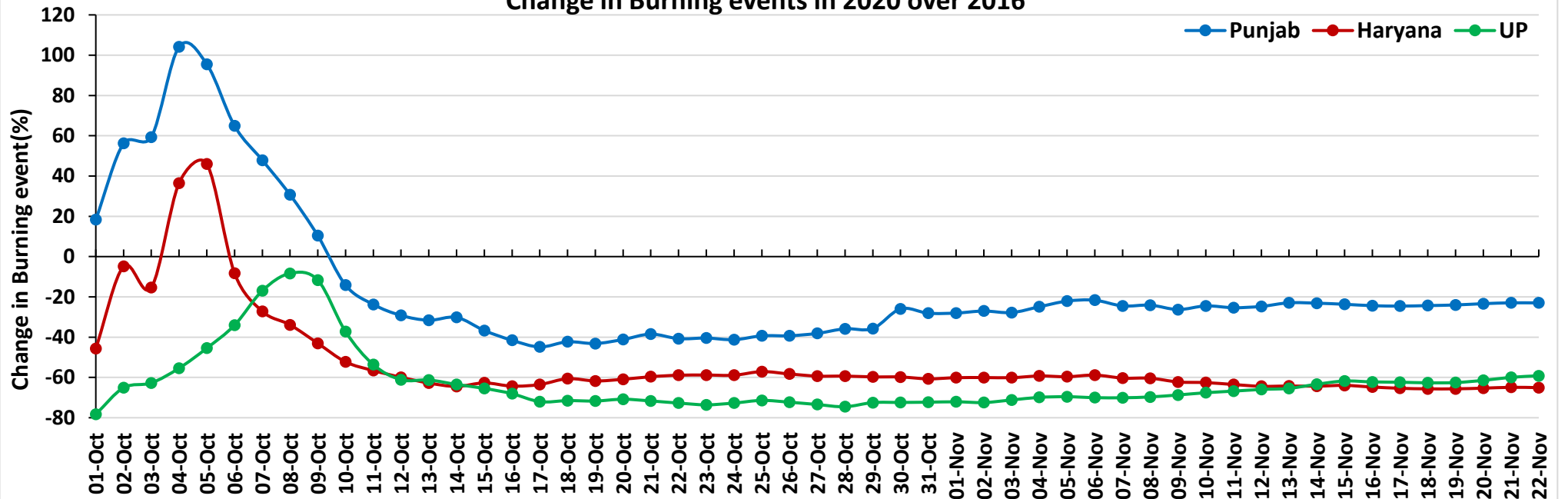
Percent Change in Burning events in 2020 over 2019, 2018, 2017 and 2016 (Daily Cumulative)



Change in Burning events in 2020 over 2017

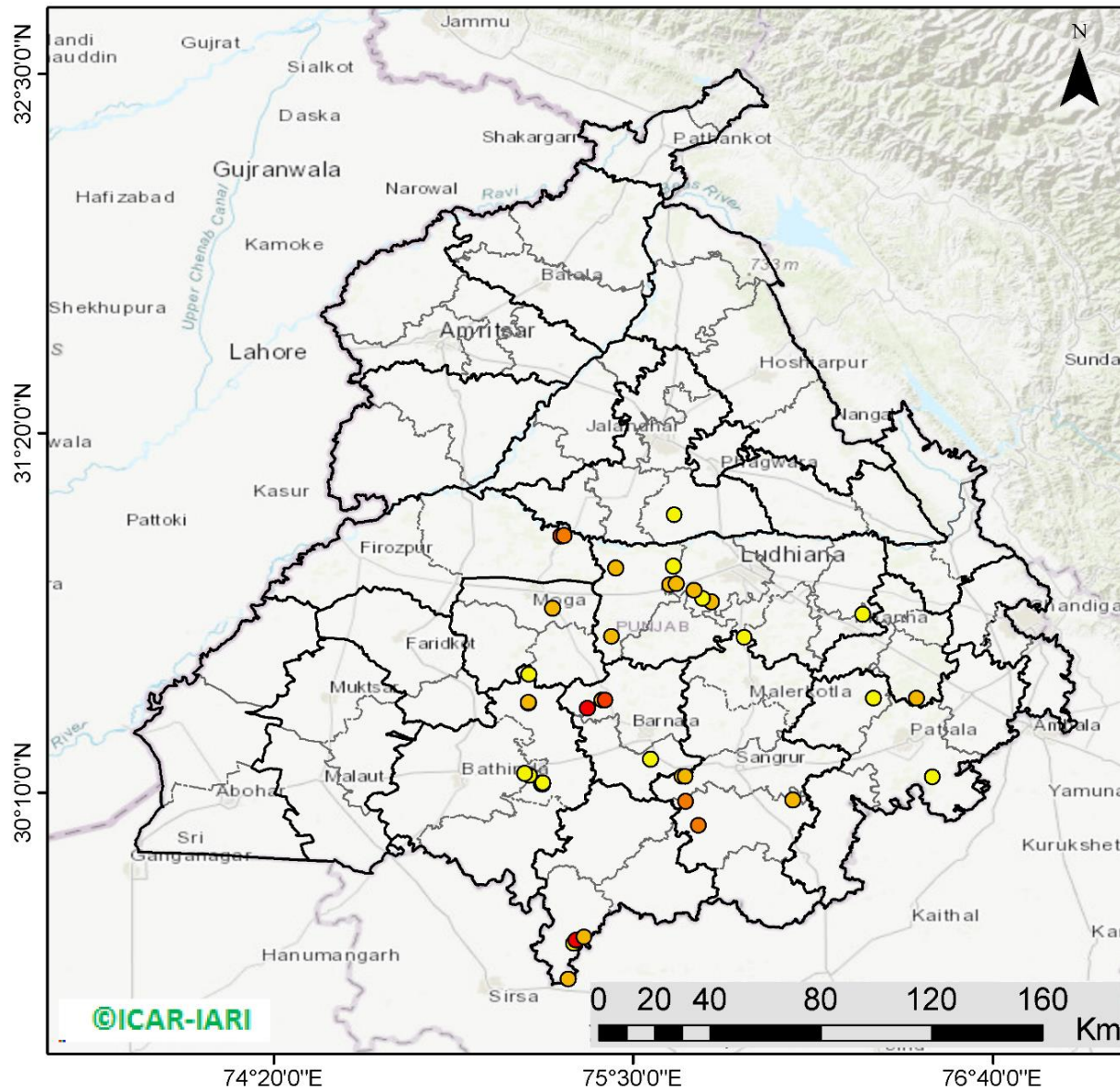


Change in Burning events in 2020 over 2016



(a) Punjab

RICE RESIDUE BURNING IN PUNJAB



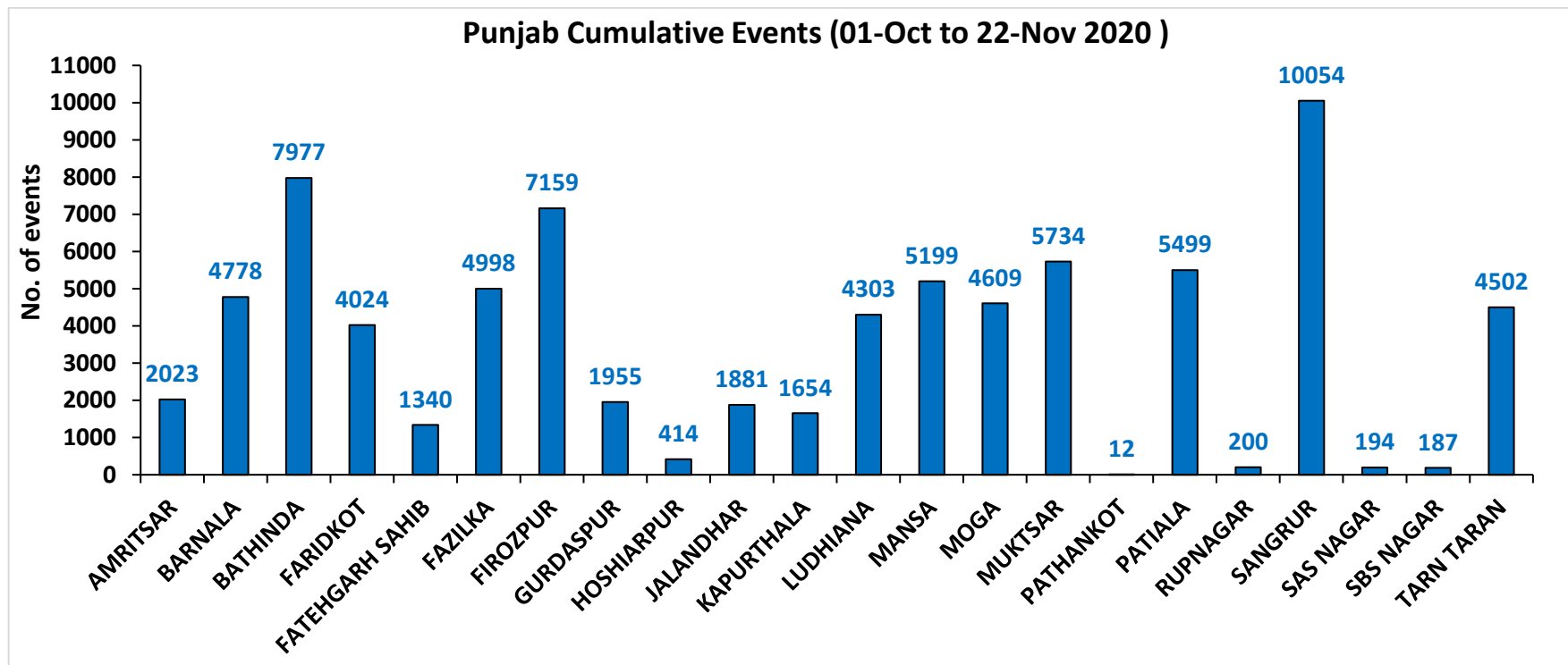
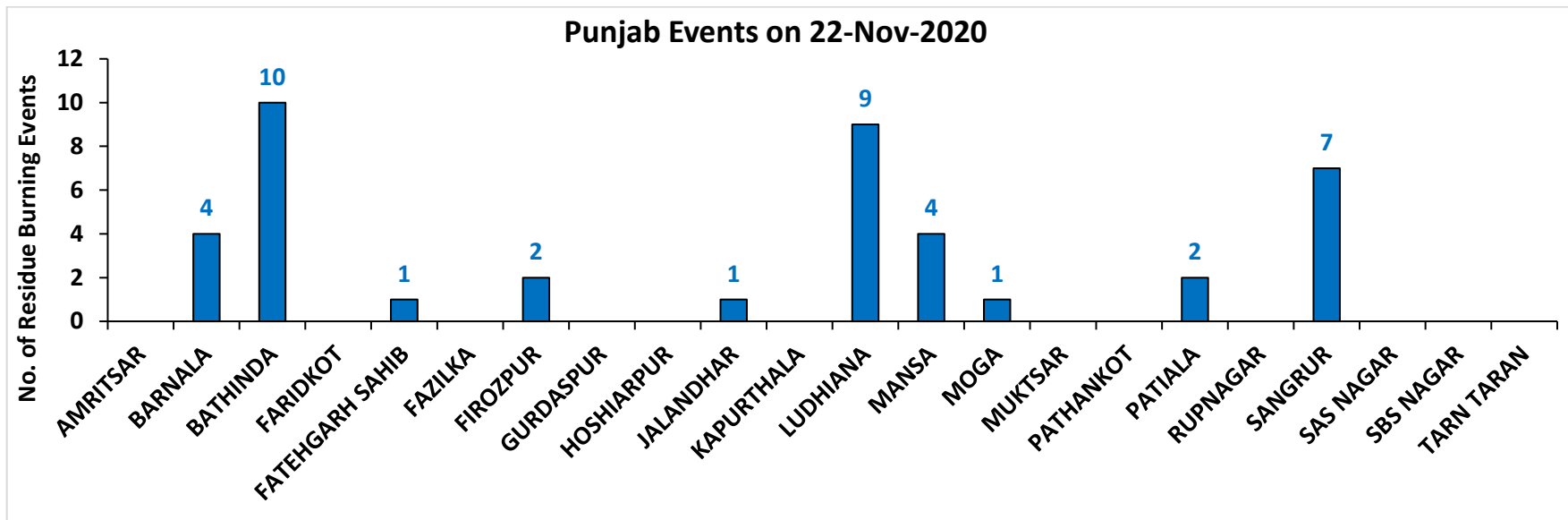
41 burning events detected in Punjab on 22nd November 2020

Fire Intensity (W/m²)

- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- >20

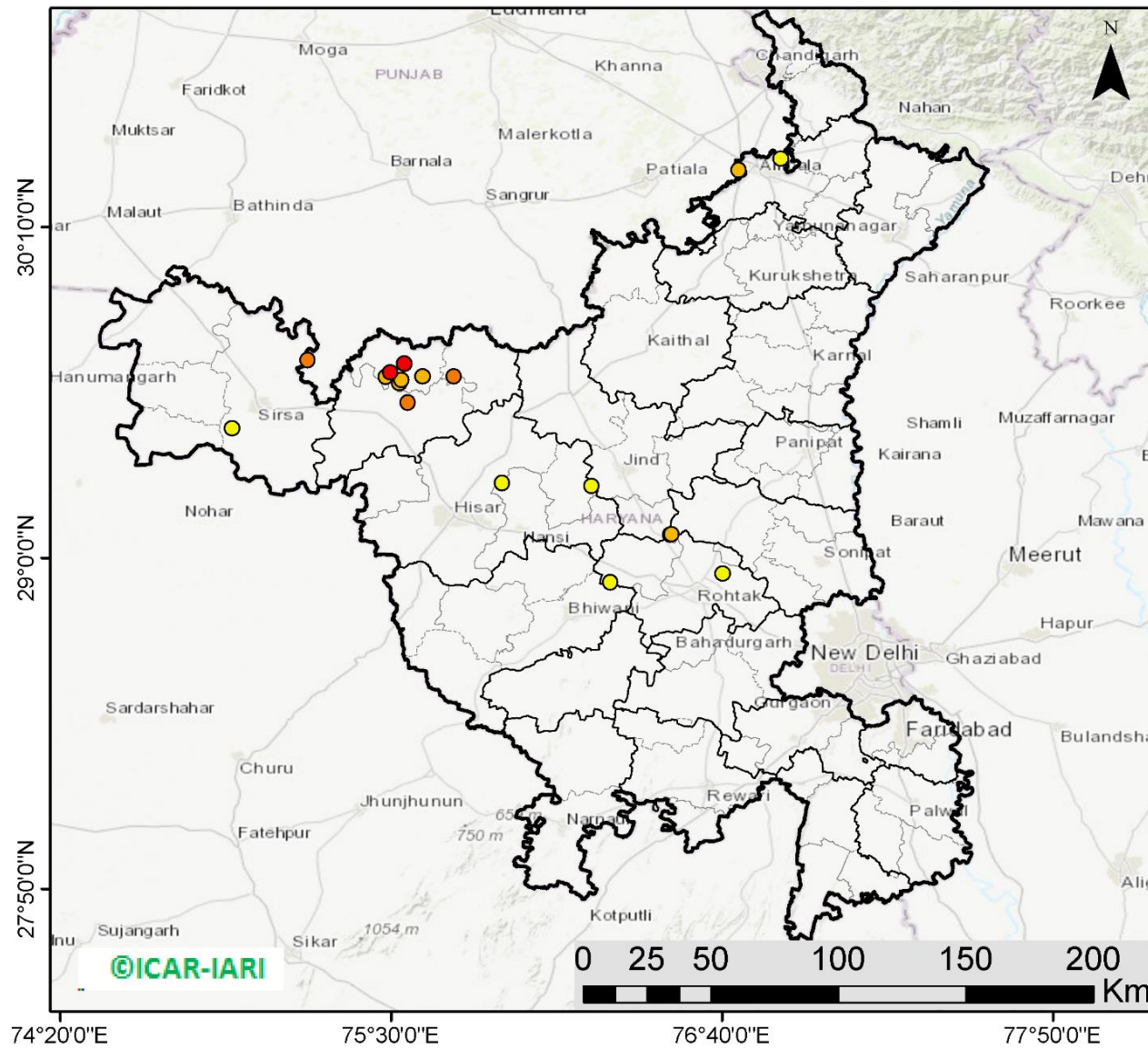


District-wise number of residue burning events in Punjab (01-Oct to 22-Nov 2020)



(b) Haryana

RICE RESIDUE BURNING IN HARYANA



18 burning events detected in Haryana on 22nd November 2020

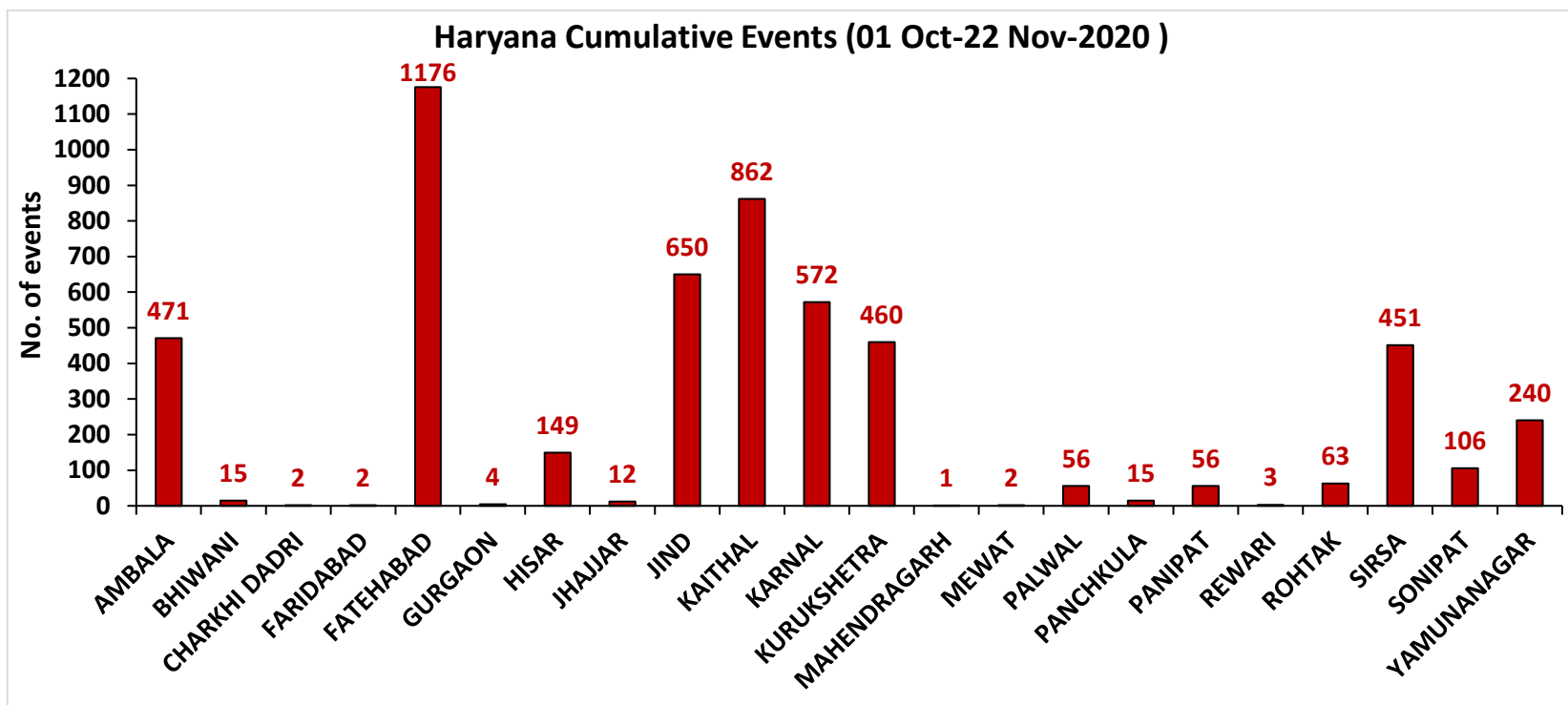
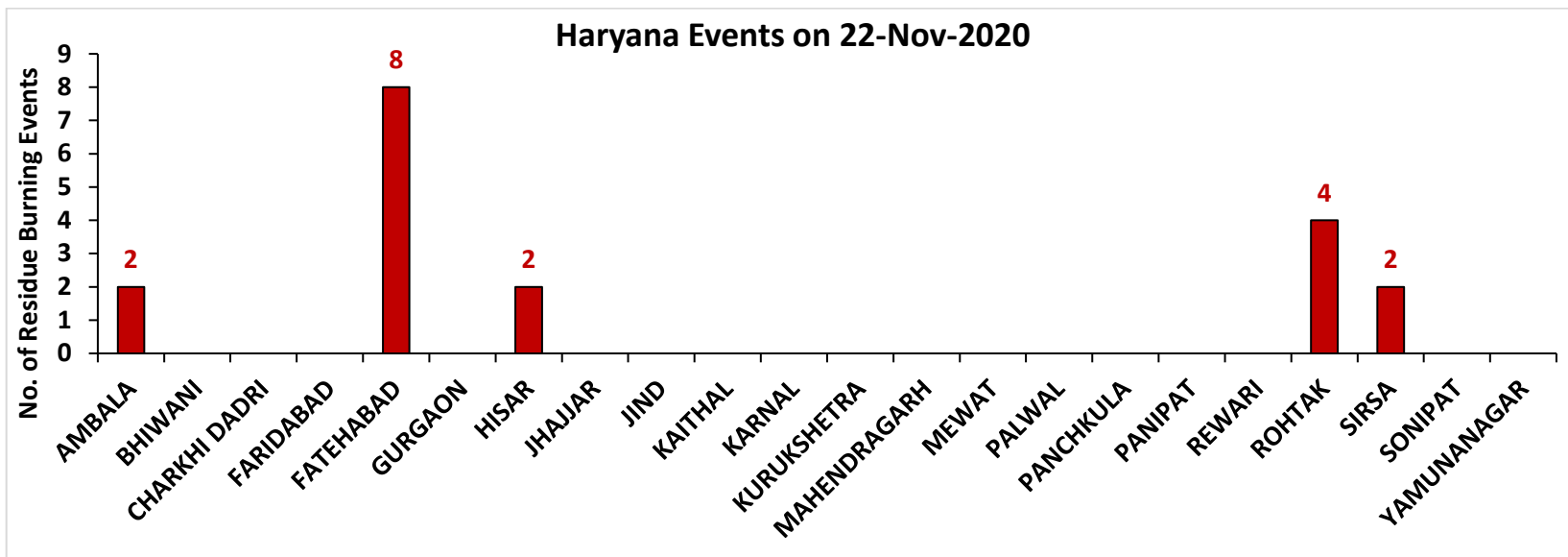
Fire Intensity (W/m²)

- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- >20



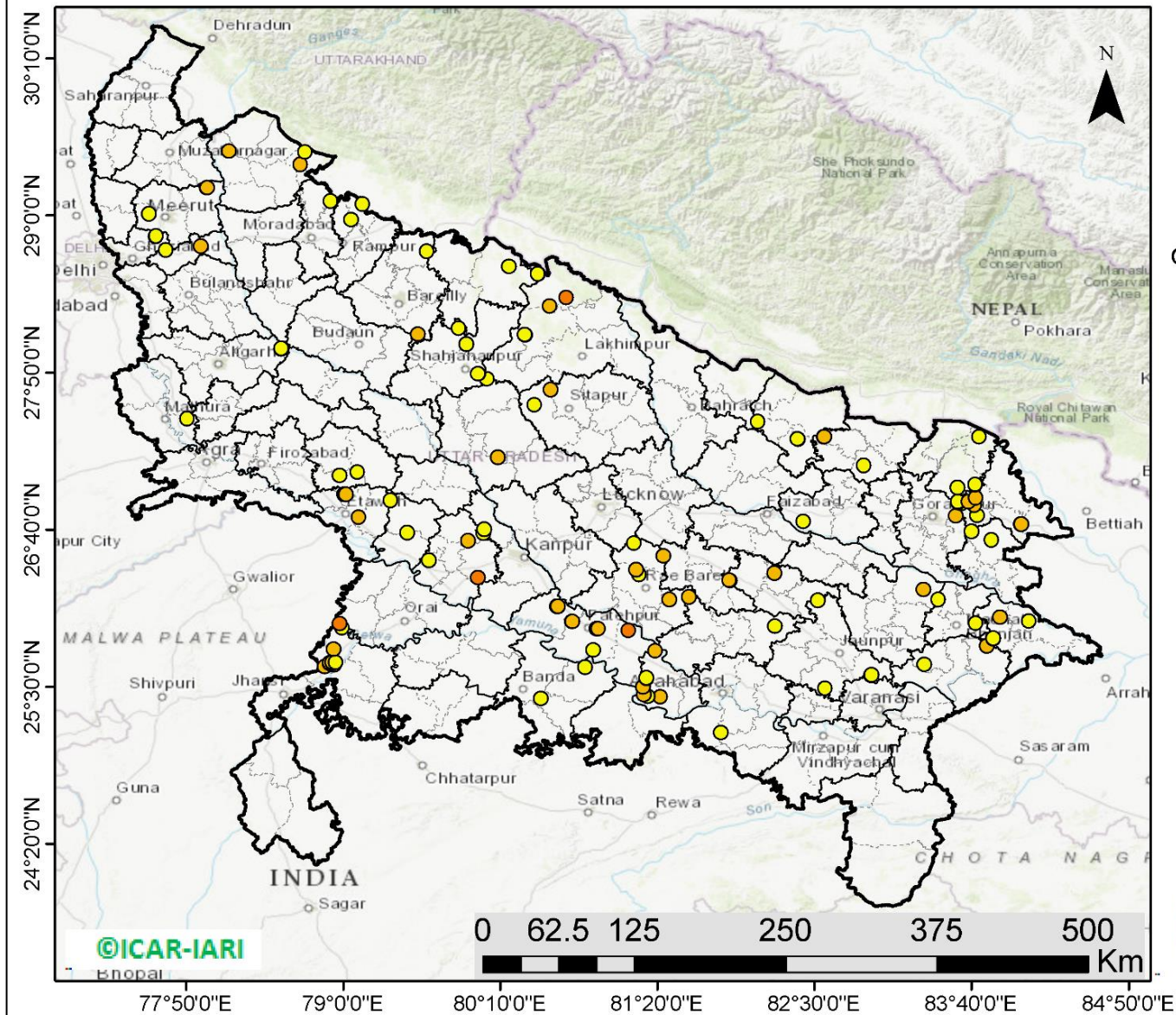
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise number of residue burning events in Haryana (01-Oct to 22-Nov 2020)



(c) Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



127 burning events detected in Uttar Pradesh on 22nd November 2020

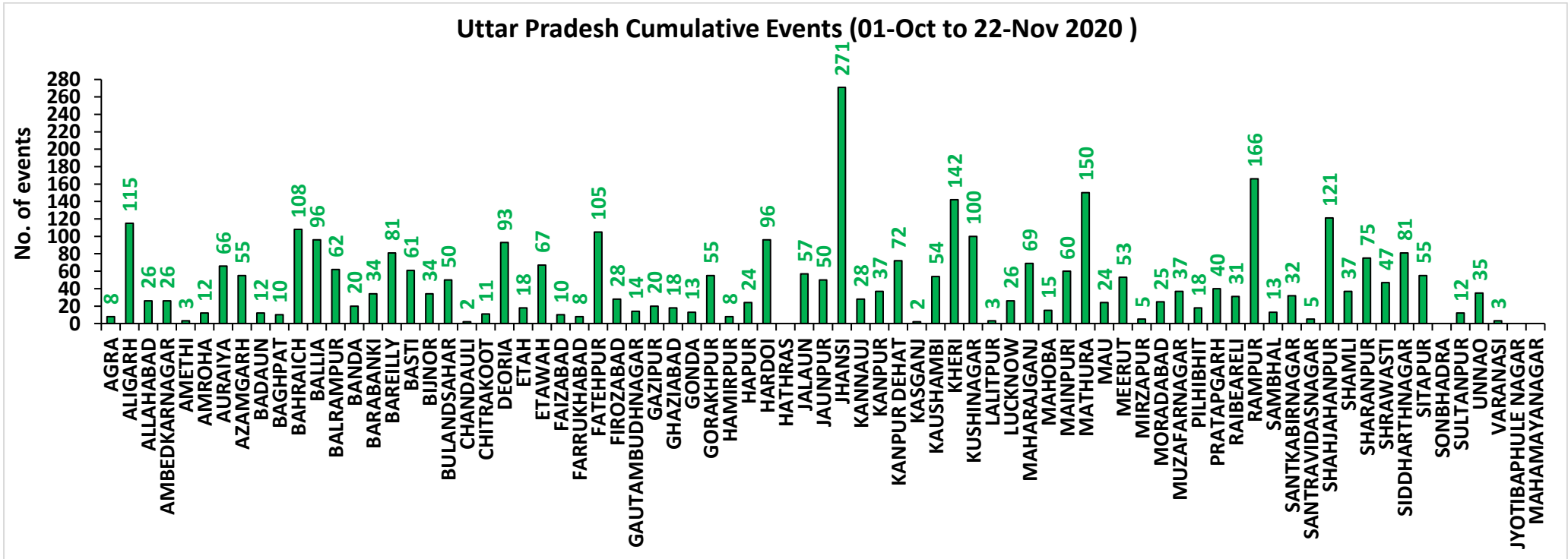
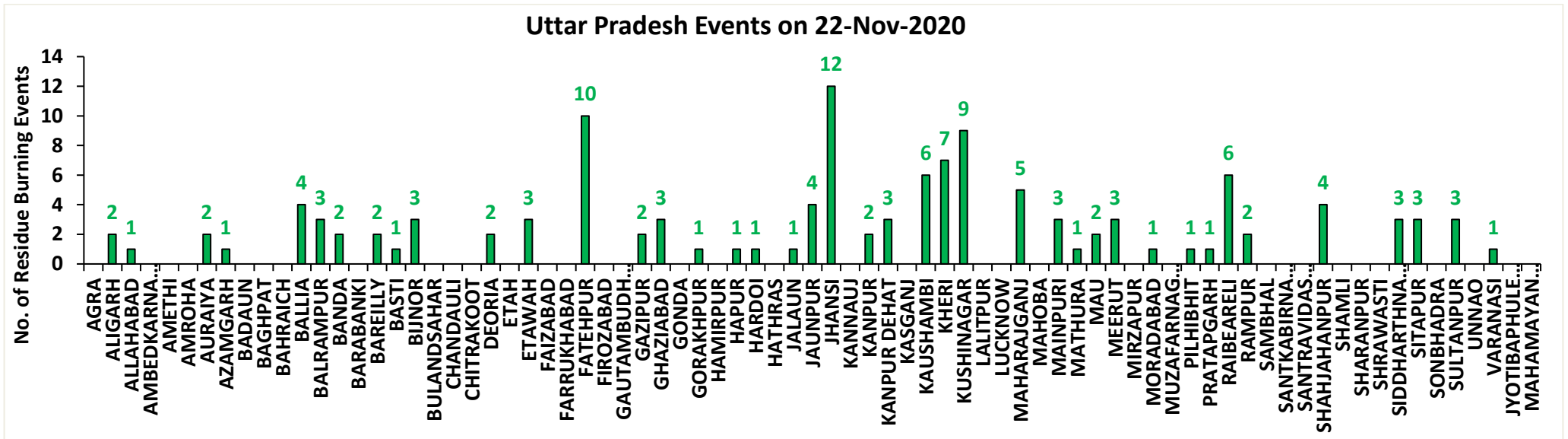
Fire Intensity (W/m²)

- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- >20



<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise number of residue burning events in Uttar Pradesh (01-Oct to 22-Nov 2020)



State-wise and date-wise number of residue burning events detected in 2016, 2017, 2018, 2019 and 2020
(Period: 01-October to 22-November)

Date	Punjab					Haryana					UP					Total				
	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016
01-Oct	129	3	16	54	109	25	1	9	13	46	5	1	11	2	23	159	5	36	69	178
02-Oct	121	20	9	50	51	34	2	23	27	16	10	0	21	8	20	165	22	53	85	87
03-Oct	110	37	4	62	66	07	16	9	40	16	07	3	12	17	16	124	56	25	119	98
04-Oct	177	3	32	103	37	50	30	16	60	7	11	4	5	22	15	238	37	53	185	59
05-Oct	163	16	56	106	95	30	37	30	68	15	15	11	10	20	14	208	64	96	194	124
06-Oct	141	0	87	138	152	42	22	63	75	105	14	8	13	39	6	197	30	163	252	263
07-Oct	166	27	162	105	171	53	16	180	97	126	36	4	69	33	24	255	47	411	235	321
08-Oct	100	59	39	215	166	40	69	40	218	94	23	18	54	76	14	163	146	133	509	274
09-Oct	126	93	75	163	270	30	70	47	148	121	15	17	32	88	22	171	180	154	399	413
10-Oct	238	172	23	164	597	65	157	37	151	242	07	53	21	126	74	310	382	81	441	913
11-Oct	333	78	30	177	652	112	126	78	87	336	22	38	24	74	128	467	242	132	338	1116
12-Oct	362	99	67	342	694	98	154	133	123	338	37	42	22	51	164	497	295	222	516	1196
13-Oct	247	108	62	470	467	64	159	147	207	284	39	33	61	69	102	350	300	270	746	853
14-Oct	616	141	112	582	812	87	133	153	333	328	08	39	57	137	60	711	313	322	1052	1200
15-Oct	487	262	90	943	1215	129	203	110	458	248	13	63	35	237	76	629	528	235	1638	1539
16-Oct	594	168	174	465	1478	100	148	138	186	385	20	77	20	71	125	714	393	332	722	1988
17-Oct	966	250	272	807	2173	167	152	268	244	399	38	53	94	69	261	1171	455	634	1120	2833
18-Oct	850	100	263	970	1065	197	103	255	306	270	64	39	163	108	204	1111	242	681	1384	1539
19-Oct	912	529	254	1591	1762	67	220	208	541	276	35	3	108	128	132	1014	752	570	2260	2170
20-Oct	933	490	496	2653	1175	104	360	141	597	188	31	62	49	255	62	1068	912	686	3505	1425
21-Oct	1415	852	618	1139	1726	153	339	217	233	257	30	185	66	168	152	1598	1376	901	1540	2135
22-Oct	1343	555	656	1356	2837	157	158	134	186	309	35	78	149	151	194	1535	791	939	1693	3340
23-Oct	1267	827	1113	994	2040	133	131	232	155	313	71	48	193	72	331	1471	1006	1538	1221	2684
24-Oct	921	1220	844	1714	1836	86	165	166	244	221	61	79	192	171	152	1068	1464	1202	2129	2209
25-Oct	1515	1463	1247	2104	1813	188	212	182	303	229	55	67	142	175	83	1758	1742	1571	2582	2125
26-Oct	2065	2861	1173	1715	3390	119	366	132	276	434	32	189	33	240	195	2216	3416	1338	2231	4019
27-Oct	2112	2135	2040	2069	2904	111	249	252	224	417	37	145	154	145	255	2260	2529	2446	2438	3576
28-Oct	2926	3007	2864	2318	3493	186	238	330	292	458	79	45	290	99	435	3191	3290	3484	2709	4386
29-Oct	1487	1504	1321	4184	2258	87	0	124	502	278	134	1	243	180	237	1708	1505	1688	4866	2773
30-Oct	4266	3017	2008	3152	1076	155	222	103	307	395	51	19	158	238	175	4472	3258	2269	3697	1646
31-Oct	3616	2325	2715	3743	6132	162	36	229	413	575	47	4	148	321	153	3825	2365	3092	4477	6860
01-Nov	3524	293	4140	2736	4843	187	50	306	250	362	70	105	161	199	223	3781	448	4607	3185	5428
02-Nov	3528	6	3550	1246	4183	139	2	306	145	332	80	33	142	131	345	3747	41	3998	1522	4860

03-Nov	2349	2646	972	2109	3806	104	68	202	240	375	174	56	181	75	409	2627	2770	1355	2424	4490
04-Nov	4965	6001	882	4603	4477	132	383	77	499	146	144	75	183	168	265	5241	6459	1142	5270	4888
05-Nov	4905	4199	2989	2876	4137	108	253	129	625	345	54	124	163	367	125	5067	4576	3281	3868	4607
06-Nov	5235	4642	3071	171	6303	207	243	222	26	322	40	118	130	357	215	5482	5003	3423	554	6840
07-Nov	4464	189	4033	420	8575	184	2	568	46	821	70	33	108	149	244	4718	224	4709	615	9640
08-Nov	3448	462	4450	2256	4129	164	16	313	128	432	151	54	338	43	419	3763	532	5101	2427	4980
09-Nov	1756	2003	2083	675	4857	30	199	96	311	608	124	96	294	107	205	1910	2298	2473	1093	5670
10-Nov	3463	2046	1675	1642	2468	144	151	85	509	484	106	147	125	131	109	3713	2344	1885	2282	3061
11-Nov	2950	783	1364	103	5040	149	78	196	29	716	94	174	45	358	129	3193	1035	1605	490	5885
12-Nov	1729	520	1256	33	1477	113	68	122	3	634	99	210	45	269	129	1941	798	1423	305	2240
13-Nov	2422	10	1563	237	885	160	16	146	7	389	154	79	94	109	338	2736	105	1803	353	1612
14-Nov	339	0	765	1101	692	50	1	189	340	171	234	22	128	95	247	623	23	1082	1536	1110
15-Nov	123	92	1480	5	871	91	29	107	40	107	176	111	146	123	154	390	232	1733	168	1132
16-Nov	9	23	1250	8	911	0	59	204	17	318	13	79	112	218	123	22	161	1566	243	1352
17-Nov	266	332	1132	217	638	15	85	289	12	299	38	265	103	249	130	319	682	1524	478	1067
18-Nov	693	740	1400	2147	568	67	70	356	139	312	58	113	111	180	217	818	923	1867	2466	1097
19-Nov	438	1221	752	2200	168	44	82	159	471	125	112	39	3	122	273	594	1342	914	2793	566
20-Nov	838	1007	385	1857	240	120	74	88	325	204	160	64	243	101	183	1118	1145	716	2283	627
21-Nov	507	151	480	2310	112	104	37	161	378	115	160	84	107	205	86	771	272	748	2893	313
22-Nov	41	21	287	719	99	18	19	122	154	118	127	116	72	281	148	186	156	481	1154	365
Total	78696	49808	58881	64319	102191	5368	6279	8629	11808	15361	3520	3625	5683	7627	8620	87584	59712	73193	83754	126172

**District-wise and date-wise cumulative number of residue burning events detected in 2016, 2017, 2018, 2019 and 2020
(Period: 01-Oct to 22-Nov)**

(a) Punjab

Districts	01-Oct to 22-Nov				
	2016	2017	2018	2019	2020
AMRITSAR	2169	1323	1298	1382	2023
BARNALA	5696	3258	3252	2961	4778
BATHINDA	8828	5416	6312	5279	7977
FARIDKOT	4624	3402	3038	2294	4024
FATEHGARH SAHIB	2460	1622	854	820	1340
FAZILKA	0	0	0	2374	4998
FIROZPUR	13591	9356	9846	4608	7159
GURDASPUR	2215	1568	1139	1465	1955
HOSHIARPUR	900	486	197	309	414
JALANDHAR	4659	2078	1367	1509	1881
KAPURTHALA	3134	1599	746	1351	1654
LUDHIANA	9535	4428	2924	2265	4303
MANSA	5636	4401	4294	3558	5199
MOGA	6392	2486	2712	2144	4609
MUKTSAR	7010	5062	5681	3480	5734
PATHANKOT	0	0	0	6	12
PATIALA	6539	5027	4207	3851	5499
RUPNAGAR	717	326	84	118	200
SANGRUR	11860	8365	7766	6357	10054
SAS NAGAR	115	107	104	150	194
SBS NAGAR	1609	807	374	264	187
TARN TARAN	4502	3202	2686	3263	4502
Total	102191	64319	58881	49808	78696

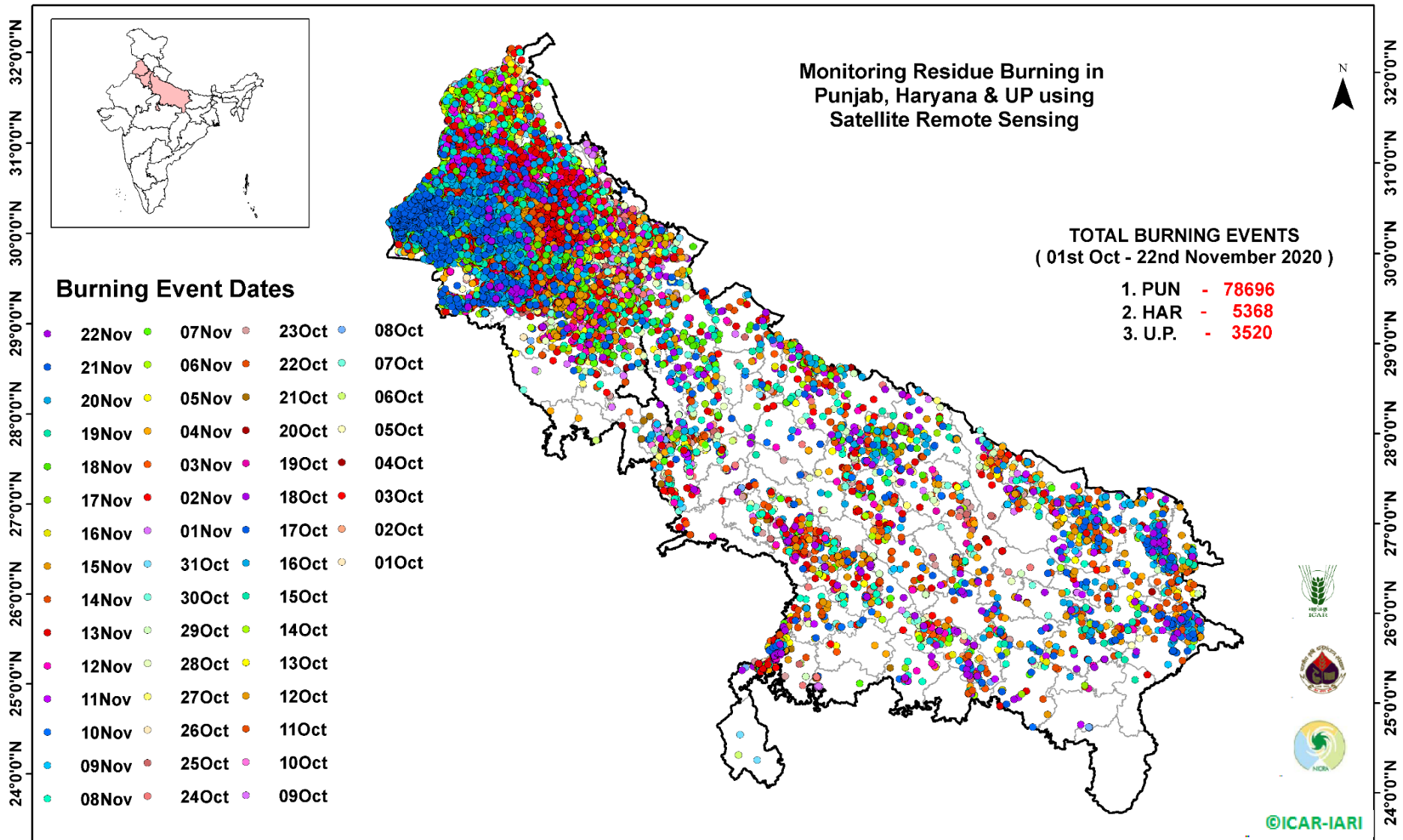
(b) Haryana

Districts	01-Oct to 22-Nov				
	2016	2017	2018	2019	2020
AMBALA	530	495	328	337	471
BHIWANI	80	33	14	11	15
CHARKHI DADRI	0	0	0	0	2
FARIDABAD	286	341	185	10	2
FATEHABAD	4802	3465	2403	1189	1176
GURGAON	0	0	0	4	4
HISAR	390	178	181	115	149
JHAJJAR	30	18	22	4	12
JIND	854	933	856	575	650
KAITHAL	1748	1512	1288	1257	862
KARNAL	1625	1501	846	1080	572
KURUKSHETRA	1078	1144	680	738	460
MAHENDRAGARH	0	0	0	2	1
MEWAT	0	0	0	3	2
PALWAL	0	0	0	188	56
PANCHKULA	0	0	3	21	15
PANIPAT	82	88	57	38	56
REWARI	0	0	0	3	3
ROHTAK	86	65	28	19	63
SIRSA	3446	1661	1517	403	451
SONIPAT	83	64	30	32	106
YAMUNANAGAR	241	310	191	250	240
Total	15361	11808	8629	6279	5368

(C)
Uttar Pradesh

Districts	01-Oct to 22-Nov																
	2016	2017	2018	2019	2020	GAUTAMBUDHNAGAR	23	38	12	19	14	MUZAFARNAGAR	124	142	44	25	37
AGRA	0	0	0	4	8	GAZIPUR	13	14	16	11	20	PILHIBHIT	938	720	428	352	18
ALIGARH	53	80	92	90	115	GHAZIABAD	70	49	35	15	18	PRATAPGARH	39	45	30	15	40
ALLAHABAD	5	11	13	10	26	GONDA	46	34	18	8	13	RAIBEARELI	87	81	41	21	31
AMBEDKARNAGAR	67	46	15	8	26	GORAKHPUR	63	111	118	13	55	RAMPUR	618	625	221	314	166
AMETHI	0	0	0	7	3	HAMIRPUR	0	0	1	37	8	SAMBHAL	0	0	0	9	13
AMROHA	0	0	0	8	12	HAPUR	0	0	0	12	24	SANTKABIRNAGAR	55	61	50	14	32
AURAIYA	230	207	57	48	66	HARDOI	240	198	109	82	96	SANTRAVIDASNAGAR	0	0	0	0	5
AZAMGARH	36	39	26	2	55	HATHRAS	0	0	0	1	0	SHAHJAHANPUR	1133	681	377	351	121
BADAUN	6	7	11	22	12	JALAUN	0	0	0	117	57	SHAMLI	0	0	0	24	37
BAGHPAT	0	0	0	11	10	JAUNPUR	17	24	16	6	50	SHARANPUR	101	120	60	66	75
BAHRAICH	70	40	57	44	108	JHANSI	0	0	2	169	271	SHRAWASTI	32	31	36	21	47
BALLIA	17	32	17	16	96	KANNAUJ	32	15	6	10	28	SIDDHARTHANAGAR	243	181	460	45	81
BALRAMPUR	34	27	40	6	62	KANPUR	14	9	13	9	37	SITAPUR	123	72	40	43	55
BANDA	2	16	8	14	20	KANPUR DEHAT	53	59	20	38	72	SONBHADRA	15	14	11	0	0
BARABANKI	214	163	171	60	34	KASGANJ	0	0	0	5	2	SULTANPUR	67	39	31	15	12
BAREILLY	246	213	114	114	81	KAUSHAMBI	22	43	41	18	54	UNNAO	63	53	39	33	35
BASTI	141	182	113	24	61	KHERI	435	268	198	176	142	VARANASI	1	0	0	0	3
BIJNOR	54	52	13	15	34	KUSHINAGAR	50	132	116	23	100	JYOTIBAPHULE NAGAR	10	13	4	0	0
BULANDSAHAR	29	30	15	27	50	LALITPUR	0	0	0	6	3	MAHAMAYANAGAR	2	2	8	0	0
CHANDAULI	9	9	1	0	2	LUCKNOW	61	30	26	22	26	Total	8620	7627	5683	3625	3520
CHITRAKOOT	0	0	0	6	11	MAHARAJGANJ	631	966	934	230	69						
DEORIA	58	67	53	5	93	MAHOBA	0	0	0	9	15						
ETAH	17	31	25	5	18	MAINPURI	83	89	45	44	60						
ETAWAH	137	113	46	54	67	MATHURA	1451	1083	1048	463	150						
FAIZABAD	13	11	8	6	10	MAU	12	16	11	6	24						
FARRUKHABAD	0	0	0	6	8	MEERUT	77	78	20	27	53						
FATEHPUR	62	49	75	54	105	MIRZAPUR	4	12	6	3	5						
FIROZABAD	23	18	9	16	28	MORADABAD	49	36	13	16	25						

Map of Cumulative Burning Events (01-Oct to 22-Nov 2020)



[\(http://geoportal.icar.gov.in:8080/geoexplorer/composer/\)](http://geoportal.icar.gov.in:8080/geoexplorer/composer/)

Details of residue burning events in Punjab on 22-Nov-2020

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	Time (IST)	Day / Night	Fire Power (W/m ²)
1	BARNALA	BARNALA	AQUA	30.44000	75.35100	13:40:00	D	21.70
2	BARNALA	BARNALA	AQUA	30.46600	75.39900	13:40:00	D	9.50
3	BARNALA	BARNALA	AQUA	30.46700	75.40900	13:40:00	D	18.50
4	BARNALA	TAPPA	S-NPP	30.27525	75.55574	13:54:00	D	1.60
5	BATHINDA	BATHINDA	S-NPP	30.22125	75.16208	13:54:00	D	3.50
6	BATHINDA	BATHINDA	S-NPP	30.22807	75.14851	13:54:00	D	2.30
7	BATHINDA	RAMPURA PHUL	S-NPP	30.19312	75.20345	13:54:00	D	2.90
8	BATHINDA	RAMPURA PHUL	S-NPP	30.19358	75.20760	13:54:00	D	4.00
9	BATHINDA	RAMPURA PHUL	S-NPP	30.19665	75.20343	13:54:00	D	7.50
10	BATHINDA	RAMPURA PHUL	S-NPP	30.19720	75.20288	13:54:00	D	2.90
11	BATHINDA	RAMPURA PHUL	S-NPP	30.19766	75.20703	13:54:00	D	4.00
12	BATHINDA	RAMPURA PHUL	S-NPP	30.45545	75.16055	13:54:00	D	5.50
13	BATHINDA	RAMPURA PHUL	S-NPP	30.45954	75.15997	13:54:00	D	5.60
14	BATHINDA	RAMPURA PHUL	AQUA	30.55000	75.16200	13:40:00	D	3.90
15	FATEHGARH SAHIB	FATEHGARH SAHIB	S-NPP	30.47294	76.41856	13:54:00	D	6.20
16	FIROZPUR	ZIRA	AQUA	30.99900	75.26500	13:40:00	D	16.50
17	FIROZPUR	ZIRA	AQUA	31.00100	75.27500	13:40:00	D	10.30
18	JALANDHAR	PHILLAUR	S-NPP	31.06826	75.63310	13:54:00	D	4.00
19	LUDHIANA	JAGRAON	AQUA	30.67300	75.43000	13:40:00	D	6.20
20	LUDHIANA	JAGRAON	AQUA	30.89600	75.44300	13:40:00	D	6.60
21	LUDHIANA	JAGRAON	S-NPP	30.90149	75.63043	13:54:00	D	3.00
22	LUDHIANA	KHANNA	AQUA	30.74500	76.24500	13:40:00	D	4.10
23	LUDHIANA	LUDHIANA WEST	AQUA	30.78500	75.75400	13:40:00	D	8.50
24	LUDHIANA	LUDHIANA WEST	S-NPP	30.79566	75.72598	13:54:00	D	1.50
25	LUDHIANA	LUDHIANA WEST	AQUA	30.82300	75.69700	13:40:00	D	9.50
26	LUDHIANA	LUDHIANA WEST	AQUA	30.84000	75.61900	13:40:00	D	9.40
27	LUDHIANA	LUDHIANA WEST	AQUA	30.84300	75.64000	13:40:00	D	6.60
28	MANSA	SARDULGARH	S-NPP	29.56120	75.28898	13:54:00	D	8.60
29	MANSA	SARDULGARH	AQUA	29.67700	75.30700	13:40:00	D	4.50
30	MANSA	SARDULGARH	S-NPP	29.68634	75.31368	13:54:00	D	23.70
31	MANSA	SARDULGARH	S-NPP	29.69759	75.34161	13:54:00	D	5.20

32	MOGA	MOGA	AQUA	30.76500	75.23900	13:40:00	D	7.10
33	PATIALA	NABHA	S-NPP	30.47264	76.28004	13:54:00	D	4.20
34	PATIALA	PATIALA	S-NPP	30.21678	76.47100	13:54:00	D	3.50
35	SANGRUR	MALERKOTLA	S-NPP	30.66954	75.86124	13:54:00	D	2.30
36	SANGRUR	SANGRUR	AQUA	30.21800	75.65900	13:40:00	D	7.10
37	SANGRUR	SANGRUR	AQUA	30.21900	75.66900	13:40:00	D	7.80
38	SANGRUR	SUNAM	AQUA	30.06000	75.71300	13:40:00	D	11.90
39	SANGRUR	SUNAM	S-NPP	30.13748	75.67086	13:54:00	D	11.80
40	SANGRUR	SUNAM	S-NPP	30.13777	75.67133	13:54:00	D	12.50
41	SANGRUR	SUNAM	AQUA	30.14200	76.01800	13:40:00	D	6.40

Details of residue burning events in Haryana on 22-Nov-2020

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	Time (IST)	Day / Night	Fire Power (W/m ²)
1	AMBALA	AMBALA	S-NPP	30.36905	76.72495	13:54:00	D	6.40
2	AMBALA	AMBALA	AQUA	30.40800	76.87300	13:40:00	D	5.00
3	FATEHABAD	FATEHABAD	AQUA	29.54900	75.55800	13:40:00	D	12.40
4	FATEHABAD	FATEHABAD	S-NPP	29.63937	75.72048	13:54:00	D	12.20
5	FATEHABAD	RATIA	AQUA	29.61700	75.52800	13:40:00	D	9.20
6	FATEHABAD	RATIA	AQUA	29.62800	75.53600	13:40:00	D	8.10
7	FATEHABAD	RATIA	AQUA	29.63800	75.48100	13:40:00	D	10.00
8	FATEHABAD	RATIA	S-NPP	29.64054	75.61066	13:54:00	D	6.90
9	FATEHABAD	RATIA	S-NPP	29.65354	75.49648	13:54:00	D	24.20
10	FATEHABAD	RATIA	AQUA	29.68500	75.54600	13:40:00	D	33.00
11	HISAR	HANSI	S-NPP	29.26477	75.89111	13:54:00	D	3.10
12	HISAR	NARNAUND	S-NPP	29.25440	76.20611	13:54:00	D	4.20
13	ROHTAK	MAHAM	S-NPP	28.91530	76.27344	13:54:00	D	2.90
14	ROHTAK	ROHTAK	S-NPP	28.94438	76.66776	02:36:00	N	2.20
15	ROHTAK	ROHTAK	S-NPP	29.08241	76.48383	13:54:00	D	8.70
16	ROHTAK	ROHTAK	S-NPP	29.08289	76.48856	13:54:00	D	8.70
17	SIRSA	SIRSA	S-NPP	29.45789	74.93860	02:36:00	N	1.20
18	SIRSA	SIRSA	AQUA	29.69900	75.20600	13:40:00	D	14.30

Details of residue burning events in Uttar Pradesh on 22-Nov-2020

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	Time (IST)	Day / Night	Fire Power (W/m ²)
1	ALIGARH	ATRAULI	AQUA	28.01100	78.53900	13:40:00	D	8.10
2	ALIGARH	ATRAULI	S-NPP	28.01242	78.54058	13:54:00	D	5.00
3	ALLAHABAD	BARA	S-NPP	25.15681	81.80310	01:00:00	N	0.60
4	AURAIYA	BIDHUNA	S-NPP	26.64404	79.47598	01:00:00	N	1.30
5	AURAIYA	BIDHUNA	S-NPP	26.88568	79.35301	13:54:00	D	1.30
6	AZAMGARH	SAGRI	NOAA-19	26.22055	83.31044	17:22:00	N	7.00
7	BALLIA	BELTHARA ROAD	S-NPP	26.01484	83.87882	12:12:00	D	6.30
8	BALLIA	RASRA	S-NPP	25.85789	83.82646	13:54:00	D	6.20
9	BALLIA	RASRA	S-NPP	25.85883	83.82837	13:54:00	D	4.80
10	BALLIA	SIKANDARPUR	S-NPP	25.98752	84.09457	12:12:00	D	3.70
11	BALRAMPUR	BALRAMPUR	S-NPP	27.46937	82.08088	02:36:00	N	0.50
12	BALRAMPUR	UTRAULA	S-NPP	27.33687	82.37899	12:12:00	D	8.30
13	BALRAMPUR	UTRAULA	S-NPP	27.34042	82.37412	12:12:00	D	2.90
14	BANDA	ATARRA	S-NPP	25.41101	80.46750	13:54:00	D	3.10
15	BANDA	BABERU	S-NPP	25.64400	80.79651	13:54:00	D	2.70
16	BAREILLY	BAHERI	S-NPP	28.73500	79.62098	02:36:00	N	0.50
17	BAREILLY	FARIDPUR	AQUA	28.11800	79.55400	13:40:00	D	7.40
18	BASTI	HARRAIYA	S-NPP	26.72727	82.41865	01:00:00	N	0.50
19	BIJNOR	AFZALGARH	AQUA	29.38000	78.68000	13:40:00	D	5.20
20	BIJNOR	AFZALGARH	S-NPP	29.46883	78.71645	13:54:00	D	2.80
21	BIJNOR	BIJNOR	AQUA	29.47600	78.14900	13:40:00	D	6.40
22	DEORIA	DEORIA	S-NPP	26.58908	83.81602	12:12:00	D	3.30
23	DEORIA	DEORIA	S-NPP	26.65506	83.66641	12:12:00	D	1.90
24	ETAWAH	BHARTHNA	AQUA	26.75800	79.11500	13:40:00	D	5.20
25	ETAWAH	SAIFAI	AQUA	26.92700	79.00800	13:40:00	D	4.60
26	ETAWAH	SAIFAI	AQUA	26.92900	79.01900	13:40:00	D	9.30
27	FATEHPUR	BINKI	S-NPP	26.09723	80.58884	13:54:00	D	4.60
28	FATEHPUR	BINKI	S-NPP	26.09755	80.59264	13:54:00	D	6.40
29	FATEHPUR	FATEHPUR	S-NPP	25.77040	80.85597	13:54:00	D	3.80
30	FATEHPUR	FATEHPUR	AQUA	25.92800	80.88200	13:40:00	D	17.60

31	FATEHPUR	FATEHPUR	S-NPP	25.92845	80.88846	13:54:00	D	2.40
32	FATEHPUR	FATEHPUR	AQUA	25.92900	80.89500	13:40:00	D	8.10
33	FATEHPUR	FATEHPUR	S-NPP	25.98428	80.69673	13:54:00	D	7.20
34	FATEHPUR	FATEHPUR	S-NPP	25.98460	80.70059	13:54:00	D	7.20
35	FATEHPUR	KHAGA	NOAA-19	25.49651	81.22659	17:22:00	N	7.60
36	FATEHPUR	KHAGA	AQUA	25.91700	81.11800	13:40:00	D	10.10
37	GAZIPUR	JAKHANIA	S-NPP	25.66531	83.31715	12:12:00	D	2.90
38	GAZIPUR	MUHAMMADBAD	NOAA-19	25.80284	83.78117	17:22:00	N	9.00
39	GHAZIABAD	MODINAGAR	S-NPP	28.74242	77.68343	13:54:00	D	2.60
40	GHAZIABAD	MODINAGAR	S-NPP	28.84371	77.60636	13:54:00	D	5.80
41	GHAZIABAD	MODINAGAR	S-NPP	28.84620	77.60918	13:54:00	D	4.50
42	GORAKHPUR	GORAKHPUR	NOAA-19	26.76853	83.54823	17:22:00	N	7.00
43	HAPUR	GARHMUKTESAR	S-NPP	28.77213	77.94077	13:54:00	D	6.40
44	HARDOI	HARDOI	AQUA	27.20300	80.14700	13:40:00	D	6.30
45	JALAUN	KONCH	AQUA	25.96700	78.97300	13:40:00	D	12.70
46	JAUNPUR	KIRAKAT	S-NPP	25.58566	82.92026	12:12:00	D	3.80
47	JAUNPUR	KIRAKAT	S-NPP	25.58784	82.92301	12:12:00	D	3.00
48	JAUNPUR	MARIAHU	S-NPP	25.48695	82.57770	13:54:00	D	4.10
49	JAUNPUR	SHHGANJ	S-NPP	26.14221	82.52650	13:54:00	D	2.60
50	JHANSI	MOTH	AQUA	25.64800	78.86100	13:40:00	D	6.80
51	JHANSI	MOTH	S-NPP	25.65999	78.93102	13:54:00	D	8.60
52	JHANSI	MOTH	S-NPP	25.66979	78.89806	13:54:00	D	3.60
53	JHANSI	MOTH	S-NPP	25.67164	78.90002	13:54:00	D	6.20
54	JHANSI	MOTH	AQUA	25.67200	78.89900	13:40:00	D	8.00
55	JHANSI	MOTH	S-NPP	25.67627	78.91517	13:54:00	D	4.40
56	JHANSI	MOTH	S-NPP	25.67650	78.89948	13:54:00	D	6.20
57	JHANSI	MOTH	S-NPP	25.67682	78.92107	13:54:00	D	4.40
58	JHANSI	MOTH	S-NPP	25.67826	78.91711	13:54:00	D	5.10
59	JHANSI	MOTH	S-NPP	25.67900	78.94467	13:54:00	D	3.90
60	JHANSI	MOTH	AQUA	25.77800	78.92900	13:40:00	D	5.50
61	JHANSI	MOTH	S-NPP	25.93437	78.98985	13:54:00	D	3.20
62	KANPUR	BILHAUR	S-NPP	26.64114	80.04097	13:54:00	D	1.80
63	KANPUR	BILHAUR	S-NPP	26.66812	80.04552	13:54:00	D	1.20

64	KANPUR DEHAT	AKBARPUR	AQUA	26.31000	79.99900	13:40:00	D	11.60
65	KANPUR DEHAT	RASULABAD	AQUA	26.58500	79.92700	13:40:00	D	7.00
66	KANPUR DEHAT	SIKANDRA	AQUA	26.43800	79.63500	13:40:00	D	4.60
67	KAUSHAMBI	MANJHANPUR	AQUA	25.42400	81.35700	13:40:00	D	6.00
68	KAUSHAMBI	MANJHANPUR	S-NPP	25.42653	81.25995	13:54:00	D	2.40
69	KAUSHAMBI	MANJHANPUR	AQUA	25.44100	81.23100	13:40:00	D	8.50
70	KAUSHAMBI	SIRATHU	S-NPP	25.56334	81.25139	13:54:00	D	2.80
71	KAUSHAMBI	SIRATHU	S-NPP	25.56565	81.25175	13:54:00	D	2.50
72	KAUSHAMBI	SIRATHU	S-NPP	25.76510	81.31935	12:12:00	D	5.10
73	KHERI	GOLA	S-NPP	28.11238	80.34969	13:54:00	D	3.20
74	KHERI	GOLA	S-NPP	28.11316	80.34749	13:54:00	D	2.20
75	KHERI	MOHMADI	S-NPP	27.78386	80.06535	02:36:00	N	0.50
76	KHERI	PALIA KALAN	AQUA	28.32600	80.53300	13:40:00	D	7.90
77	KHERI	PALIA KALAN	AQUA	28.39000	80.65600	13:40:00	D	11.80
78	KHERI	PALIA KALAN	S-NPP	28.56589	80.44761	02:36:00	N	1.00
79	KHERI	PALIA KALAN	S-NPP	28.56699	80.44624	02:36:00	N	1.00
80	KUSHINAGAR	HATA	S-NPP	26.77045	83.70904	02:36:00	N	1.00
81	KUSHINAGAR	HATA	NOAA-19	26.84937	83.68897	17:22:00	N	9.00
82	KUSHINAGAR	HATA	S-NPP	26.86131	83.59056	01:00:00	N	0.40
83	KUSHINAGAR	HATA	S-NPP	26.86970	83.56858	12:12:00	D	5.70
84	KUSHINAGAR	HATA	S-NPP	26.87418	83.56598	12:12:00	D	1.90
85	KUSHINAGAR	HATA	NOAA-19	26.87632	83.64529	17:22:00	N	6.00
86	KUSHINAGAR	HATA	NOAA-19	26.90327	83.69867	17:22:00	N	7.00
87	KUSHINAGAR	TAMKUHI RAJ	S-NPP	26.70766	84.03337	12:12:00	D	5.20
88	KUSHINAGAR	TAMKUHI RAJ	S-NPP	26.70871	84.03774	12:12:00	D	7.30
89	MAHARAJGANJ	MAHARAJGANJ	S-NPP	26.97946	83.56375	01:00:00	N	0.50
90	MAHARAJGANJ	MAHARAJGANJ	S-NPP	26.99898	83.69617	01:00:00	N	0.60
91	MAHARAJGANJ	MAHARAJGANJ	S-NPP	27.00014	83.69581	01:00:00	N	0.60
92	MAHARAJGANJ	MAHARAJGANJ	S-NPP	27.06779	83.64056	01:00:00	N	0.30
93	MAHARAJGANJ	NICHLAUL	S-NPP	27.35598	83.72490	02:36:00	N	1.10
94	MAINPURI	BHOGAON	S-NPP	27.09401	79.10649	13:54:00	D	2.40
95	MAINPURI	KARHAL	S-NPP	27.06662	78.97273	02:36:00	N	0.60
96	MAINPURI	KARHAL	S-NPP	27.06830	78.97148	02:36:00	N	0.40

97	MATHURA	MAHABAN	S-NPP	27.49138	77.84104	02:36:00	N	0.70
98	MAU	GHOSI	S-NPP	26.14921	83.41883	12:12:00	D	2.50
99	MAU	MAU	S-NPP	25.97098	83.69738	12:12:00	D	4.30
100	MEERUT	MAWANA	S-NPP	29.20539	77.98588	13:54:00	D	4.00
101	MEERUT	MAWANA	S-NPP	29.20555	77.98798	13:54:00	D	5.60
102	MEERUT	MEERUT	AQUA	29.01200	77.55500	13:40:00	D	4.50
103	MORADABAD	MORADABAD	AQUA	29.10600	78.90700	13:40:00	D	4.90
104	PILHIBHIT	PURANPUR	S-NPP	28.62131	80.22936	00:54:00	N	0.80
105	PRATAPGARH	PATTI	S-NPP	25.94907	82.20722	12:12:00	D	2.70
106	RAIBEARELI	MAHARAJGANG	S-NPP	26.56449	81.15905	13:54:00	D	4.70
107	RAIBEARELI	RAEBARELI	S-NPP	26.33444	81.19671	13:54:00	D	3.50
108	RAIBEARELI	RAEBARELI	AQUA	26.36900	81.17500	13:40:00	D	6.70
109	RAIBEARELI	SALON	S-NPP	26.14750	81.42168	13:54:00	D	6.40
110	RAIBEARELI	SALON	METOP-2	26.16666	81.56824	19:38:00	N	6.00
111	RAIBEARELI	TILOI	S-NPP	26.47039	81.37761	13:54:00	D	6.10
112	RAMPUR	SUAR	S-NPP	28.96817	79.05877	13:54:00	D	1.30
113	RAMPUR	SUAR	S-NPP	29.08338	79.14294	13:54:00	D	1.70
114	SHAHJAHANPUR	SHAHJAHANPUR	S-NPP	27.82433	80.00143	02:36:00	N	1.20
115	SHAHJAHANPUR	SHAHJAHANPUR	S-NPP	27.82442	79.99977	02:36:00	N	1.40
116	SHAHJAHANPUR	TILHAR	S-NPP	28.04458	79.91380	13:54:00	D	2.30
117	SHAHJAHANPUR	TILHAR	S-NPP	28.15991	79.85703	02:36:00	N	0.40
118	SIDDHARTHANAGAR	BANSI	S-NPP	27.14323	82.86597	13:54:00	D	2.40
119	SIDDHARTHANAGAR	ITWA	S-NPP	27.35524	82.57061	13:54:00	D	6.50
120	SIDDHARTHANAGAR	ITWA	S-NPP	27.35671	82.57210	13:54:00	D	5.90
121	SITAPUR	MISRIK	S-NPP	27.59215	80.42035	13:54:00	D	2.40
122	SITAPUR	MISRIK	S-NPP	27.70639	80.54128	13:54:00	D	7.20
123	SITAPUR	MISRIK	S-NPP	27.70671	80.54126	13:54:00	D	7.10
124	SULTANPUR	JAISINGHPUR	TERRA	26.34500	82.20200	10:25:00	D	8.20
125	SULTANPUR	SULTANPUR	S-NPP	26.28615	81.87320	13:54:00	D	2.30
126	SULTANPUR	SULTANPUR	AQUA	26.29100	81.86700	13:40:00	D	9.60
127	VARANASI	PINDRA	S-NPP	25.50002	82.79884	01:00:00	N	0.30

The study used images received from following Satellites at IARI Satellite Ground Station

S. No.	Satellite Name	Sensor	Resolution (meter)	Day / Night Passes
1.	Suomi NPP	VIIRS	375 / 750	Both
2.	Terra	MODIS	1000	Both
3.	Aqua	MODIS	1000	Both
4.	NOAA – 18	AVHRR	1000	Night
5.	NOAA – 19	AVHRR	1000	Night
6.	Metop - 1	AVHRR	1000	Night
7.	Metop - 2	AVHRR	1000	Night

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Softcopy of this report and latest statistics can be seen on <http://creams.iari.res.in>

GIS Maps of fire events can be visualized online on ICAR KRISHI Geoportal website: <http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

(Part of KRISHI Portal: <https://krishi.icar.gov.in> initiative)
