



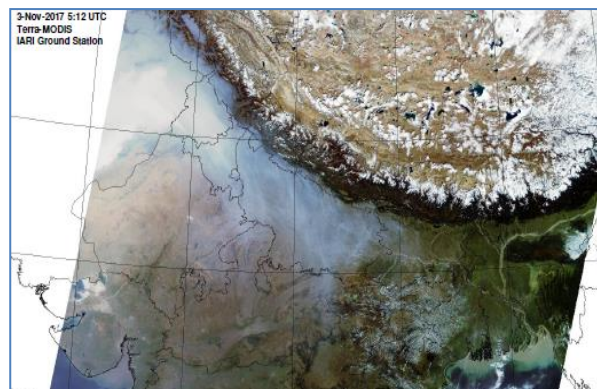
**Bulletin  
No. 55**

**Events Date:  
24-Nov-2020**

**Issued on:  
25-Nov-2020**



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



**Prepared by:**

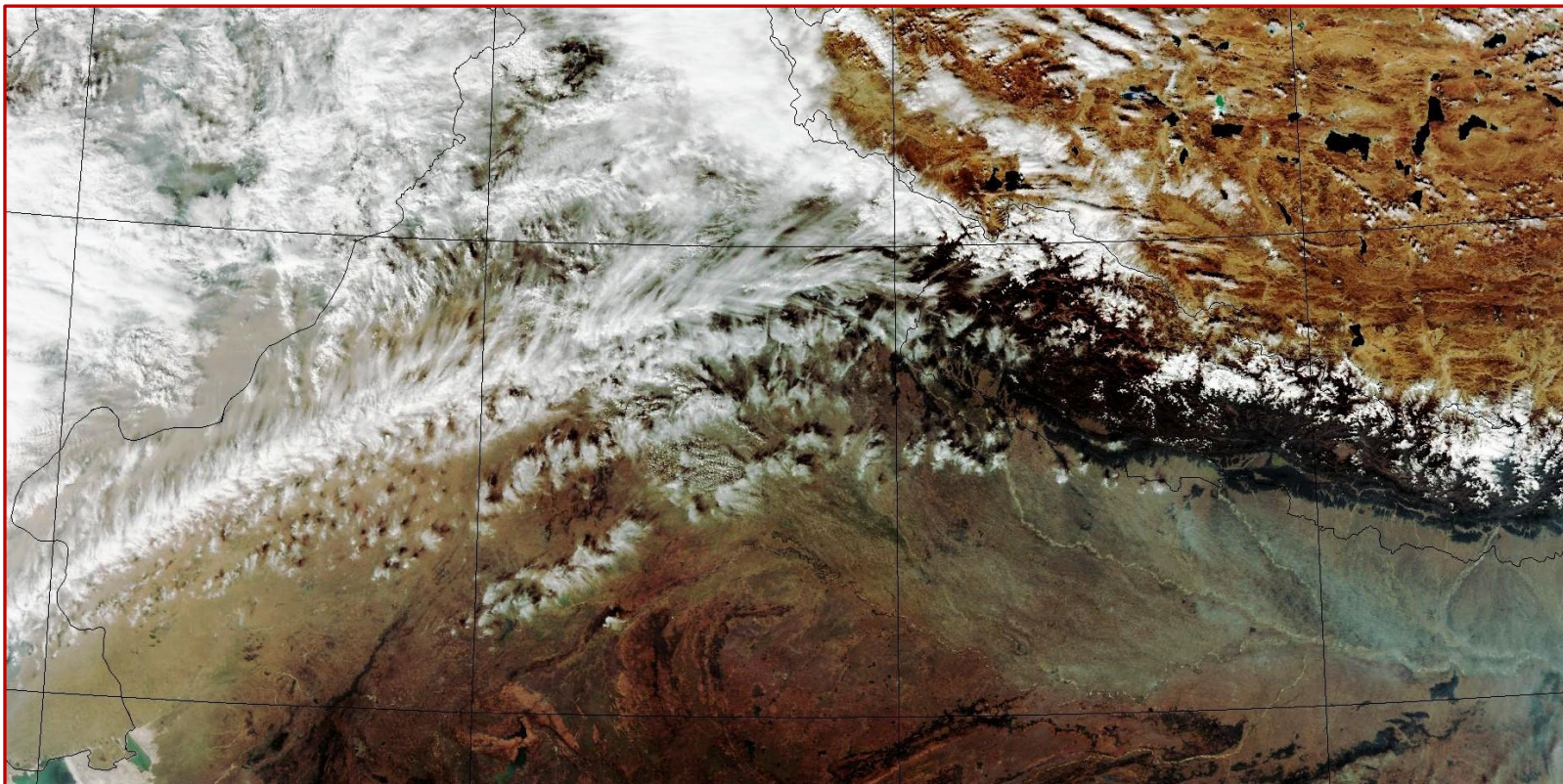
**Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory,  
Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012**

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

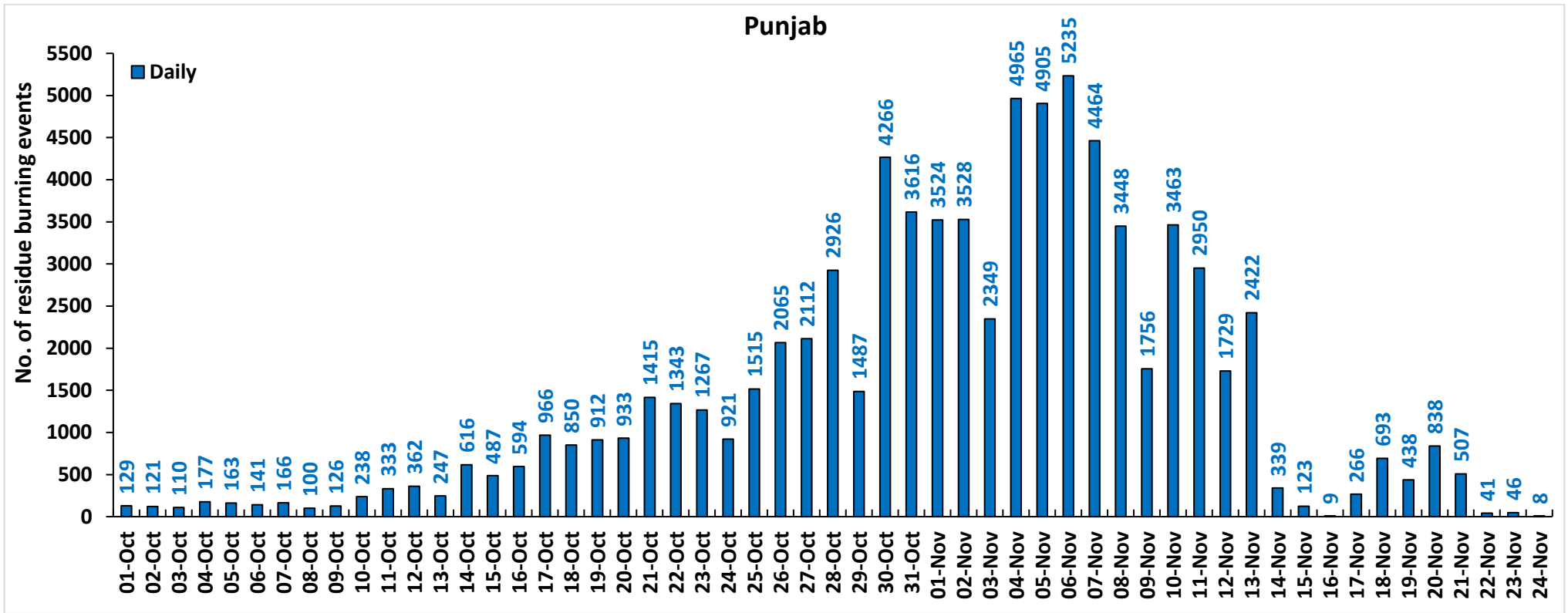
### Highlights for 24-November-2020

- Satellites detected **176** residue burning events in the three study States on **24-Nov-2020**.
- The state wise events detected on **24-Nov-2020** were **08** in Punjab, **24** in Haryana and **144** in UP.
- The number of events has decreased from **197** on **23-Nov-2020** to **176** on **24-Nov-2020** in the three states.
- The states of Punjab and Haryana were covered with clouds which prevented fire event detection by satellites.
- Ferozpur in Punjab, Sirsa in Haryana and Jhansi in UP reported the highest number of events on **24-Nov-2020**.
- Total **87957** burning events were detected in the three States between **01-Oct-2020** and **24-Nov-2020**, which are distributed as **78750**, **5454** and **3753** in Punjab, Haryana and UP, respectively.
- In Haryana and UP, the cumulative number of burning events between **01-Oct** and **24-Nov 2020** were lower than in **2019**, while in Punjab the cumulative number of events were significantly more than in **2019**.

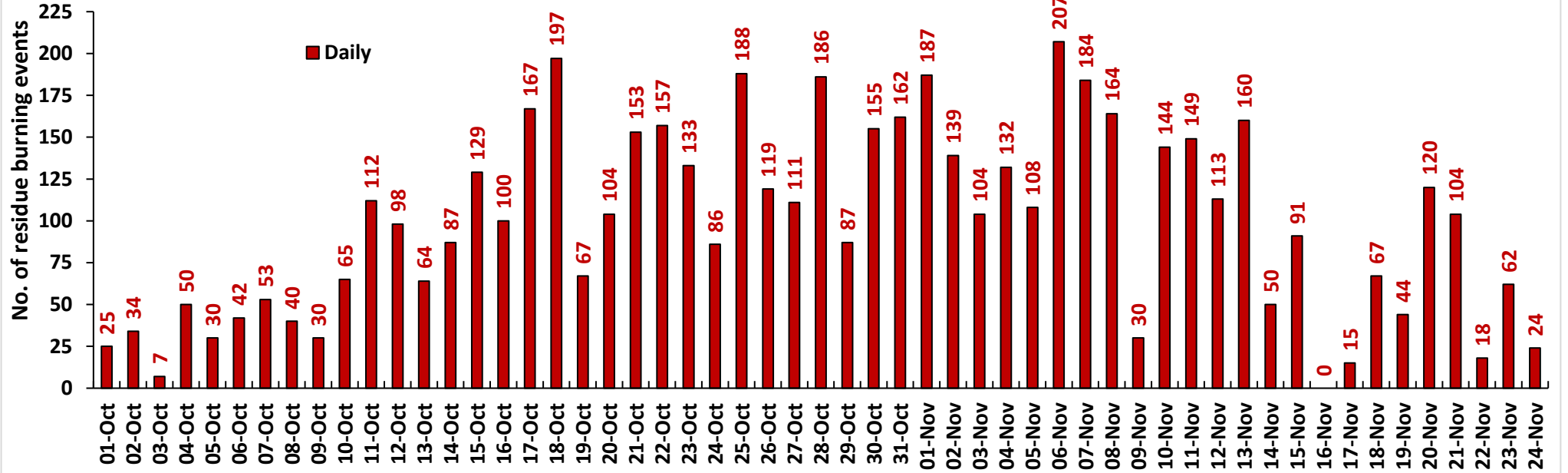
SNPP (VIIRS) Satellite image of North India Acquired on 24-Nov-2020 at 13:18 IST by IARI Ground Station



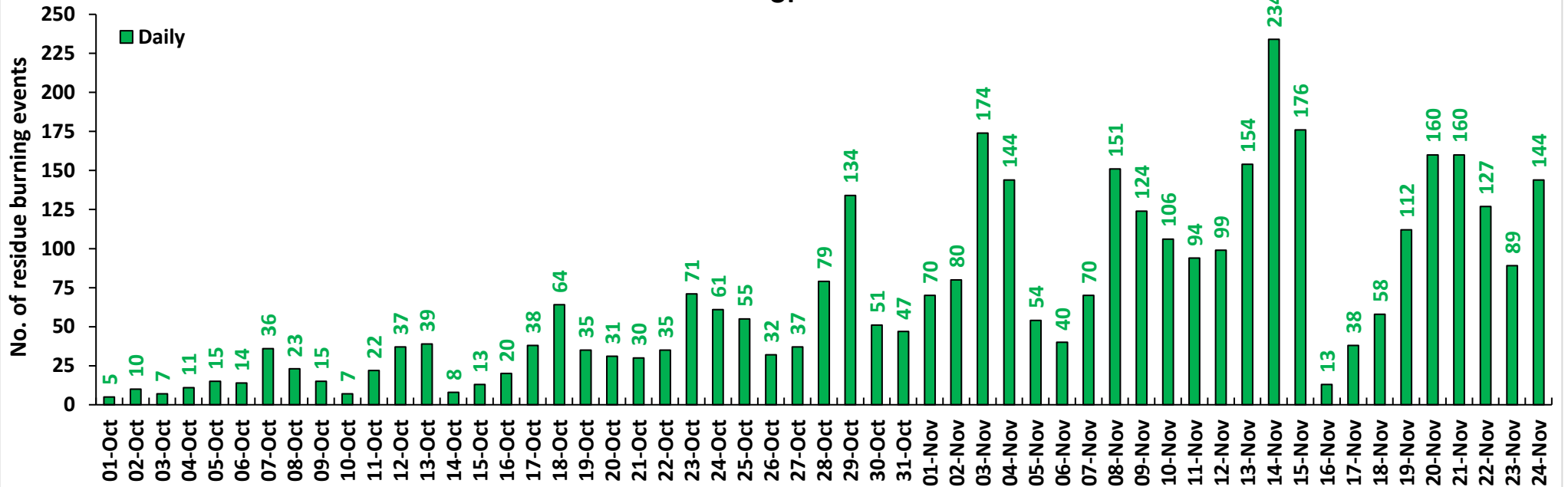
**Temporal distribution of residue burning events for the three study States in 2020.**



### Haryana



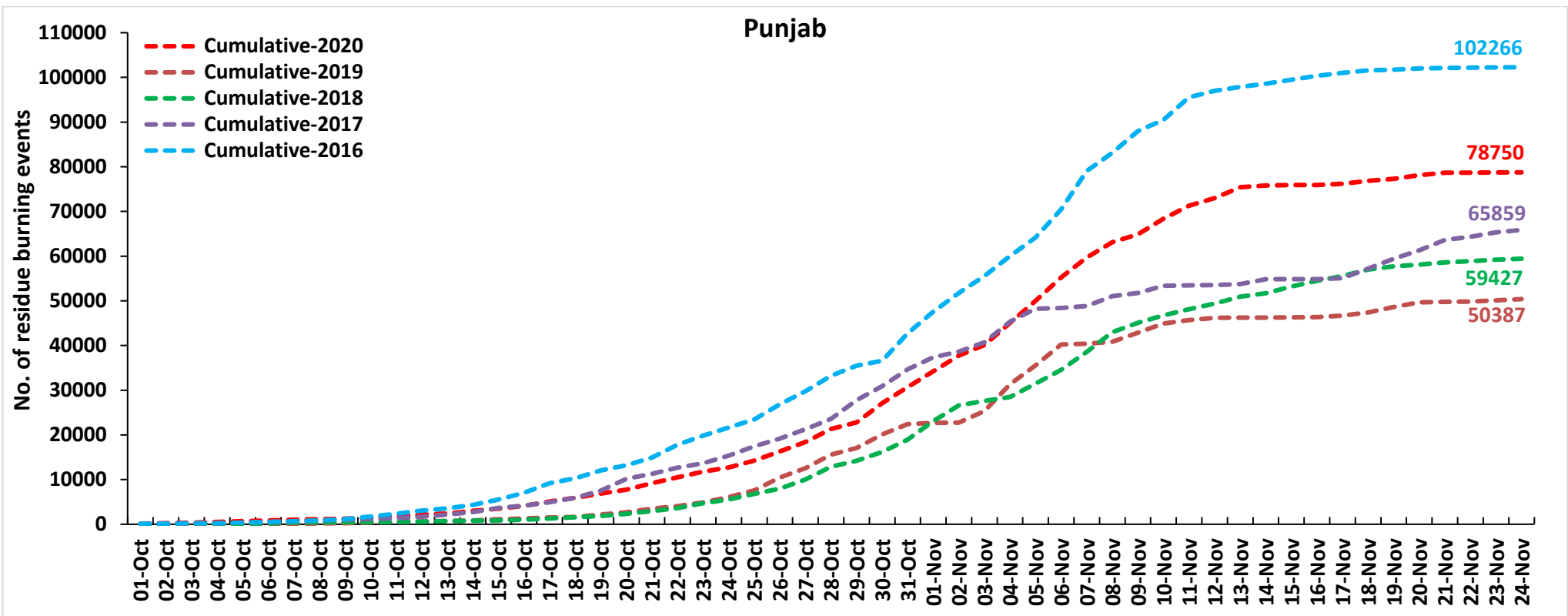
### UP



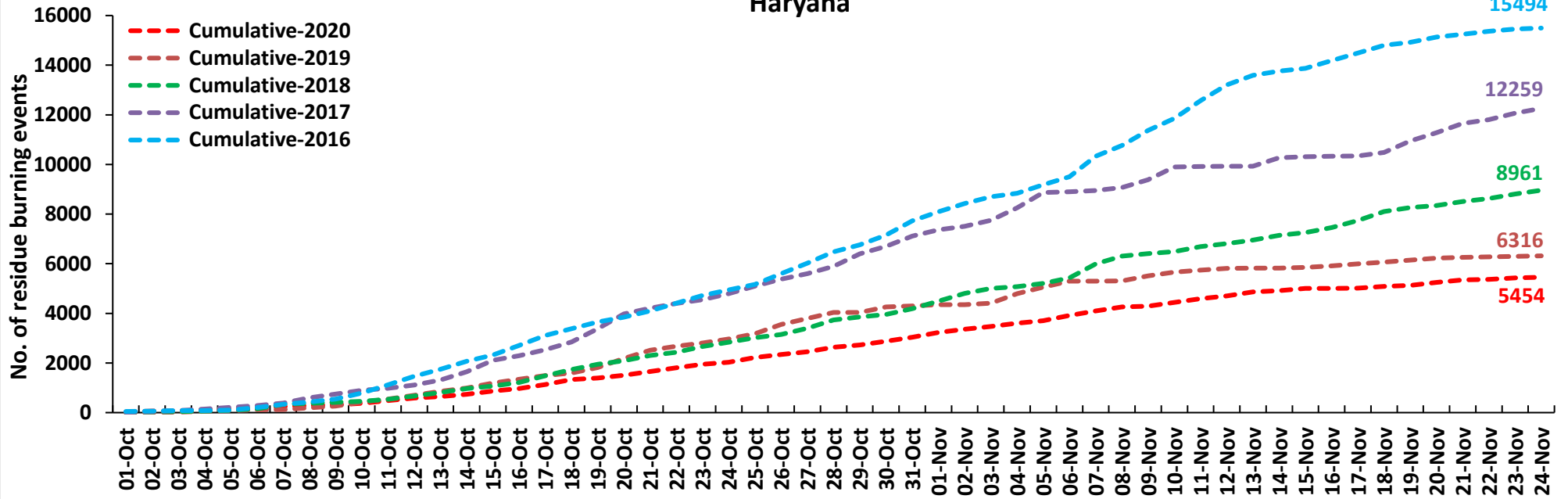
**Comparison of residue burning events in current year (2020) with previous years (2019, 2018, 2017 & 2016) for the three study States**

**(01-Oct to 24-Nov)**

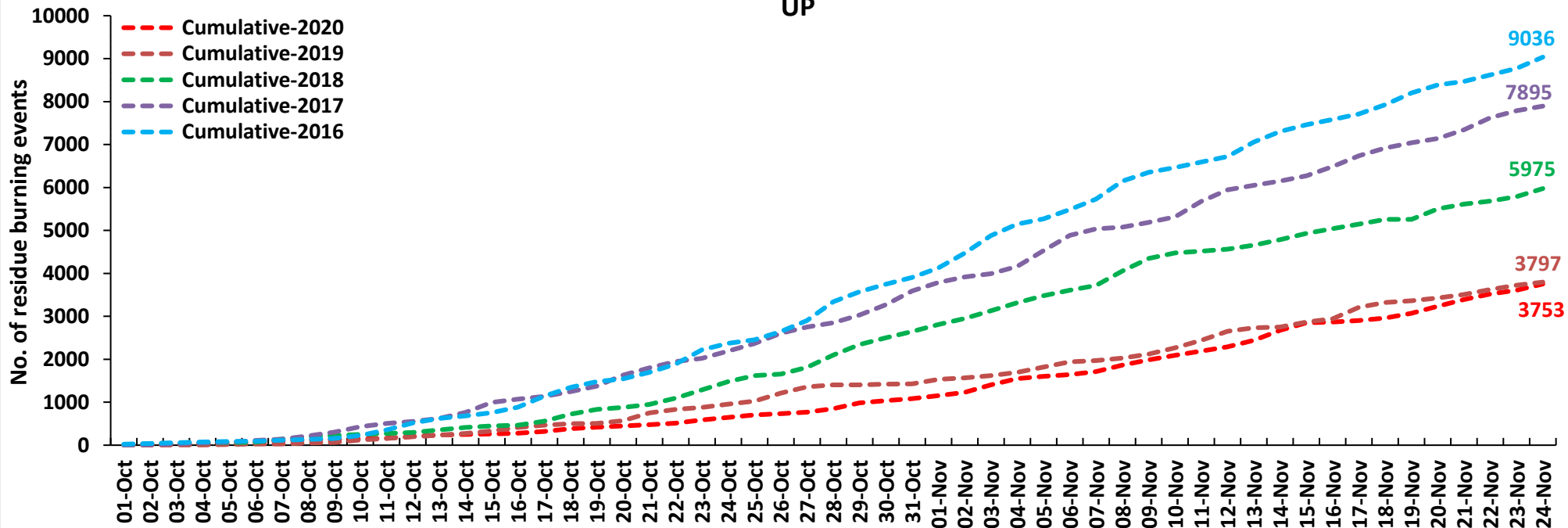
**Punjab**



### Haryana

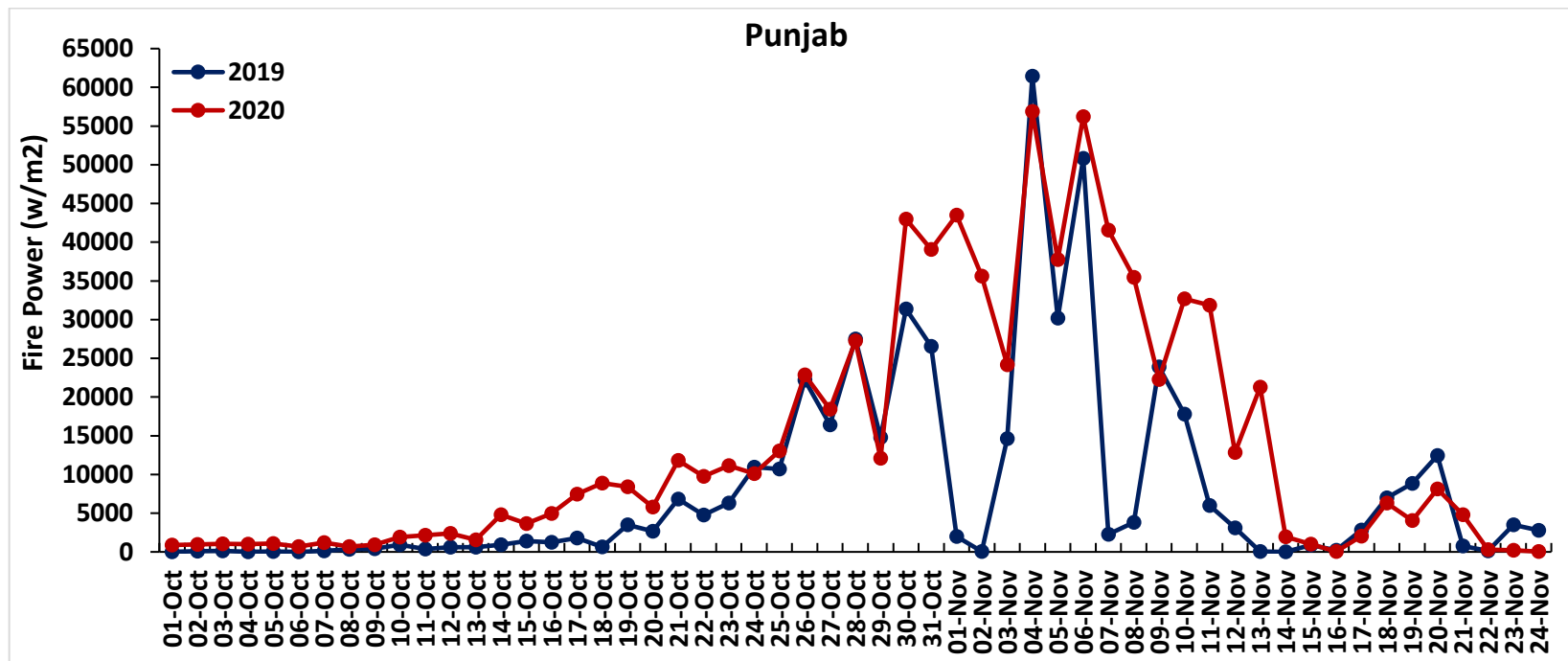


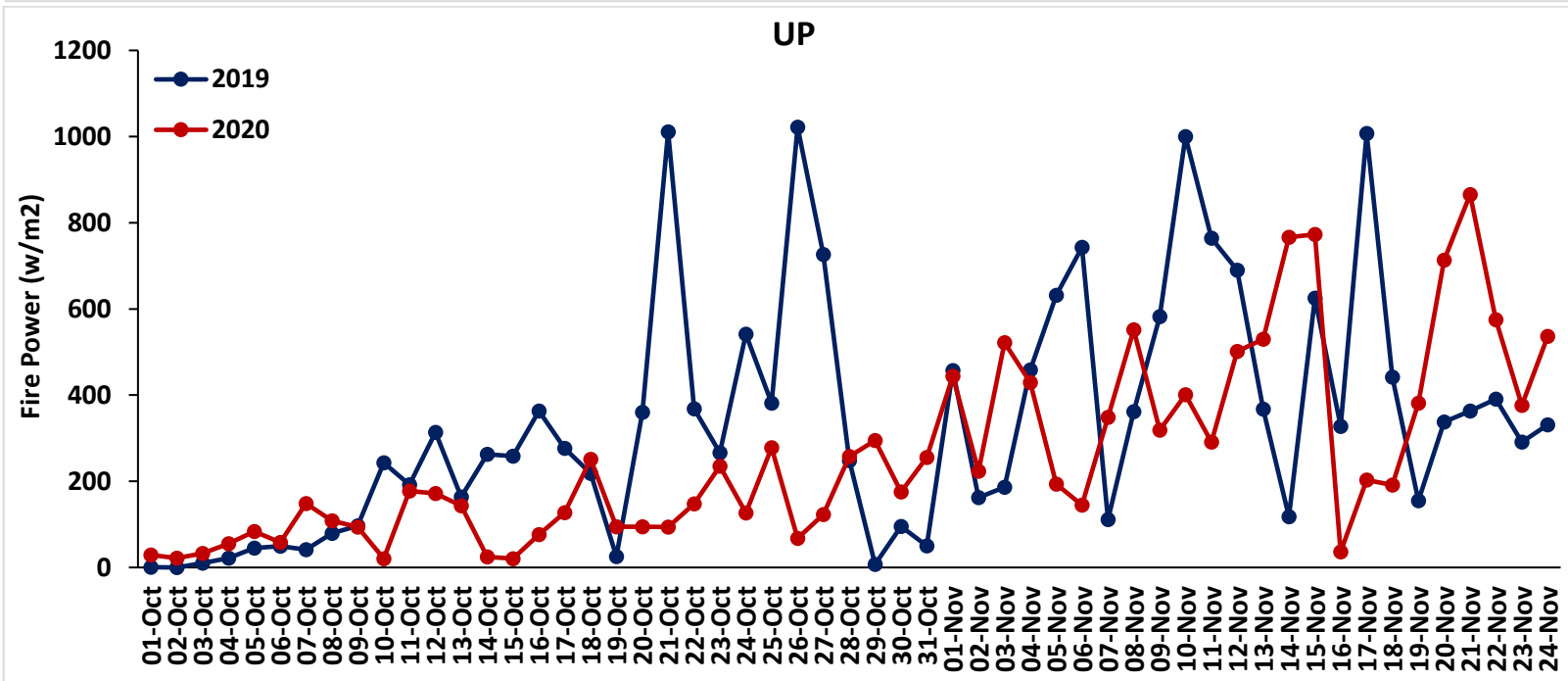
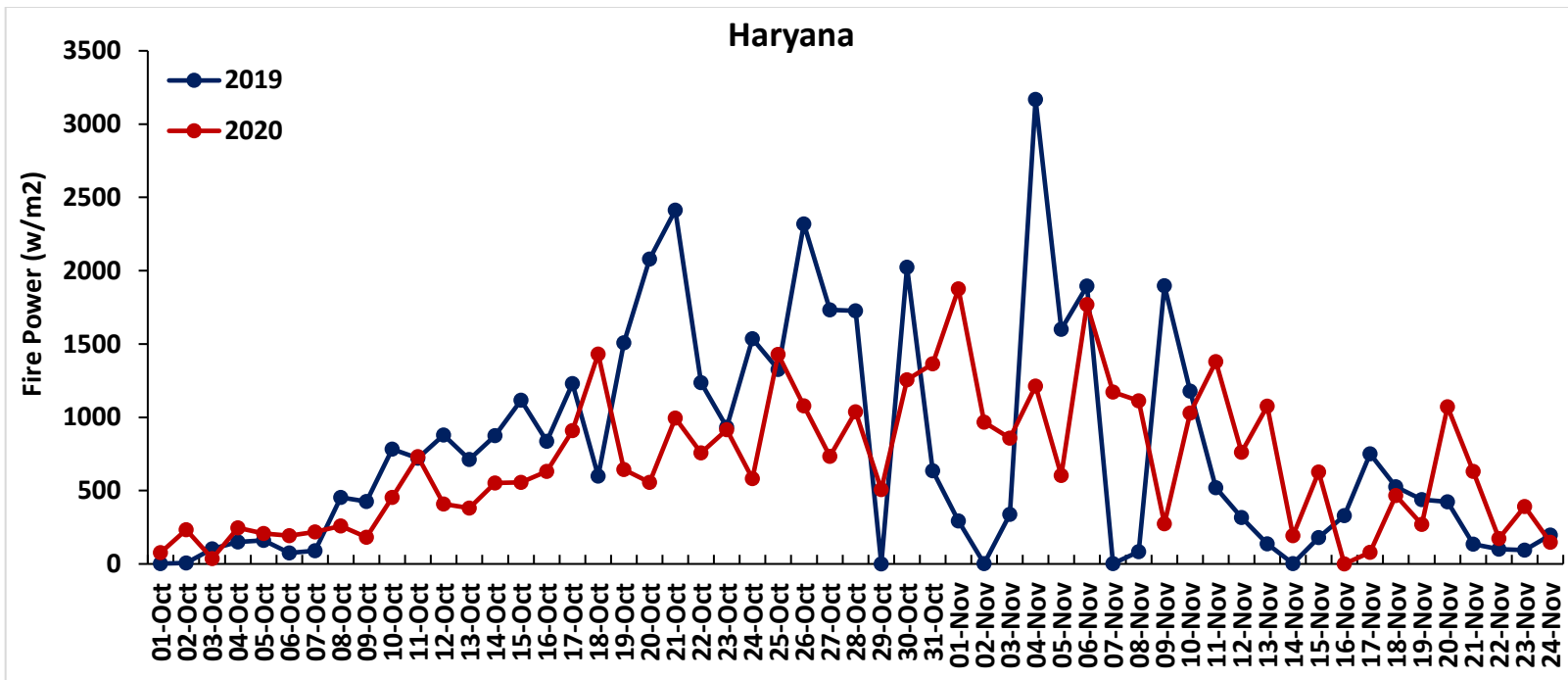
### UP



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

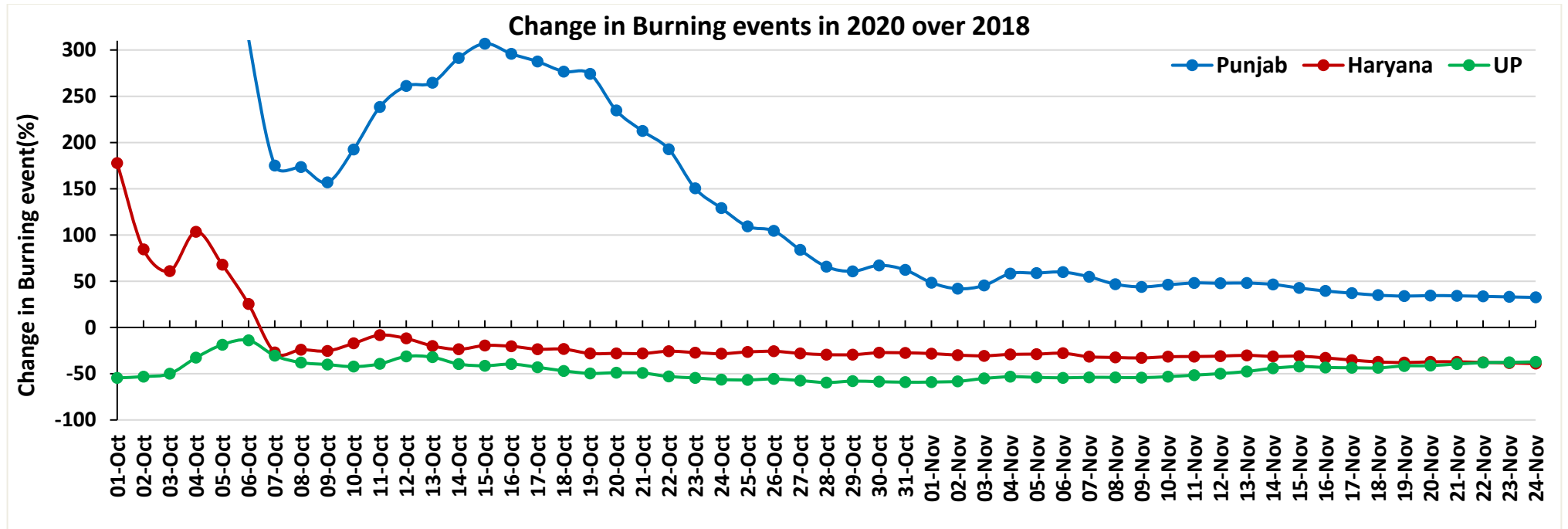
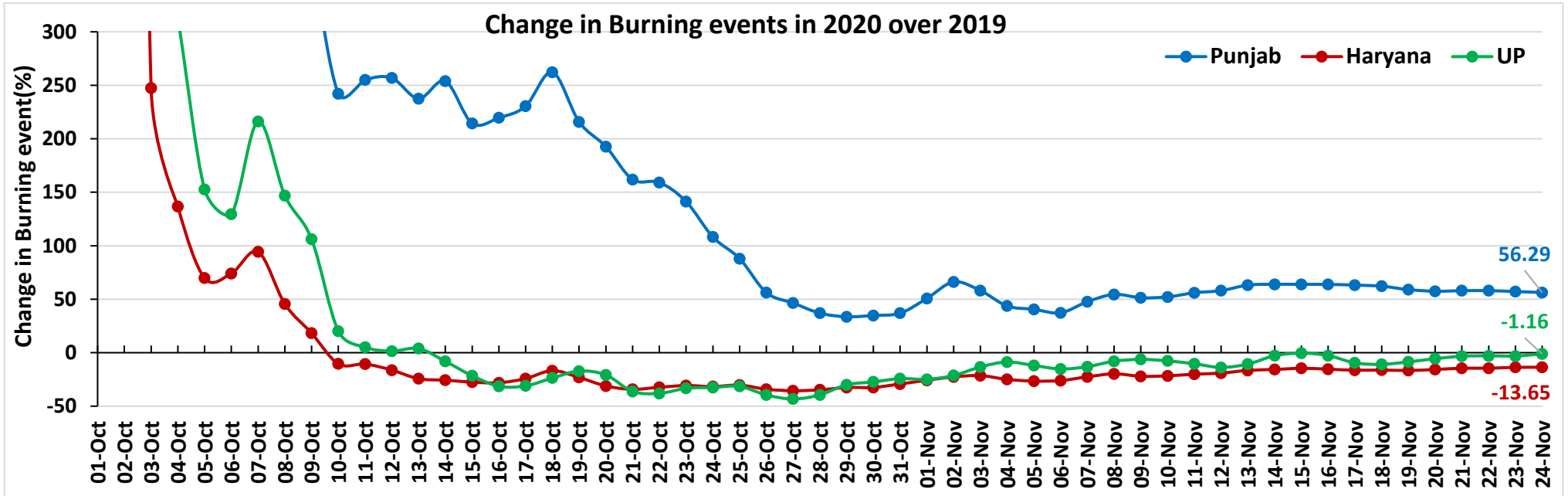
**(01-Oct to 24-Nov)**



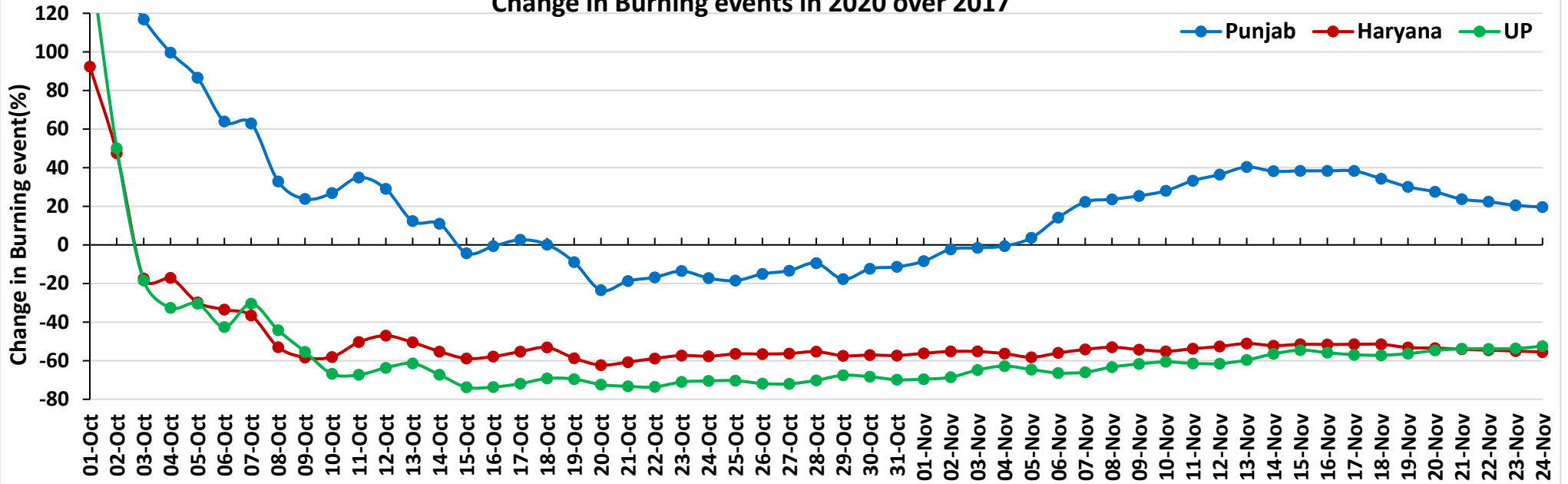




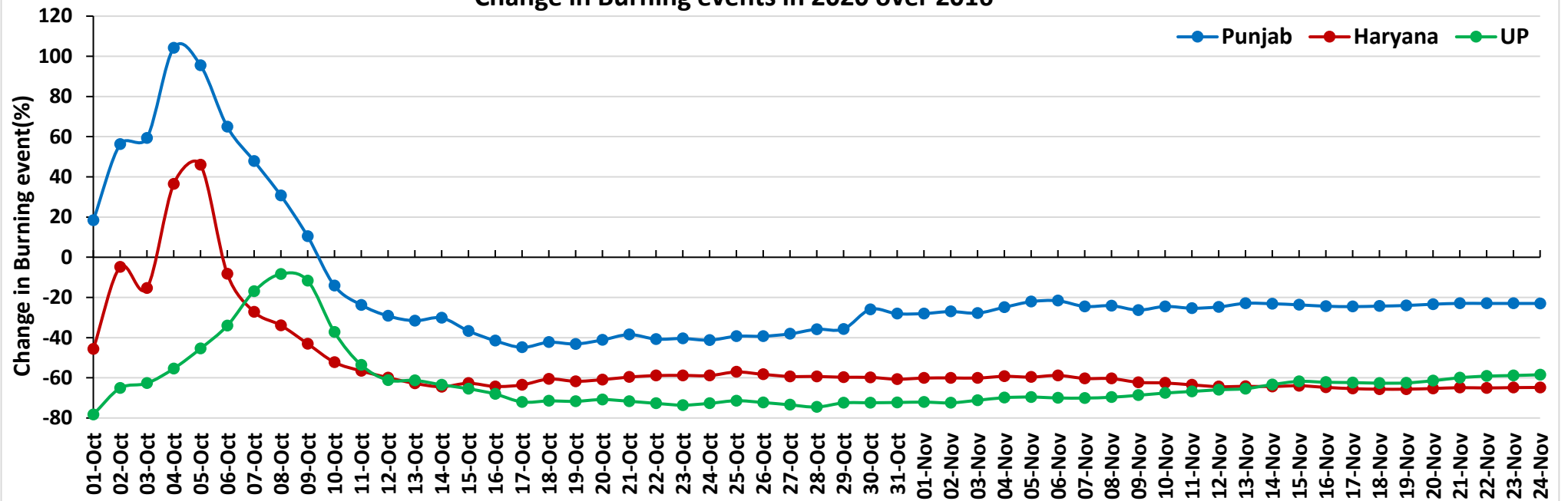
**Percent Change in Burning events in 2020 over 2019, 2018, 2017 and 2016 (Daily Cumulative)**



Change in Burning events in 2020 over 2017

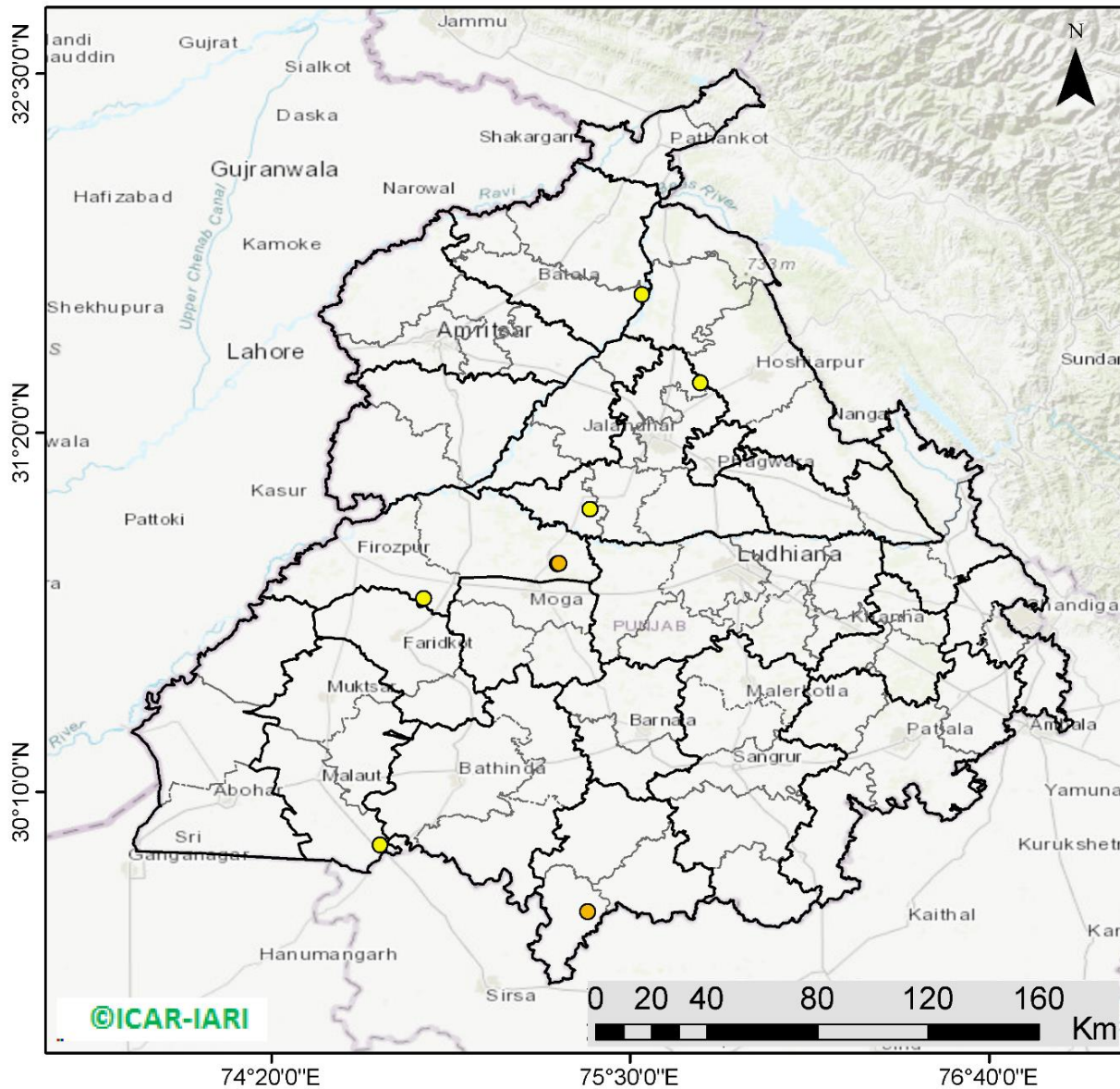


Change in Burning events in 2020 over 2016



(a) Punjab

RICE RESIDUE BURNING IN PUNJAB



**08** burning events detected in Punjab on 24th November 2020

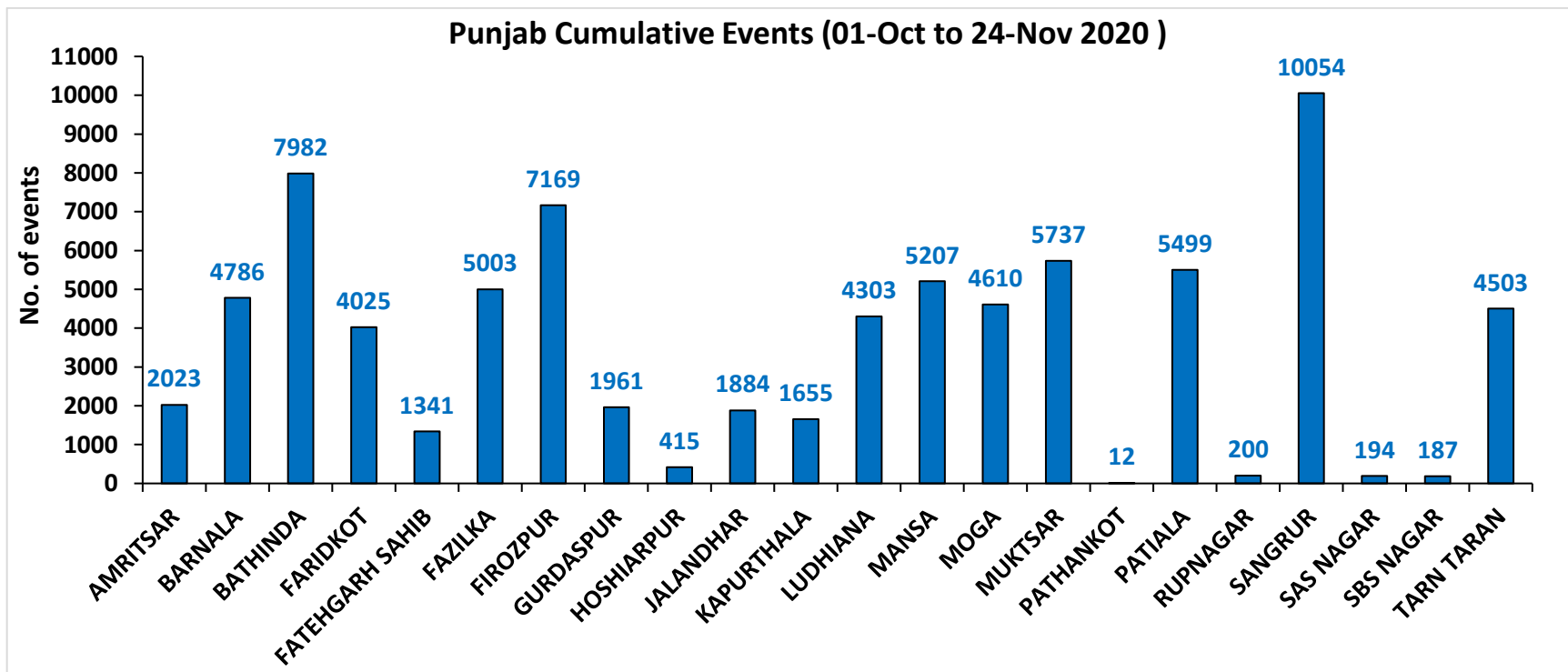
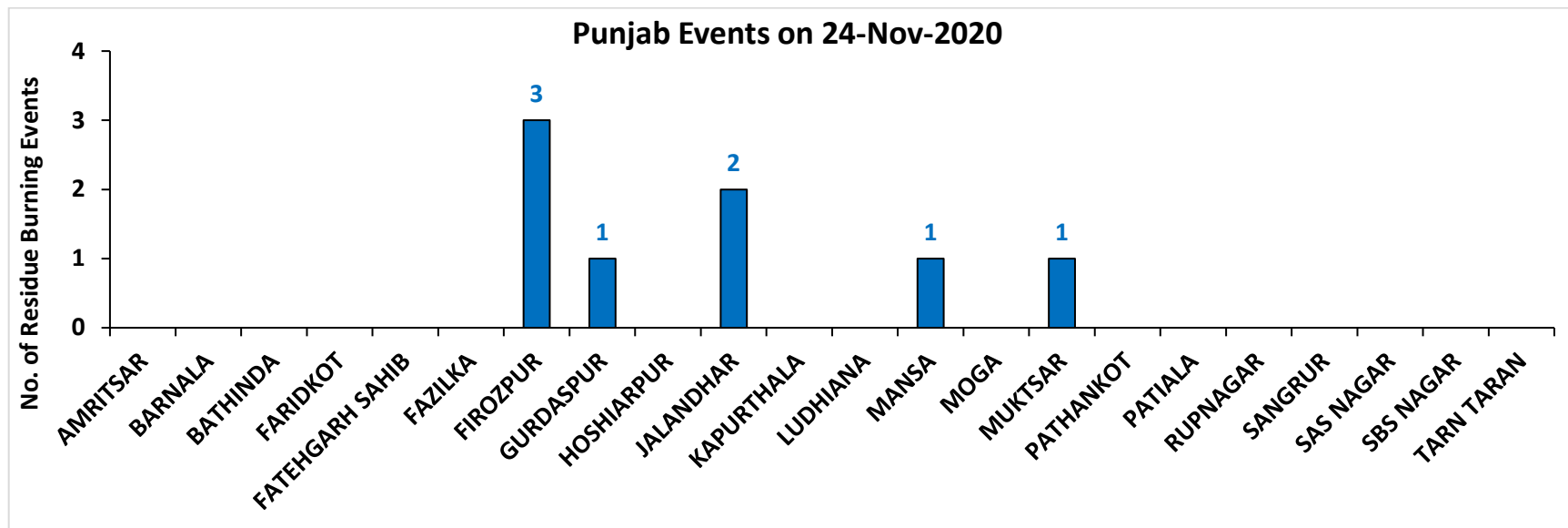
Fire Intensity (W/m<sup>2</sup>)

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



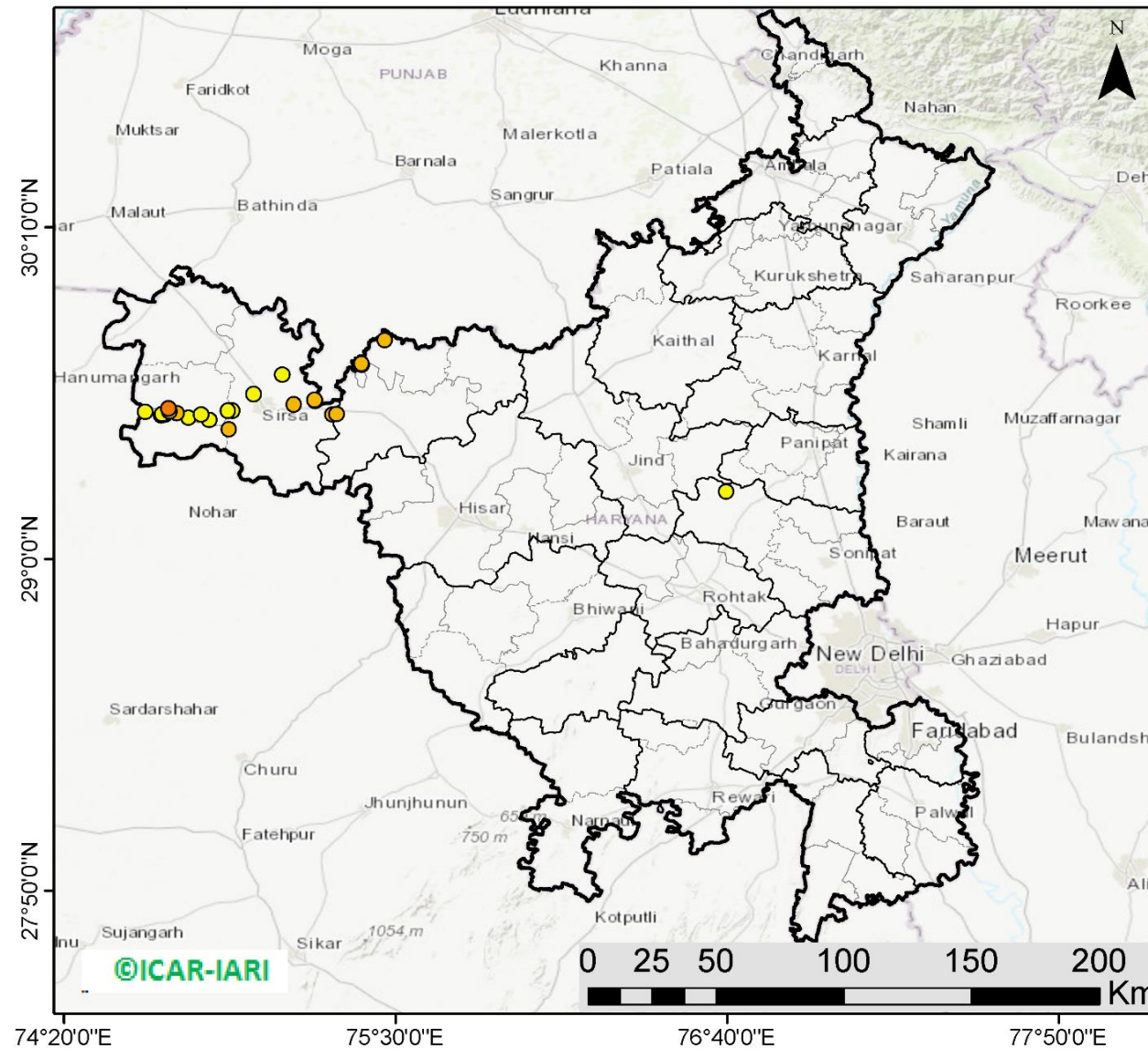
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

### District-wise number of residue burning events in Punjab (01-Oct to 24-Nov 2020)



(b) Haryana

RICE RESIDUE BURNING IN HARYANA



**24** burning events detected in Haryana on 24th November 2020

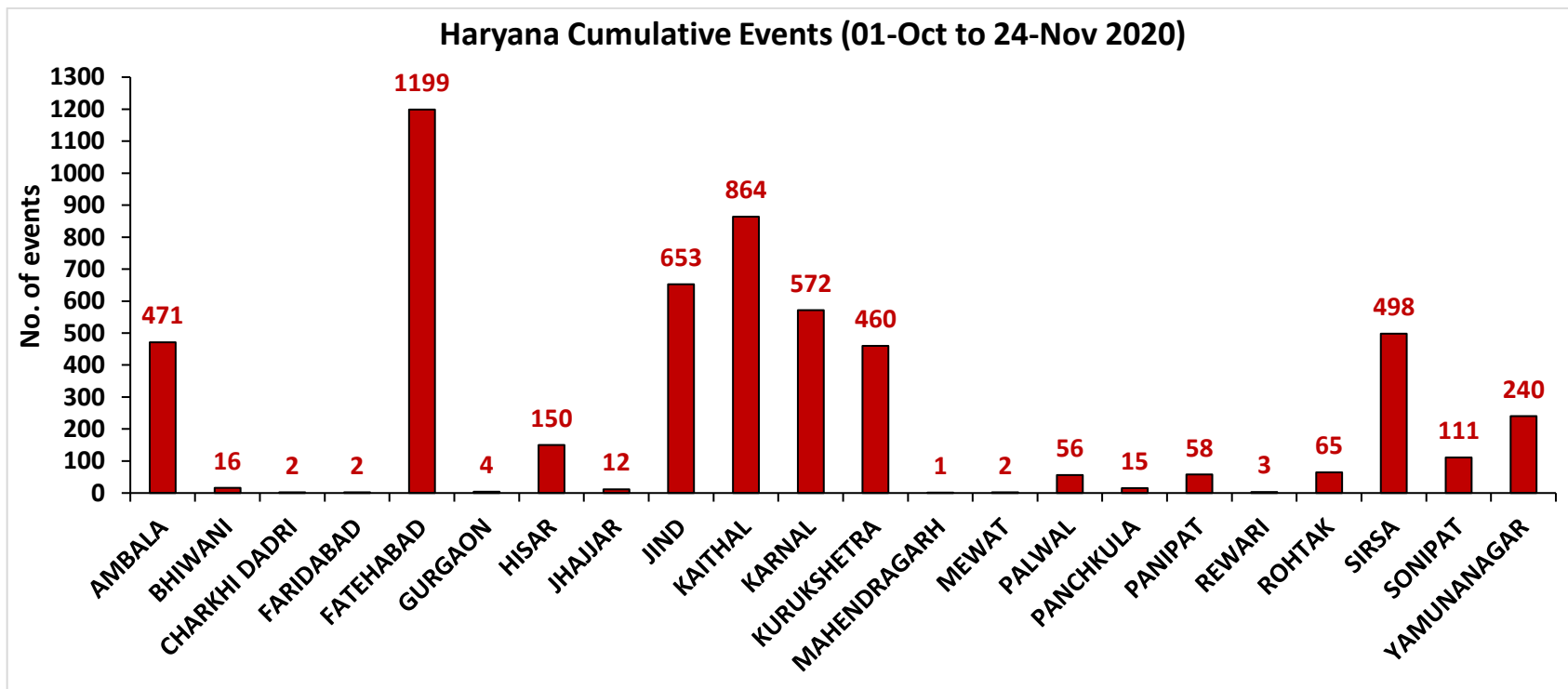
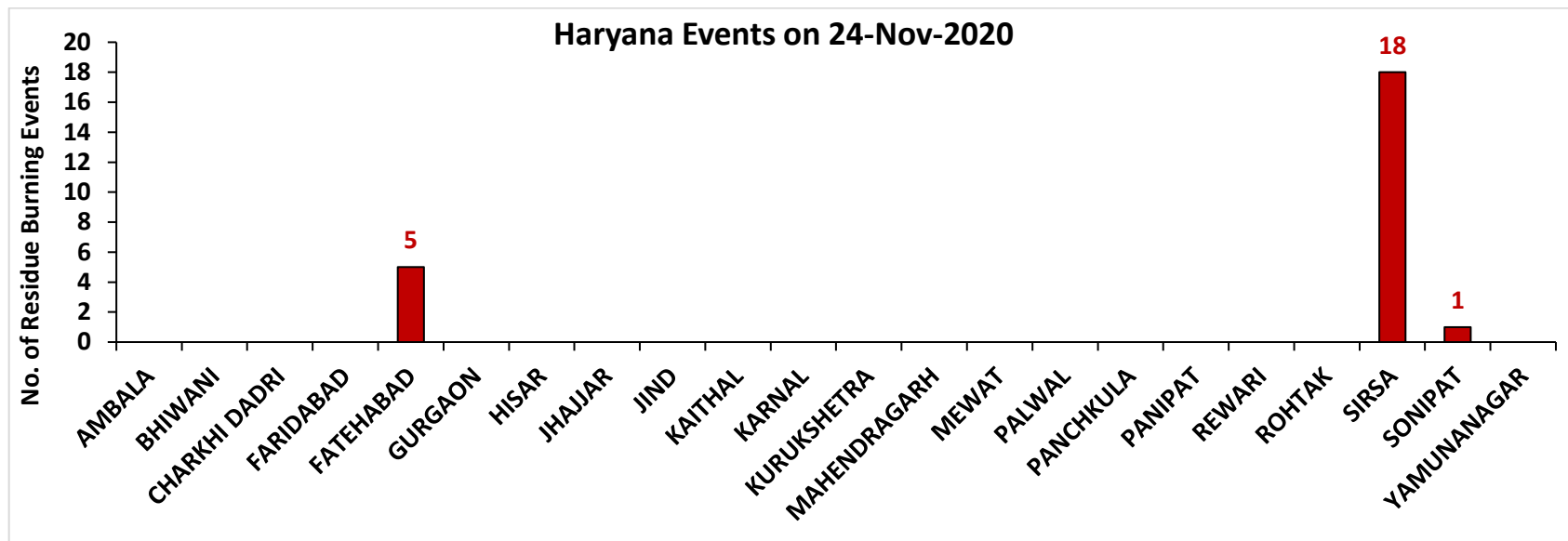
Fire Intensity (W/m<sup>2</sup>)

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



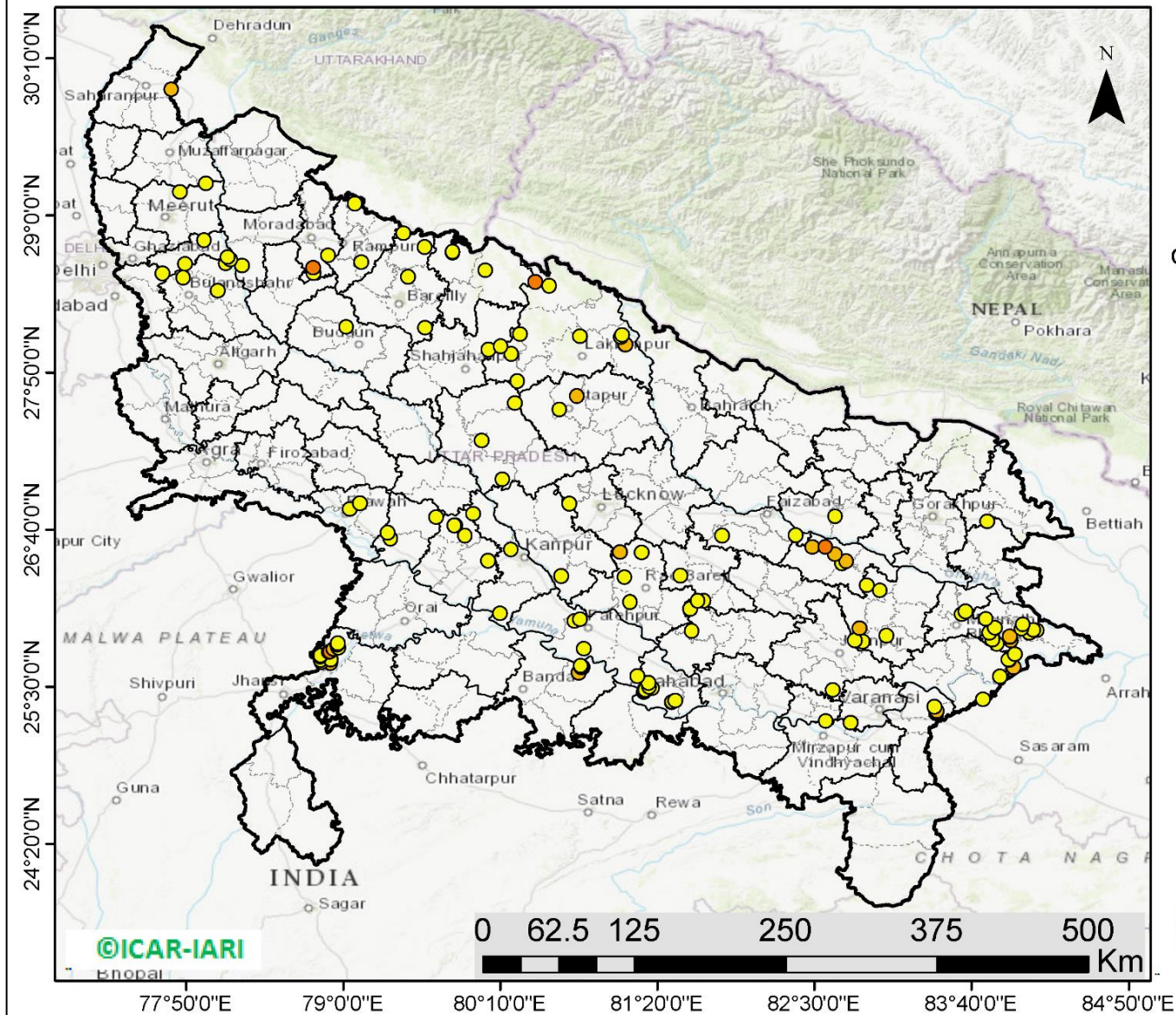
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

### District-wise number of residue burning events in Haryana (01-Oct to 24-Nov 2020)



(c) Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



**144** burning events detected in Uttar Pradesh on 24th November 2020

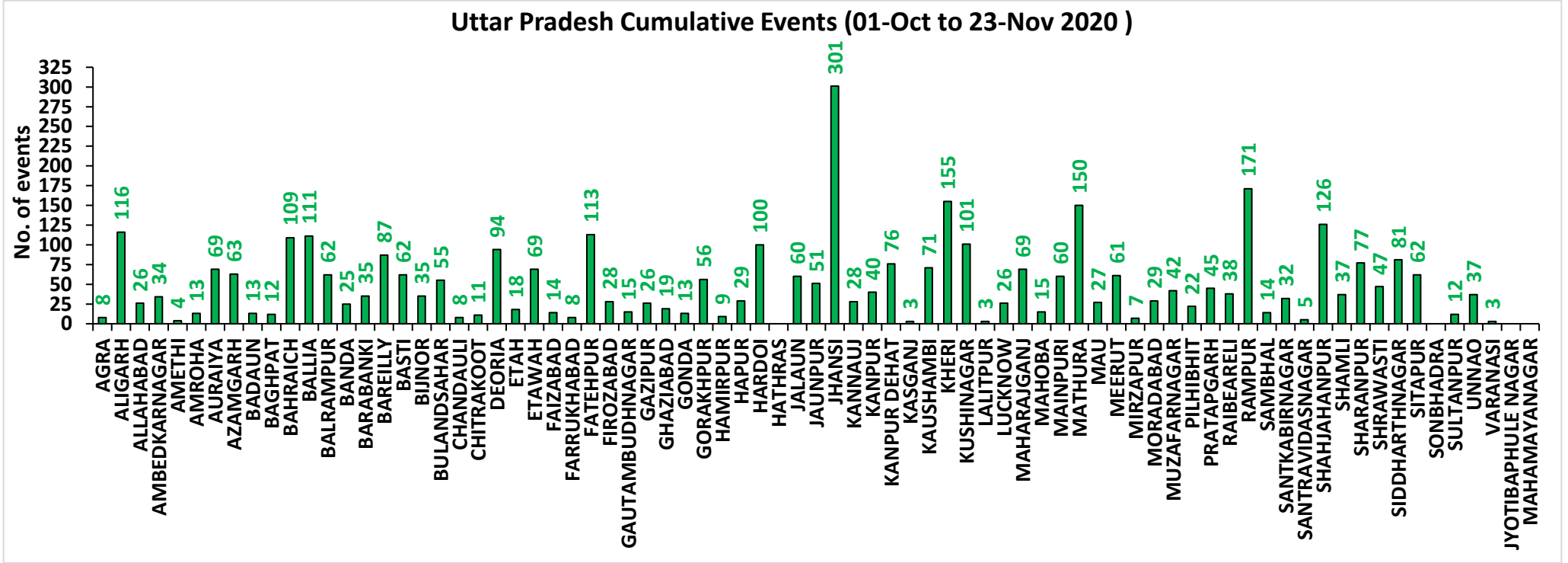
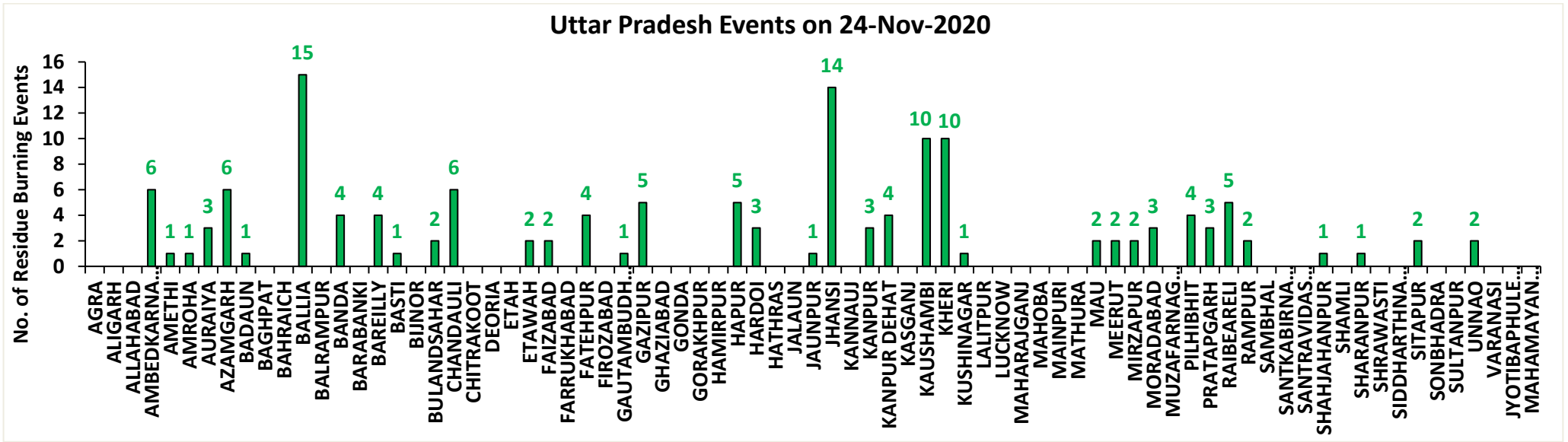
Fire Intensity (W/m<sup>2</sup>)

- 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 24-Nov 2020)





**State-wise and date-wise number of residue burning events detected in 2016, 2017, 2018, 2019 and 2020**  
**(Period: 01-October to 24-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
23-Nov	46	286	317	1033	54	62	14	180	259	97	89	100	106	163	151	197	400	603	1455	302
24-Nov	8	293	229	507	21	24	23	152	192	36	144	72	186	105	265	176	388	567	804	322
<b>Total</b>	<b>78750</b>	<b>50387</b>	<b>59427</b>	<b>65859</b>	<b>102266</b>	<b>5454</b>	<b>6316</b>	<b>8961</b>	<b>12259</b>	<b>15494</b>	<b>3753</b>	<b>3797</b>	<b>5975</b>	<b>7895</b>	<b>9036</b>	<b>87957</b>	<b>60500</b>	<b>74363</b>	<b>86013</b>	<b>126796</b>

**District-wise and date-wise cumulative number of residue burning events detected in 2016, 2017, 2018, 2019 and 2020  
(Period: 01-Oct to 24-Nov)**

**(a) Punjab**

Districts	01-Oct to 24-Nov				
	2016	2017	2018	2019	2020
AMRITSAR	2170	1340	1364	1404	2023
BARNALA	5698	3371	3273	2964	4786
BATHINDA	8839	5623	6336	5301	7982
FARIDKOT	4626	3447	3051	2313	4025
FATEHGARH SAHIB	2461	1638	857	821	1341
FAZILKA	0	0	0	2644	5003
FIROZPUR	13612	9706	9955	4634	7169
GURDASPUR	2215	1581	1165	1477	1961
HOSHIARPUR	901	489	198	311	415
JALANDHAR	4660	2101	1382	1514	1884
KAPURTHALA	3134	1616	750	1353	1655
LUDHIANA	9537	4611	3007	2269	4303
MANSA	5641	4459	4304	3562	5207
MOGA	6393	2658	2727	2148	4610
MUKTSAR	7026	5270	5759	3620	5737
PATHANKOT	0	0	0	6	12
PATIALA	6541	5029	4213	3852	5499
RUPNAGAR	717	326	86	118	200
SANGRUR	11862	8412	7778	6358	10054
SAS NAGAR	115	107	104	150	194
SBS NAGAR	1610	815	386	265	187
TARN TARAN	4508	3260	2732	3303	4503
<b>Total</b>	<b>102266</b>	<b>65859</b>	<b>59427</b>	<b>50387</b>	<b>78750</b>

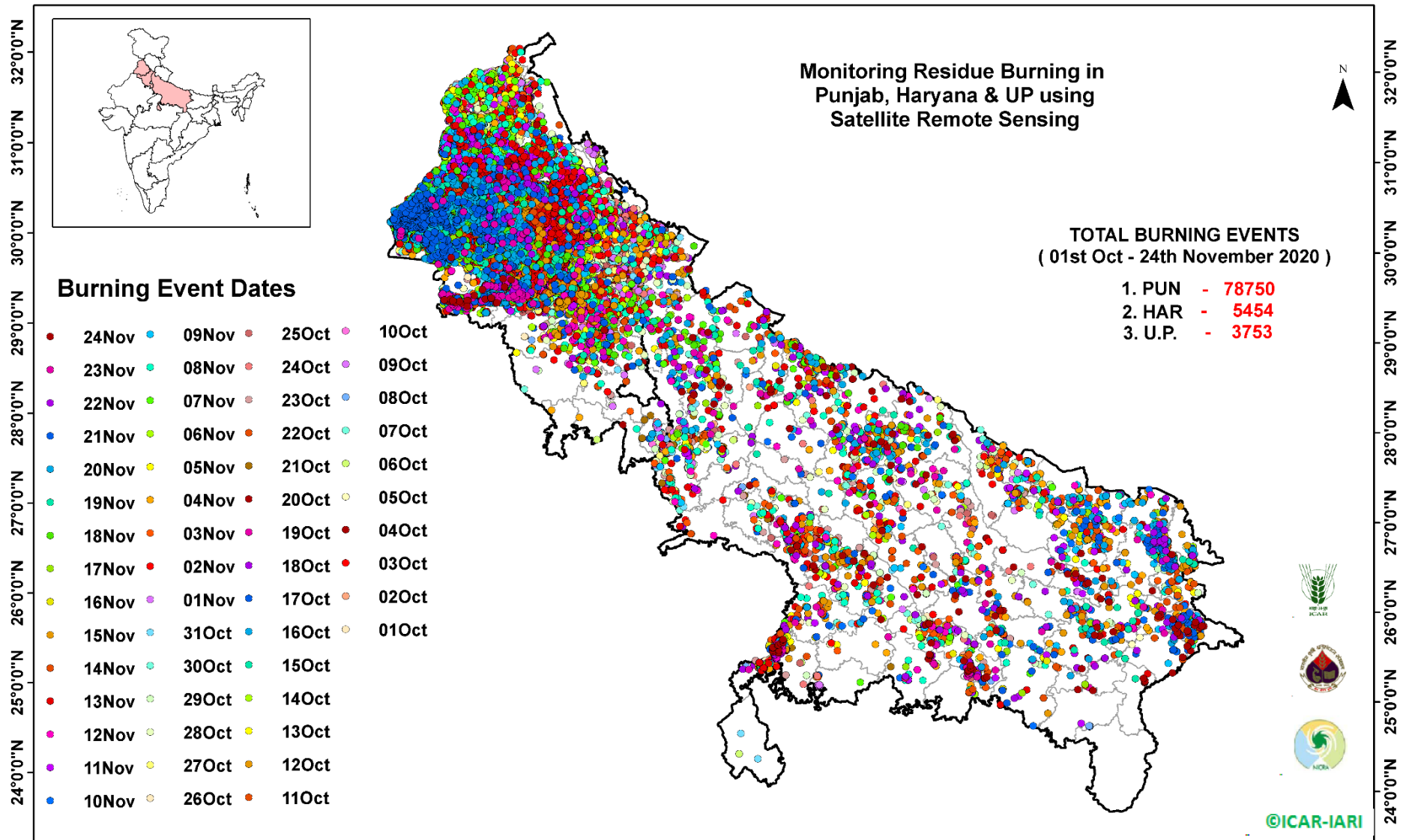
**(b) Haryana**

Districts	01-Oct to 24-Nov				
	2016	2017	2018	2019	2020
AMBALA	532	498	329	338	471
BHIWANI	85	37	20	11	16
CHARKHI DADRI	0	0	0	0	2
FARIDABAD	288	341	185	10	2
FATEHABAD	4814	3615	2492	1193	1199
GURGAON	0	0	0	4	4
HISAR	400	178	202	116	150
JHAJJAR	34	18	27	4	12
JIND	858	939	875	578	653
KAITHAL	1748	1512	1291	1258	864
KARNAL	1628	1506	851	1083	572
KURUKSHETRA	1078	1147	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	92	94	60	40	58
REWARI	0	0	0	3	3
ROHTAK	96	74	35	23	65
SIRSA	3510	1921	1677	421	498
SONIPAT	87	69	41	32	111
YAMUNANAGAR	244	310	193	250	240
<b>Total</b>	<b>15494</b>	<b>12259</b>	<b>8961</b>	<b>6316</b>	<b>5454</b>

**(C)**  
**Uttar Pradesh**

Districts	01-Oct to 24-Nov																
	2016	2017	2018	2019	2020	GAUTAMBUDHNAGAR	27	42	12	19	15	MUZAFARNAGAR	140	149	49	34	42
AGRA	0	0	0	4	8	GAZIPUR	15	14	17	12	26	PILHIBIT	945	729	433	353	22
ALIGARH	55	80	93	90	116	GHAZIABAD	85	51	37	15	19	PRATAPGARH	43	52	34	19	45
ALLAHABAD	5	15	17	16	26	GONDA	47	34	19	10	13	RAIBEARELI	111	97	53	25	38
AMBEDKARNAGAR	71	54	18	8	34	GORAKHPUR	66	112	128	16	56	RAMPUR	622	632	223	316	171
AMETHI	0	0	0	10	4	HAMIRPUR	0	0	1	37	9	SAMBHAL	0	0	0	9	14
AMROHA	0	0	0	8	13	HAPUR	0	0	0	12	29	SANTKABIRNAGAR	55	63	53	14	32
AURAIYA	255	213	64	49	69	HARDOI	250	200	110	82	100	SANTRAVIDASNAGAR	0	0	0	1	5
AZAMGARH	37	43	29	4	63	HATHRAS	0	0	0	1	0	SHAHJAHANPUR	1145	685	384	352	126
BADAUN	12	7	11	22	13	JALAUN	0	0	0	125	60	SHAMLI	0	0	0	24	37
BAGHPAT	0	0	0	11	12	JAUNPUR	21	29	21	11	51	SHARANPUR	111	131	66	68	77
BAHRAICH	78	40	59	44	109	JHANSI	0	0	2	197	301	SHRAWASTI	37	31	36	21	47
BALLIA	19	40	20	21	111	KANNAUJ	34	18	8	10	28	SIDDHARTHANAGAR	255	184	467	48	81
BALRAMPUR	36	27	42	8	62	KANPUR	17	9	13	9	40	SITAPUR	131	74	42	44	62
BANDA	2	17	9	16	25	KANPUR DEHAT	67	66	26	43	76	SONBHADRA	15	14	11	0	0
BARABANKI	219	166	171	60	35	KASGANJ	0	0	0	5	3	SULTANPUR	73	48	42	16	12
BAREILLY	255	224	117	115	87	KAUSHAMBI	32	46	46	18	71	UNNAO	64	54	40	36	37
BASTI	144	186	120	30	62	KHERI	452	293	208	182	155	VARANASI	2	0	0	0	3
BIJNOR	62	56	16	15	35	KUSHINAGAR	60	142	143	30	101	JYOTIBAPHULE NAGAR	12	14	5	0	0
BULANDSAHAR	31	31	17	27	55	LALITPUR	0	0	0	7	3	MAHAMAYANAGAR	2	2	8	0	0
CHANDAULI	12	10	1	1	8	LUCKNOW	62	30	26	22	26	<b>Total</b>	<b>9036</b>	<b>7895</b>	<b>5975</b>	<b>3797</b>	<b>3753</b>
CHITRAKOOT	0	0	0	6	11	MAHARAJGANJ	682	1000	1001	263	69						
DEORIA	61	75	58	8	94	MAHOBA	0	0	0	9	15						
ETAH	21	31	28	5	18	MAINPURI	91	90	54	45	60						
ETAWAH	169	120	60	54	69	MATHURA	1455	1083	1049	463	150						
FAIZABAD	14	14	9	7	14	MAU	13	18	13	8	27						
FARRUKHABAD	0	0	0	6	8	MEERUT	88	88	21	29	61						
FATEHPUR	70	55	84	56	113	MIRZAPUR	5	13	6	3	7						
FIROZABAD	23	18	11	17	28	MORADABAD	53	36	14	16	29						

### Map of Cumulative Burning Events (01-Oct to 24-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 24-Nov-2020**

<b>S. No.</b>	<b>District</b>	<b>Tehsil / Block</b>	<b>Satellite</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Time (IST)</b>	<b>Day / Night</b>	<b>Fire Power (W/m<sup>2</sup>)</b>
1	FIROZPUR	FIROZPUR	S-NPP	30.79477	74.82862	13:18:00	D	1.70
2	FIROZPUR	ZIRA	S-NPP	30.90791	75.26435	13:18:00	D	7.00
3	FIROZPUR	ZIRA	S-NPP	30.90875	75.26900	13:18:00	D	7.70
4	GURDASPUR	GURDASPUR	S-NPP	31.78218	75.53866	13:18:00	D	2.90
5	JALANDHAR	JALANDHAR II	S-NPP	31.49493	75.72837	13:18:00	D	3.40
6	JALANDHAR	SHAHKOT	S-NPP	31.08361	75.36879	13:18:00	D	1.90
7	MANSA	SARDULGARH	S-NPP	29.77791	75.36160	13:18:00	D	9.10
8	MUKTSAR	MALAUT	S-NPP	29.99346	74.68764	13:18:00	D	4.70

**Details of residue burning events in Haryana on 24-Nov-2020**

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	Time (IST)	Day / Night	Fire Power (W/m <sup>2</sup> )
1	FATEHABAD	FATEHABAD	AQUA	29.50800	75.27800	13:25:00	D	6.20
2	FATEHABAD	FATEHABAD	AQUA	29.51000	75.29200	13:25:00	D	5.50
3	FATEHABAD	RATIA	S-NPP	29.68351	75.38198	13:18:00	D	5.80
4	FATEHABAD	RATIA	S-NPP	29.68708	75.38114	13:18:00	D	5.80
5	FATEHABAD	RATIA	METOP-2	29.76890	75.46326	20:36:00	N	10.00
6	SIRSA	ELLENABAD	S-NPP	29.49628	74.77219	13:18:00	D	2.00
7	SIRSA	ELLENABAD	AQUA	29.50400	74.67600	13:25:00	D	21.80
8	SIRSA	ELLENABAD	AQUA	29.50700	74.69100	13:25:00	D	10.50
9	SIRSA	ELLENABAD	S-NPP	29.50972	74.67937	13:18:00	D	3.80
10	SIRSA	ELLENABAD	S-NPP	29.51778	74.61897	13:18:00	D	4.50
11	SIRSA	ELLENABAD	S-NPP	29.51814	74.70379	13:18:00	D	2.20
12	SIRSA	ELLENABAD	S-NPP	29.52920	74.70111	13:18:00	D	12.90
13	SIRSA	RANIA	S-NPP	29.48889	74.84406	13:18:00	D	4.10
14	SIRSA	RANIA	S-NPP	29.50839	74.81636	13:18:00	D	3.10
15	SIRSA	RANIA	METOP-2	29.51288	74.73047	20:36:00	N	9.50
16	SIRSA	RANIA	S-NPP	29.52147	74.92735	13:18:00	D	5.00
17	SIRSA	RANIA	S-NPP	29.52236	74.91167	13:18:00	D	4.90
18	SIRSA	SIRSA	S-NPP	29.45589	74.91425	13:18:00	D	5.50
19	SIRSA	SIRSA	METOP-2	29.54432	75.14297	20:36:00	N	7.00
20	SIRSA	SIRSA	S-NPP	29.55623	75.21604	13:18:00	D	4.50
21	SIRSA	SIRSA	S-NPP	29.55983	75.21519	13:18:00	D	5.10
22	SIRSA	SIRSA	S-NPP	29.58065	75.00052	13:18:00	D	3.60
23	SIRSA	SIRSA	S-NPP	29.64815	75.10134	13:18:00	D	3.10
24	SONIPAT	GOHANA	S-NPP	29.23726	76.66349	02:00:00	N	0.80

**Details of residue burning events in Uttar Pradesh on 24-Nov-2020**

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	Time (IST)	Day / Night	Fire Power (W/m2)
1	AMBEDKARNAGAR	AKBARPUR	S-NPP	26.41751	82.70596	13:18:00	D	3.30
2	AMBEDKARNAGAR	AKBARPUR	AQUA	26.48400	82.65300	13:25:00	D	6.70
3	AMBEDKARNAGAR	AKBARPUR	S-NPP	26.53552	82.48431	13:18:00	D	6.60
4	AMBEDKARNAGAR	ALAPUR	S-NPP	26.48079	82.91222	02:00:00	N	0.30
5	AMBEDKARNAGAR	JALALPUR	AQUA	26.43200	82.73800	13:25:00	D	6.60
6	AMBEDKARNAGAR	TANDA	S-NPP	26.53766	82.58131	13:18:00	D	12.30
7	AMETHI	GAURIGANJ	S-NPP	26.13688	81.67951	13:18:00	D	2.70
8	AMROHA	HASANPUR	S-NPP	28.62704	78.24731	13:18:00	D	2.50
9	AURAIYA	AURAIYA	S-NPP	26.60101	79.35211	13:18:00	D	4.70
10	AURAIYA	AURAIYA	S-NPP	26.64489	79.32786	13:18:00	D	4.10
11	AURAIYA	BIDHUNA	S-NPP	26.75884	79.68929	02:00:00	N	0.70
12	AZAMGARH	BURHANPUR	S-NPP	26.21515	82.98844	13:12:00	D	3.30
13	AZAMGARH	BURHANPUR	S-NPP	26.25143	82.88821	13:18:00	D	2.80
14	AZAMGARH	LALGANJ	S-NPP	25.83508	82.86035	13:12:00	D	3.00
15	AZAMGARH	LALGANJ	S-NPP	25.87961	83.03300	13:12:00	D	2.70
16	AZAMGARH	PHULPUR	S-NPP	25.84513	82.80086	13:12:00	D	1.40
17	AZAMGARH	PHULPUR	S-NPP	25.93266	82.83677	13:12:00	D	9.10
18	BADAUN	BISAULI	S-NPP	28.17247	79.02210	13:18:00	D	2.70
19	BALLIA	BALLIA	S-NPP	25.64598	83.98060	13:12:00	D	7.30
20	BALLIA	BALLIA	S-NPP	25.73905	83.98899	13:12:00	D	3.20
21	BALLIA	BALLIA	S-NPP	25.90177	84.09686	13:12:00	D	2.70
22	BALLIA	BANSDIH	S-NPP	25.91611	84.15045	13:12:00	D	1.80
23	BALLIA	BANSDIH	S-NPP	25.92109	84.12939	13:12:00	D	2.30
24	BALLIA	BELTHARA ROAD	S-NPP	26.00079	83.77274	13:12:00	D	1.60
25	BALLIA	RASRA	S-NPP	25.81877	83.85561	13:12:00	D	3.00
26	BALLIA	RASRA	S-NPP	25.84308	83.96049	13:12:00	D	6.80
27	BALLIA	RASRA	S-NPP	25.85201	83.82118	13:12:00	D	2.30
28	BALLIA	RASRA	S-NPP	25.86843	83.95172	13:12:00	D	5.60
29	BALLIA	RASRA	S-NPP	25.87214	83.95116	13:12:00	D	5.60
30	BALLIA	RASRA	S-NPP	25.90039	83.80073	13:12:00	D	2.80



31	BALLIA	RASRA	S-NPP	25.93524	83.83956	13:12:00	D	4.00
32	BALLIA	SIKANDARPUR	S-NPP	25.92957	84.03913	13:12:00	D	2.90
33	BALLIA	SIKANDARPUR	S-NPP	25.96122	84.04948	13:12:00	D	2.80
34	BANDA	BABERU	S-NPP	25.60400	80.74922	13:12:00	D	5.70
35	BANDA	BABERU	S-NPP	25.64559	80.77737	13:12:00	D	4.60
36	BANDA	BABERU	AQUA	25.64600	80.76800	13:25:00	D	4.60
37	BANDA	BABERU	S-NPP	25.65385	80.76405	13:12:00	D	3.80
38	BAREILLY	BAHERI	S-NPP	28.76474	79.60289	02:00:00	N	0.50
39	BAREILLY	BAHERI	S-NPP	28.86546	79.44617	02:00:00	N	0.80
40	BAREILLY	FARIDPUR	S-NPP	28.16428	79.60609	02:00:00	N	2.20
41	BAREILLY	NAWABGANJ	S-NPP	28.54346	79.48152	13:18:00	D	1.70
42	BASTI	BASTI	S-NPP	26.76265	82.65410	13:18:00	D	2.40
43	BULANSAHAR	BULANSHAHAR	S-NPP	28.53619	77.81173	13:18:00	D	1.50
44	BULANSAHAR	SIYANA	S-NPP	28.43975	78.06775	02:00:00	N	1.50
45	CHANDAULI	CHANDAULI	AQUA	25.30500	83.40500	13:25:00	D	5.40
46	CHANDAULI	CHANDAULI	S-NPP	25.31010	83.40411	13:12:00	D	2.50
47	CHANDAULI	CHANDAULI	S-NPP	25.31369	83.40354	13:12:00	D	2.50
48	CHANDAULI	CHANDAULI	AQUA	25.31500	83.40400	13:25:00	D	7.50
49	CHANDAULI	CHANDAULI	S-NPP	25.31843	83.41203	13:12:00	D	9.50
50	CHANDAULI	CHANDAULI	S-NPP	25.35258	83.39292	13:12:00	D	2.20
51	ETAWAH	ETAWAH	S-NPP	26.81809	79.04769	13:18:00	D	2.60
52	ETAWAH	ETAWAH	S-NPP	26.86356	79.12344	13:18:00	D	3.20
53	FAIZABAD	FAIZSBAD	S-NPP	26.62650	82.36028	13:18:00	D	4.80
54	FAIZABAD	MILKIPUR	S-NPP	26.62034	81.81519	02:00:00	N	0.60
55	FATEHPUR	FATEHPUR	S-NPP	25.78198	80.78522	13:12:00	D	2.40
56	FATEHPUR	FATEHPUR	S-NPP	25.98493	80.71726	13:18:00	D	1.00
57	FATEHPUR	FATEHPUR	S-NPP	25.99781	80.75861	13:18:00	D	2.10
58	FATEHPUR	KHAGA	S-NPP	25.57954	81.18602	13:12:00	D	4.10
59	GAUTAMBUDHNAGAR	DADRI	S-NPP	28.57005	77.65822	13:18:00	D	2.30
60	GAZIPUR	MUHAMMADBAD	S-NPP	25.57475	83.88146	13:12:00	D	3.30
61	GAZIPUR	MUHAMMADBAD	S-NPP	25.57682	83.87810	13:12:00	D	2.00
62	GAZIPUR	MUHAMMADBAD	S-NPP	25.69601	83.94600	13:12:00	D	3.60
63	GAZIPUR	MUHAMMADBAD	S-NPP	25.69782	83.94321	13:12:00	D	3.10

64	GAZIPUR	ZAMANIA	S-NPP	25.40598	83.75107	13:12:00	D	3.00
65	HAPUR	GARHMUKTESAR	S-NPP	28.64252	78.12922	13:18:00	D	2.80
66	HAPUR	GARHMUKTESAR	S-NPP	28.67065	78.16144	13:18:00	D	1.70
67	HAPUR	GARHMUKTESAR	S-NPP	28.68949	78.14084	02:00:00	N	1.10
68	HAPUR	GARHMUKTESAR	S-NPP	28.81649	77.96657	13:18:00	D	4.70
69	HAPUR	HAPUR	S-NPP	28.64023	77.82449	13:18:00	D	1.80
70	HARDOI	BILGRAM	S-NPP	27.03827	80.18259	13:18:00	D	1.10
71	HARDOI	BILGRAM	S-NPP	27.32644	80.02953	13:18:00	D	3.00
72	HARDOI	HARDOI	S-NPP	27.60613	80.27506	13:18:00	D	3.20
73	JAUNPUR	MARIAHU	S-NPP	25.47546	82.63721	02:00:00	N	1.00
74	JHANSI	MOTH	S-NPP	25.67280	78.90073	13:18:00	D	3.10
75	JHANSI	MOTH	S-NPP	25.67342	78.90461	13:18:00	D	9.80
76	JHANSI	MOTH	S-NPP	25.68013	78.83914	13:18:00	D	7.90
77	JHANSI	MOTH	S-NPP	25.69617	78.83200	13:18:00	D	3.70
78	JHANSI	MOTH	S-NPP	25.69797	78.90787	13:18:00	D	4.20
79	JHANSI	MOTH	AQUA	25.72100	78.83100	13:25:00	D	10.30
80	JHANSI	MOTH	S-NPP	25.72626	78.83427	13:18:00	D	3.90
81	JHANSI	MOTH	AQUA	25.72900	78.83400	13:25:00	D	4.20
82	JHANSI	MOTH	AQUA	25.75700	78.89200	13:25:00	D	9.90
83	JHANSI	MOTH	AQUA	25.75900	78.90200	13:25:00	D	11.80
84	JHANSI	MOTH	S-NPP	25.77909	78.92827	13:18:00	D	7.70
85	JHANSI	MOTH	S-NPP	25.79131	78.96191	13:18:00	D	2.80
86	JHANSI	MOTH	AQUA	25.81400	78.95500	13:25:00	D	7.70
87	JHANSI	MOTH	S-NPP	25.82185	78.95999	13:18:00	D	4.70
88	KANPUR	BILHAUR	S-NPP	26.78238	79.96323	13:18:00	D	1.90
89	KANPUR	GHATAMPUR	S-NPP	26.04471	80.16547	13:18:00	D	1.90
90	KANPUR	KANPUR NAGAR	S-NPP	26.51659	80.24524	13:18:00	D	2.70
91	KANPUR DEHAT	AKBARPUR	S-NPP	26.43411	80.07471	13:18:00	D	3.20
92	KANPUR DEHAT	RASULABAD	S-NPP	26.62181	79.90616	13:18:00	D	2.00
93	KANPUR DEHAT	RASULABAD	S-NPP	26.69834	79.83241	13:18:00	D	2.10
94	KANPUR DEHAT	RASULABAD	AQUA	26.69900	79.82700	13:25:00	D	4.20
95	KAUSHAMBI	MANJHANPUR	S-NPP	25.38268	81.44038	13:12:00	D	12.60
96	KAUSHAMBI	MANJHANPUR	S-NPP	25.38659	81.44373	13:12:00	D	1.70

97	KAUSHAMBI	MANJHANPUR	S-NPP	25.39665	81.46614	13:12:00	D	2.50
98	KAUSHAMBI	MANJHANPUR	S-NPP	25.45764	81.23128	13:12:00	D	2.50
99	KAUSHAMBI	MANJHANPUR	AQUA	25.47100	81.23500	13:25:00	D	4.40
100	KAUSHAMBI	MANJHANPUR	AQUA	25.47200	81.24500	13:25:00	D	16.60
101	KAUSHAMBI	MANJHANPUR	S-NPP	25.47324	81.24454	13:12:00	D	2.00
102	KAUSHAMBI	MANJHANPUR	AQUA	25.48800	81.29300	13:25:00	D	4.20
103	KAUSHAMBI	MANJHANPUR	S-NPP	25.49778	81.27229	13:12:00	D	2.50
104	KAUSHAMBI	SIRATHU	S-NPP	25.52790	81.26713	13:12:00	D	2.20
105	KHERI	DHAURAHRA	S-NPP	28.04025	81.09324	13:18:00	D	3.50
106	KHERI	DHAURAHRA	S-NPP	28.04081	81.09731	13:18:00	D	5.10
107	KHERI	DHAURAHRA	S-NPP	28.09482	81.06272	13:18:00	D	1.70
108	KHERI	DHAURAHRA	S-NPP	28.11005	81.07257	13:18:00	D	2.30
109	KHERI	LAKHIMPUR	S-NPP	28.10123	80.75962	13:18:00	D	1.60
110	KHERI	MOHMADI	S-NPP	27.76831	80.29374	13:18:00	D	1.90
111	KHERI	MOHMADI	S-NPP	27.97121	80.24843	13:18:00	D	2.20
112	KHERI	MOHMADI	S-NPP	28.03008	80.16949	13:18:00	D	1.90
113	KHERI	MOHMADI	S-NPP	28.11809	80.31135	13:18:00	D	2.50
114	KHERI	PALIA KALAN	S-NPP	28.47705	80.53211	13:18:00	D	3.20
115	KUSHINAGAR	HATA	S-NPP	26.72546	83.78439	13:18:00	D	4.50
116	MAU	MADHUBAN	S-NPP	26.06047	83.62276	13:12:00	D	3.50
117	MAU	MAU	S-NPP	26.03799	83.59251	13:12:00	D	2.00
118	MEERUT	MAWANA	S-NPP	29.17350	77.78609	13:18:00	D	3.40
119	MEERUT	MAWANA	S-NPP	29.23581	77.98063	13:18:00	D	2.80
120	MIRZAPUR	MIRZAPUR	S-NPP	25.23101	82.76767	13:12:00	D	2.30
121	MIRZAPUR	MIRZAPUR	S-NPP	25.24205	82.58446	13:12:00	D	3.00
122	MORADABAD	BILARI	S-NPP	28.57179	78.77892	13:18:00	D	1.60
123	MORADABAD	BILARI	AQUA	28.60900	78.77700	13:25:00	D	10.10
124	MORADABAD	MORADABAD	S-NPP	28.70340	78.88615	13:18:00	D	1.40
125	PILHIBHIT	PILHIBHIT	S-NPP	28.72560	79.81193	02:00:00	N	0.50
126	PILHIBHIT	PILHIBHIT	S-NPP	28.72898	79.81268	02:00:00	N	1.20
127	PILHIBHIT	PURANPUR	AQUA	28.50500	80.42600	13:25:00	D	12.30
128	PILHIBHIT	PURANPUR	S-NPP	28.59243	80.05691	02:00:00	N	1.30
129	PRATAPGARH	LALGANJ	S-NPP	25.91511	81.58948	13:12:00	D	2.20

130	PRATAPGARH	LALGANJ	S-NPP	26.07764	81.57845	13:18:00	D	2.20
131	PRATAPGARH	LALGANJ	S-NPP	26.13741	81.63405	13:18:00	D	1.80
132	RAIBEARELI	DALMAU	AQUA	26.12900	81.13100	13:25:00	D	4.10
133	RAIBEARELI	MAHARAJGANG	S-NPP	26.49639	81.21745	13:18:00	D	3.70
134	RAIBEARELI	MAHARAJGANG	S-NPP	26.49907	81.05505	13:18:00	D	5.70
135	RAIBEARELI	RAEBARELI	S-NPP	26.31223	81.09168	13:18:00	D	2.90
136	RAIBEARELI	TILOI	S-NPP	26.32448	81.50368	13:18:00	D	2.00
137	RAMPUR	MILAK	S-NPP	28.65043	79.13469	13:18:00	D	1.80
138	RAMPUR	SUAR	S-NPP	29.08668	79.08641	13:18:00	D	2.70
139	SHAHJAHANPUR	PUWANYA	S-NPP	28.00476	80.07881	02:00:00	N	0.50
140	SHARANPUR	SHARANPUR	S-NPP	29.93422	77.72485	13:18:00	D	6.80
141	SITAPUR	SITAPUR	S-NPP	27.55652	80.60625	13:18:00	D	2.10
142	SITAPUR	SITAPUR	S-NPP	27.65882	80.73507	13:18:00	D	8.20
143	UNNAO	BIGHAPUR	S-NPP	26.32218	80.61777	13:18:00	D	2.90
144	UNNAO	HASANGANJ	S-NPP	26.85783	80.67815	13:18:00	D	2.30

## 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)

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