



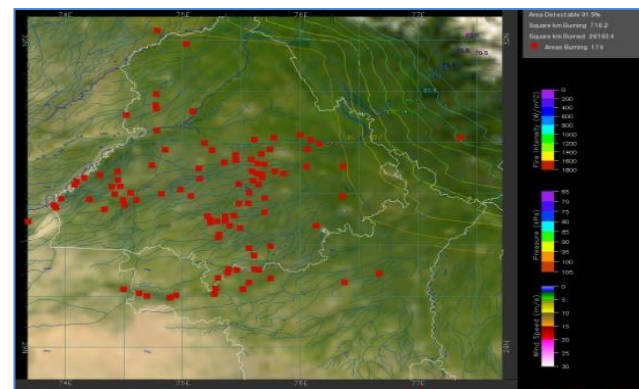
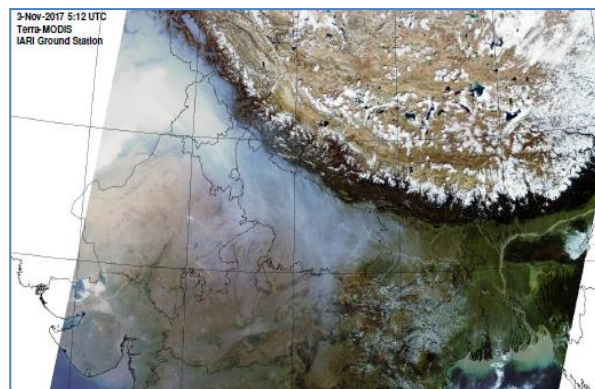
**Bulletin
No. 54**

**Events Date:
23-Nov-2019**

**Issued on:
24-Nov-2019**



MONITORING PADDY RESIDUE BURNING IN NORTH INDIA USING SATELLITE REMOTE SENSING DURING 2019



Prepared by:

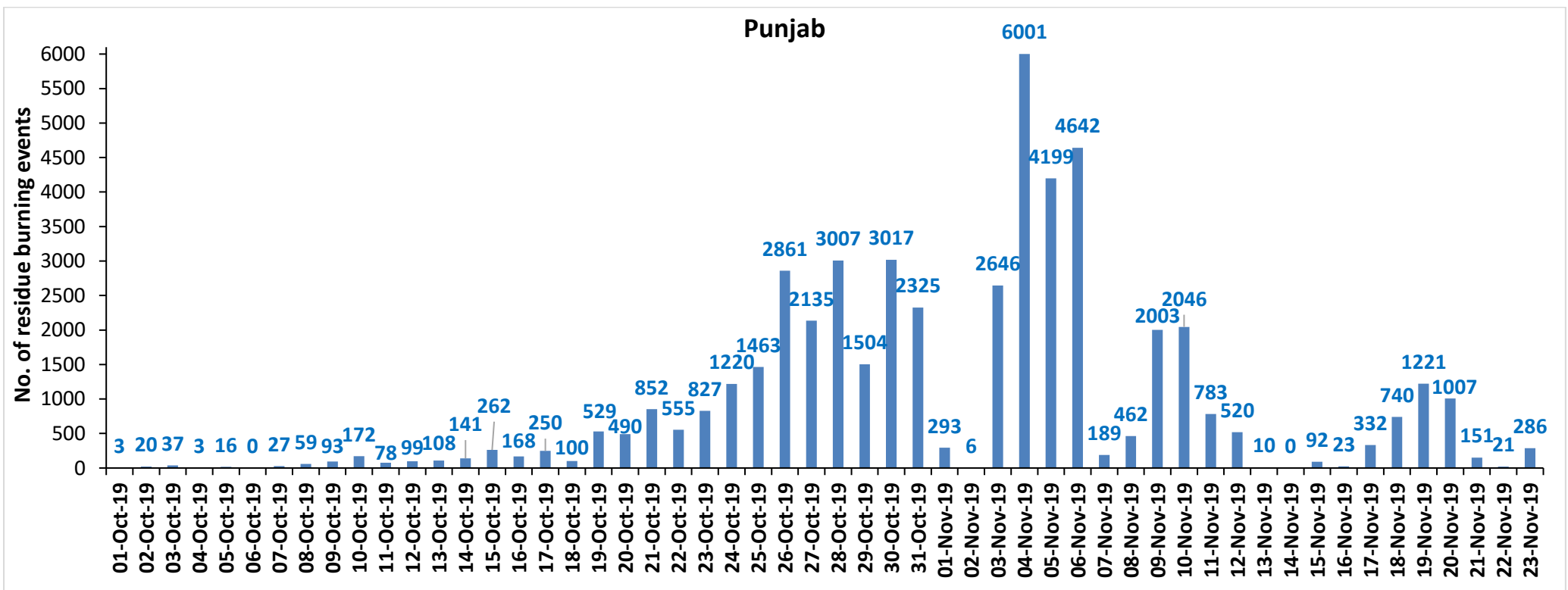
**Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory,
Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012**

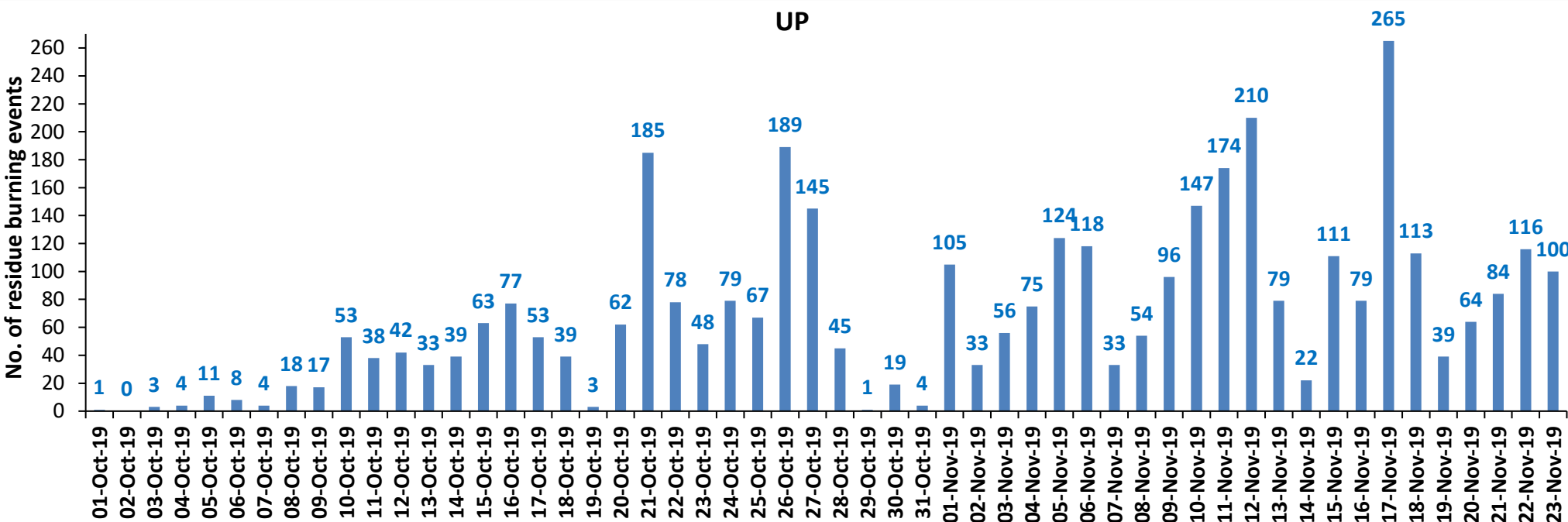
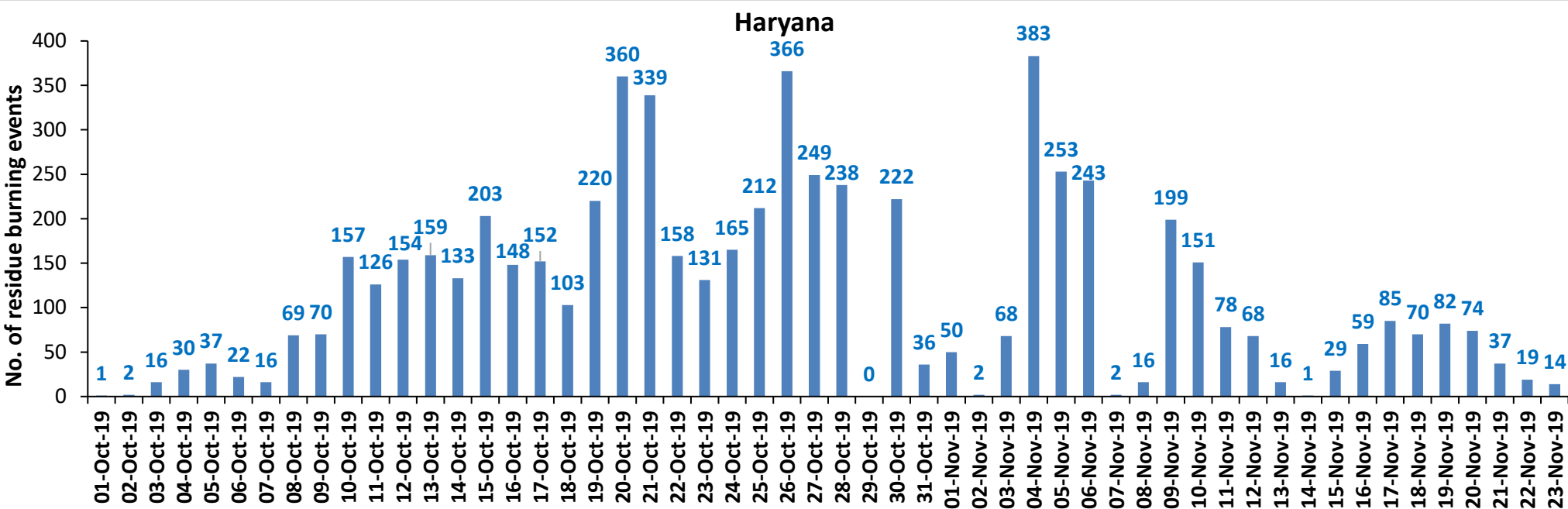
<http://creams.iari.res.in>

Highlights for 23-November-2019

- Satellites detected **400** residue burning events in the three study States on **23-Nov-2019**.
- The burning events detected on **23-Nov-2019** are **286, 14** and **100** in Punjab, Haryana and UP, respectively.
- The number of events has increased from **156** on **22-Nov-2019** to **400** on **23-Nov-2019** in the three states.
- The state of UP was partially covered with clouds which prevented fire event detection by satellites.
- Total **60112** burning events were detected in the three States between **01-Oct-2019** and **23-Nov-2019**, which are distributed as **50094, 6293** and **3725** in Punjab, Haryana and UP, respectively.
- Overall, the total burning events recorded in the three states are **18.5%** less than in 2018 till date. UP recorded **35.6%** reduction, Haryana recorded **28.6%** reduction, and Punjab recorded **15.4%** reduction, respectively, in the current season than in 2018.

Temporal distribution of residue burning events for the three study States in 2019

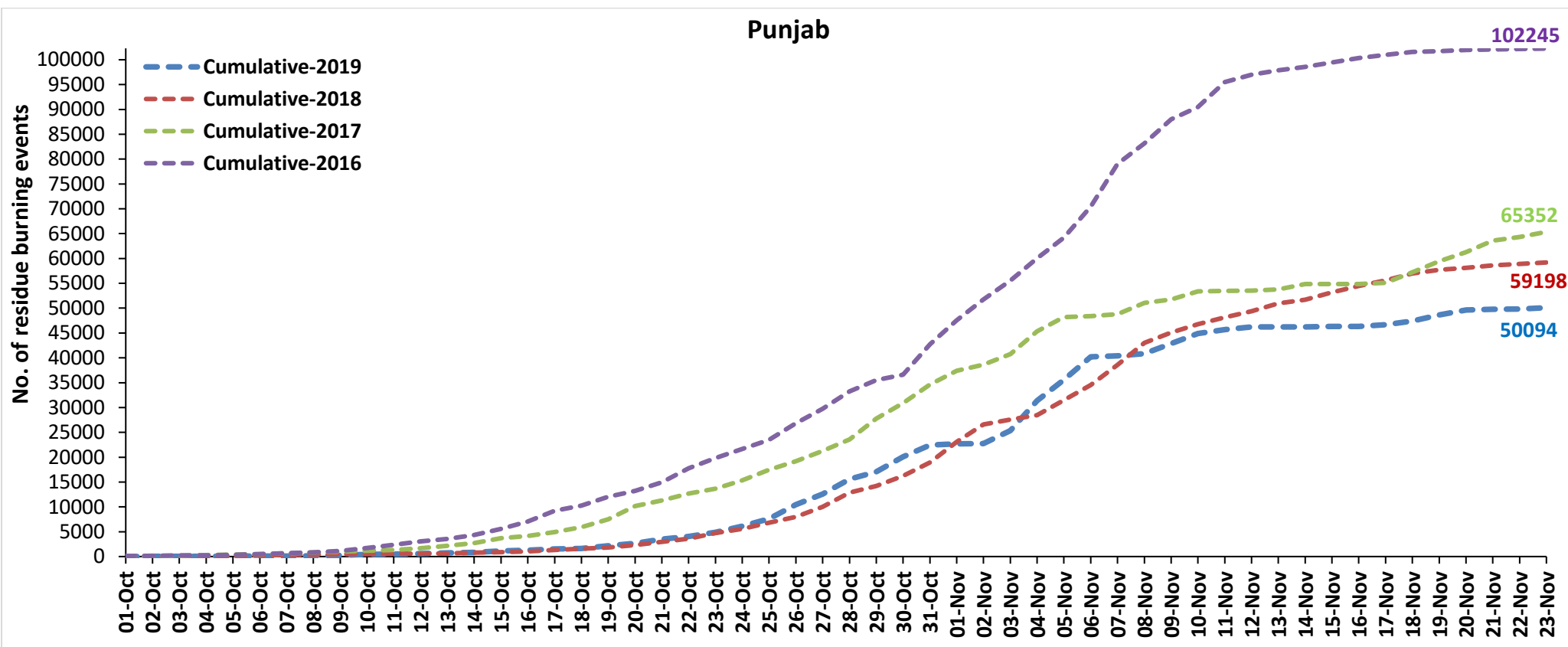




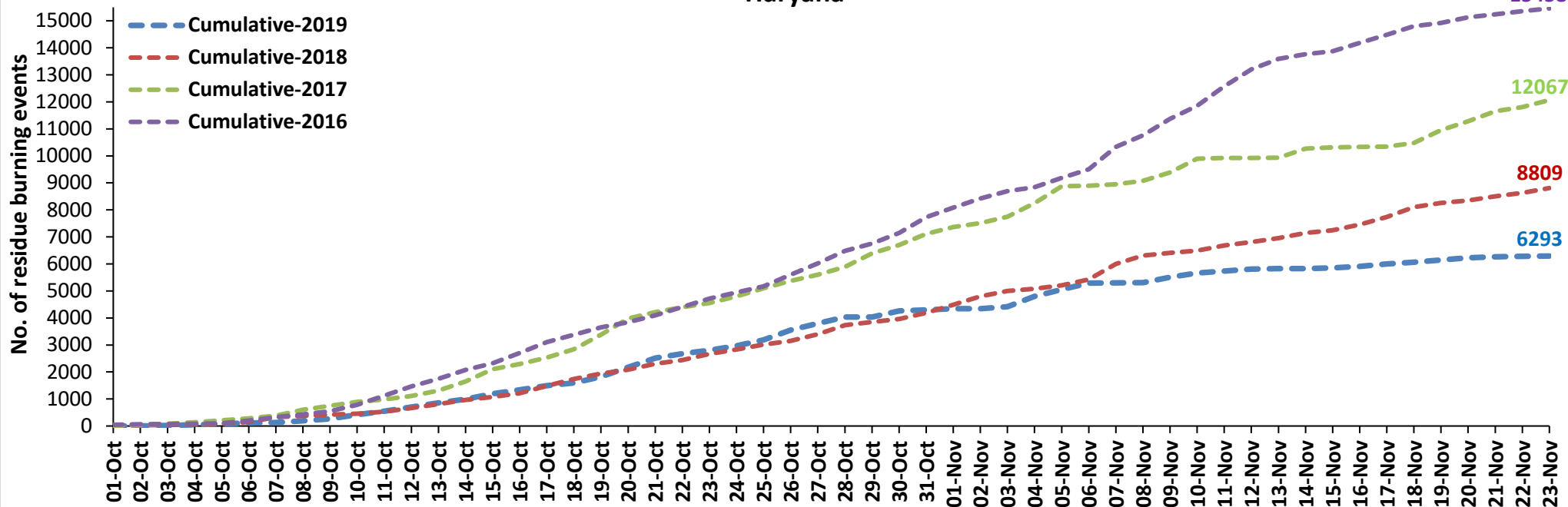
Comparison of residue burning events in current year (2019) with previous years (2018, 2017 & 2016) for the three study States

(01-Oct to 23-Nov)

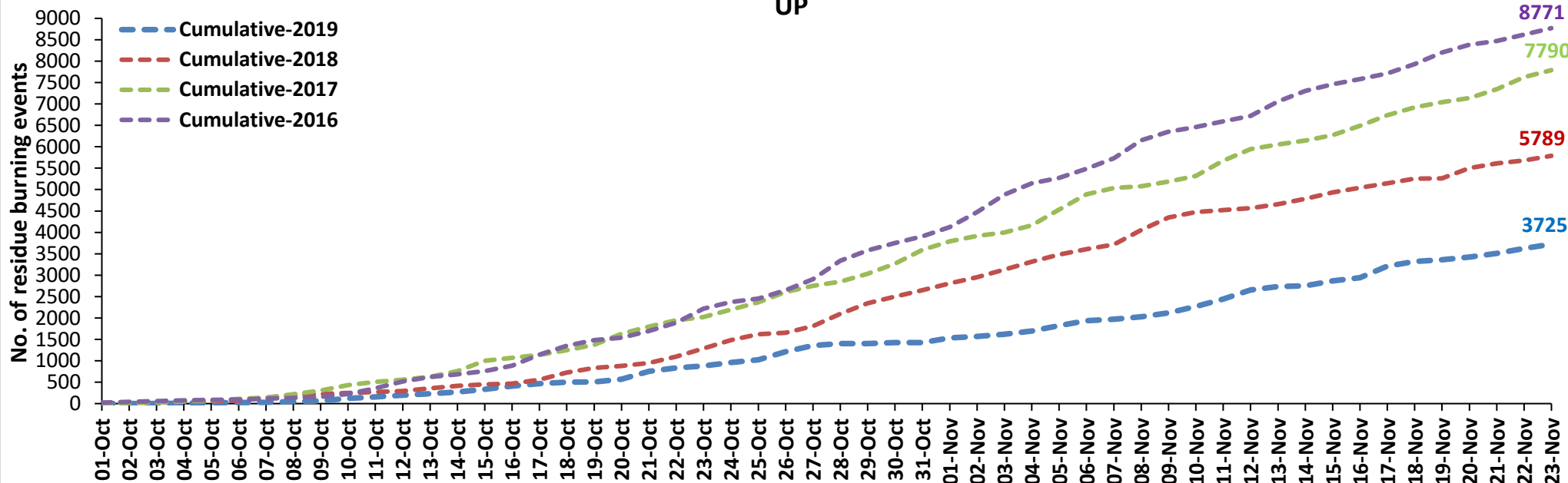
Punjab



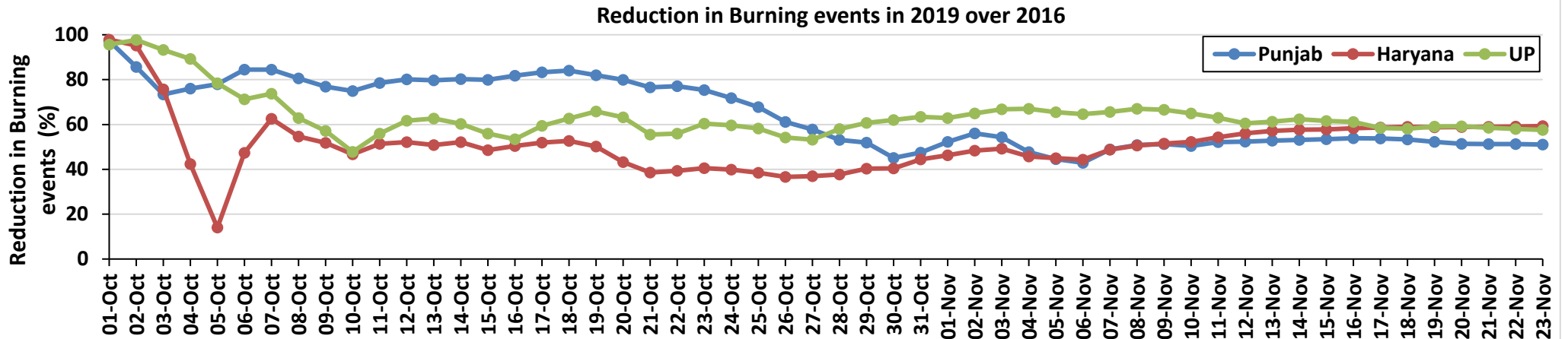
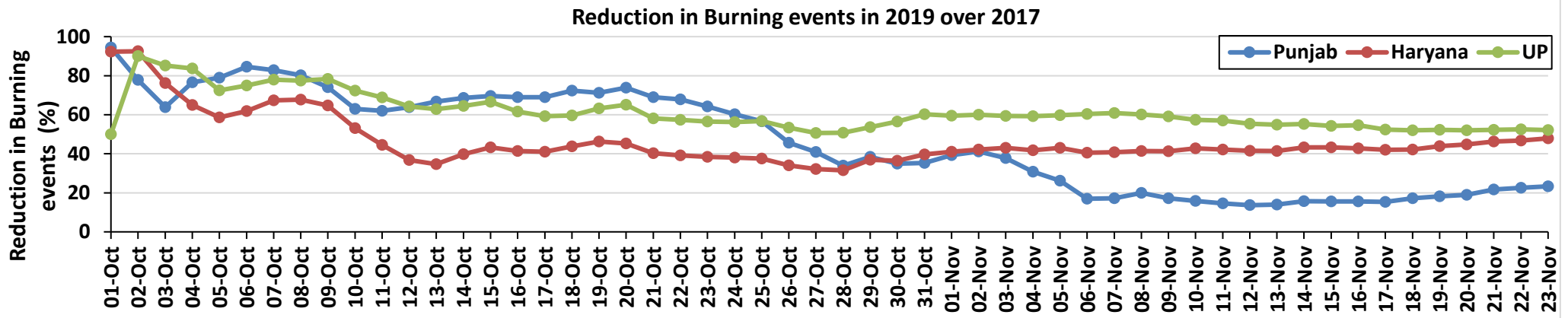
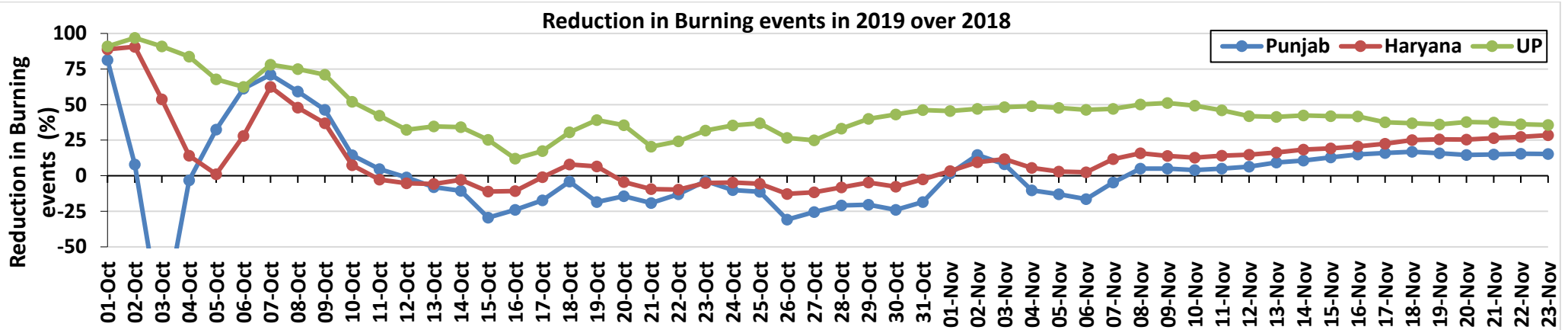
Haryana



UP

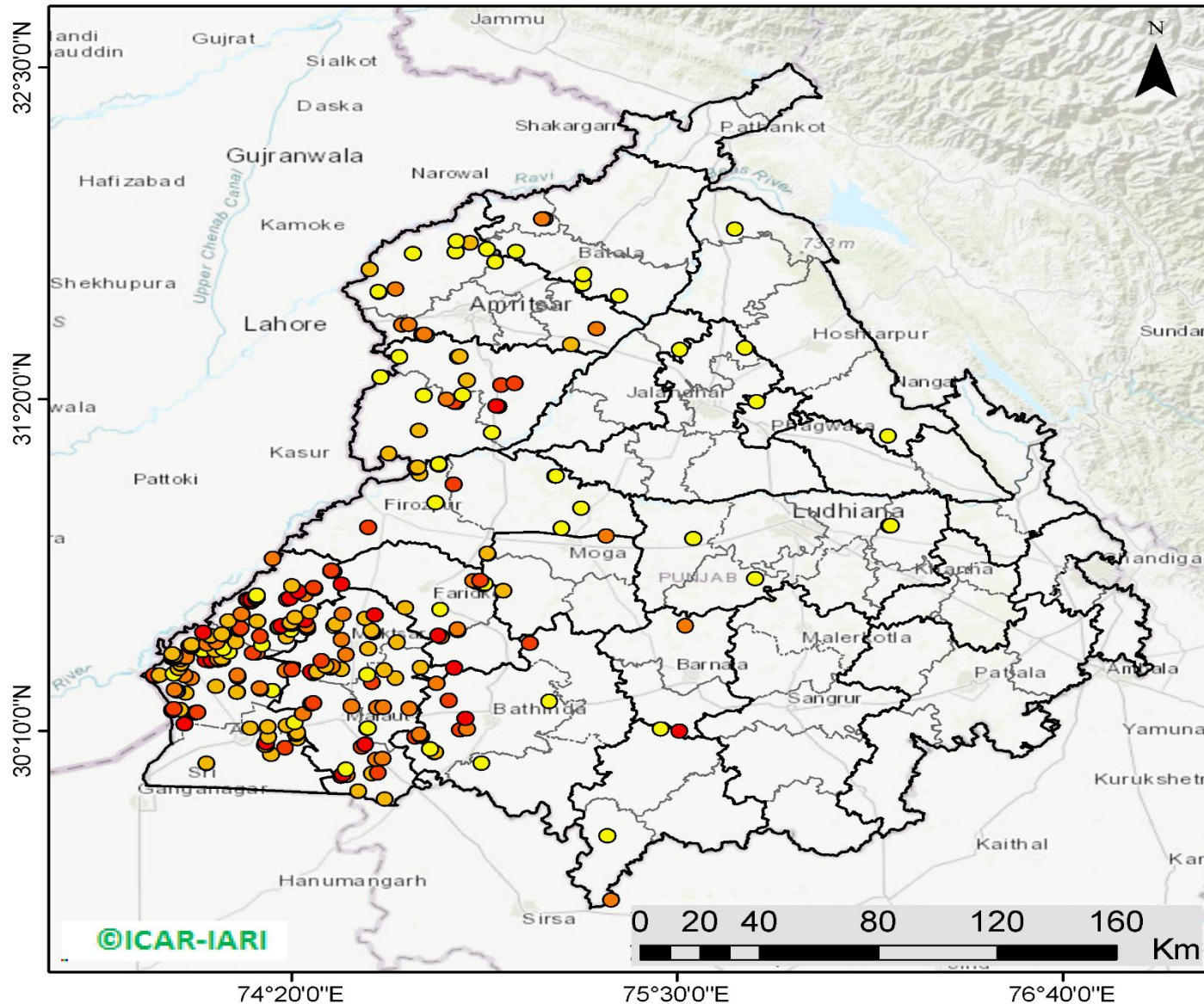


Percent Reduction in Burning events in 2019 over 2018, 2017 and 2016 (Daily Cumulative)



(a) Punjab

RICE RESIDUE BURNING IN PUNJAB



286 burning events detected in Punjab on 23rd November 2019

Fire Intensity (W/m²)

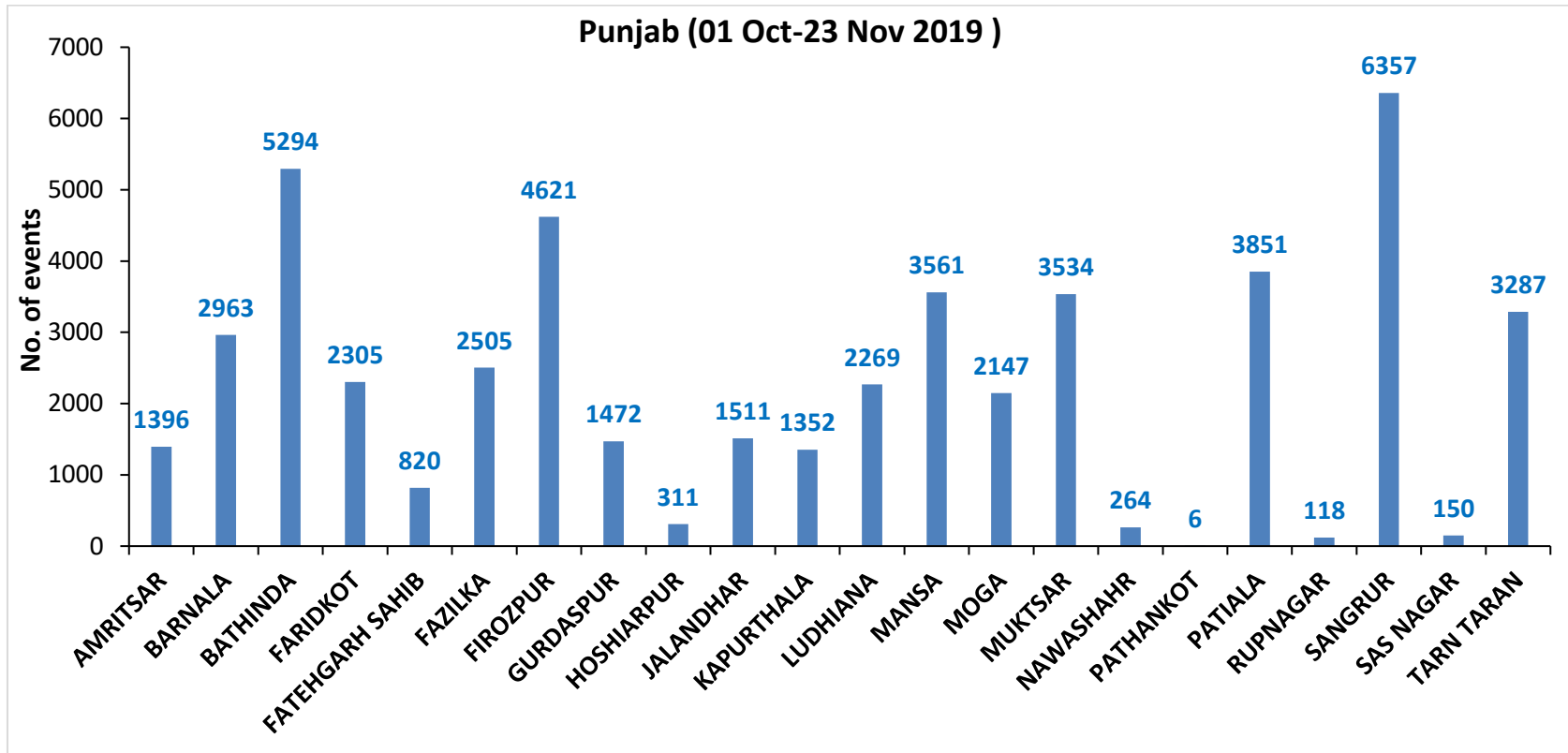
- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- >20

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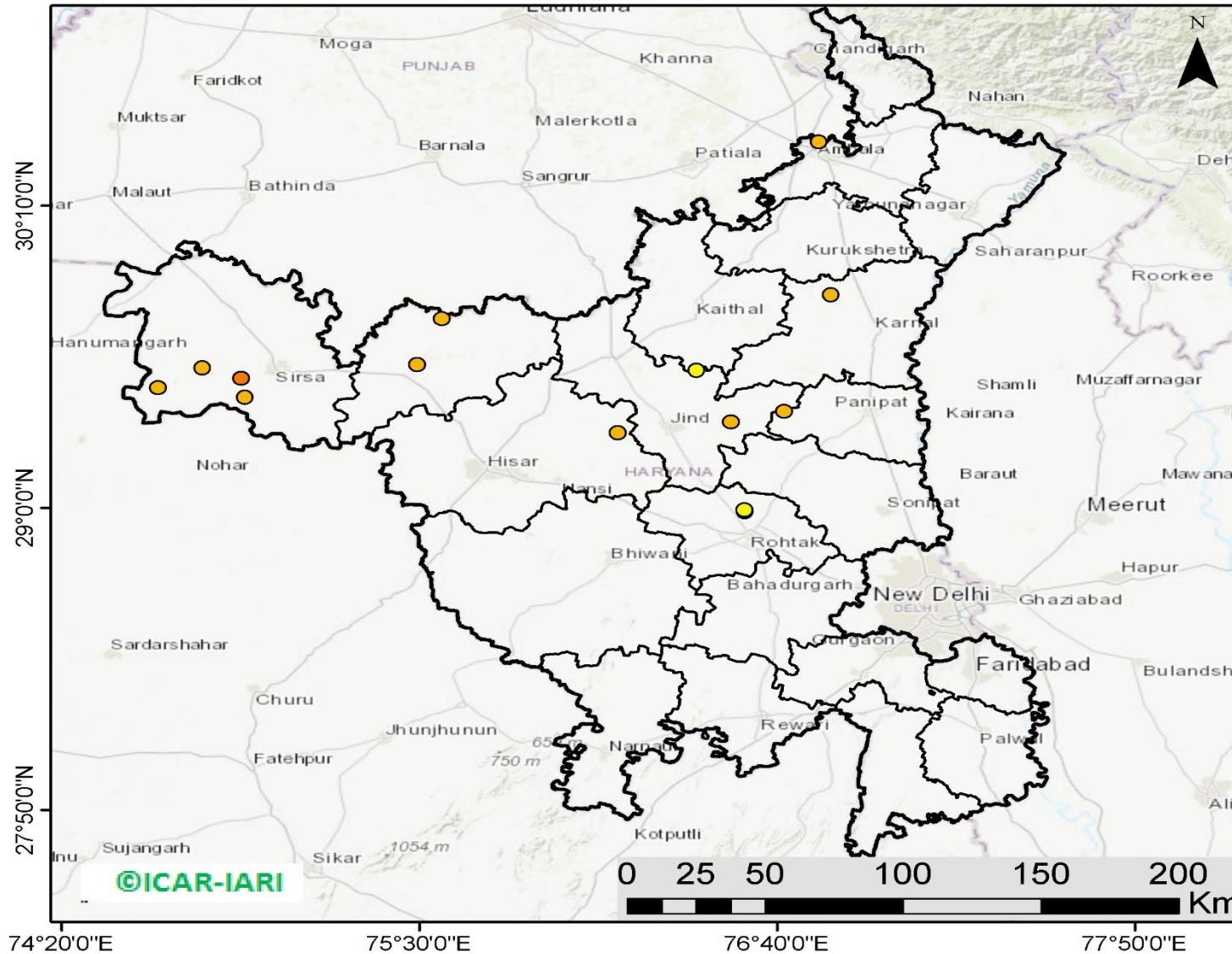
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Punjab (01 Oct to 23-Nov 2019)



(b) Haryana

RICE RESIDUE BURNING IN HARYANA



14 burning events
detected in Haryana on
23rd November 2019

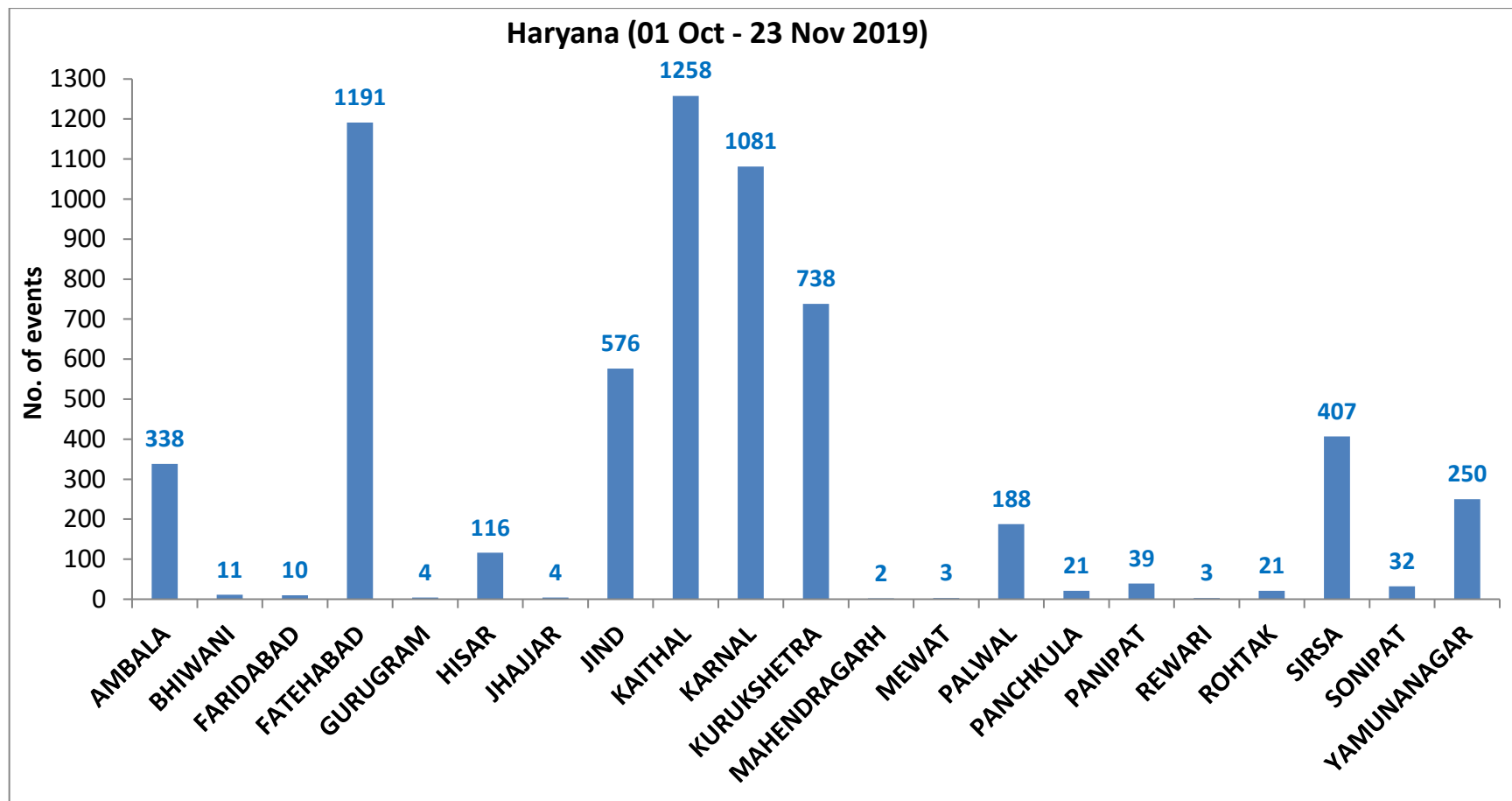
Fire Intensity (W/m²)

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



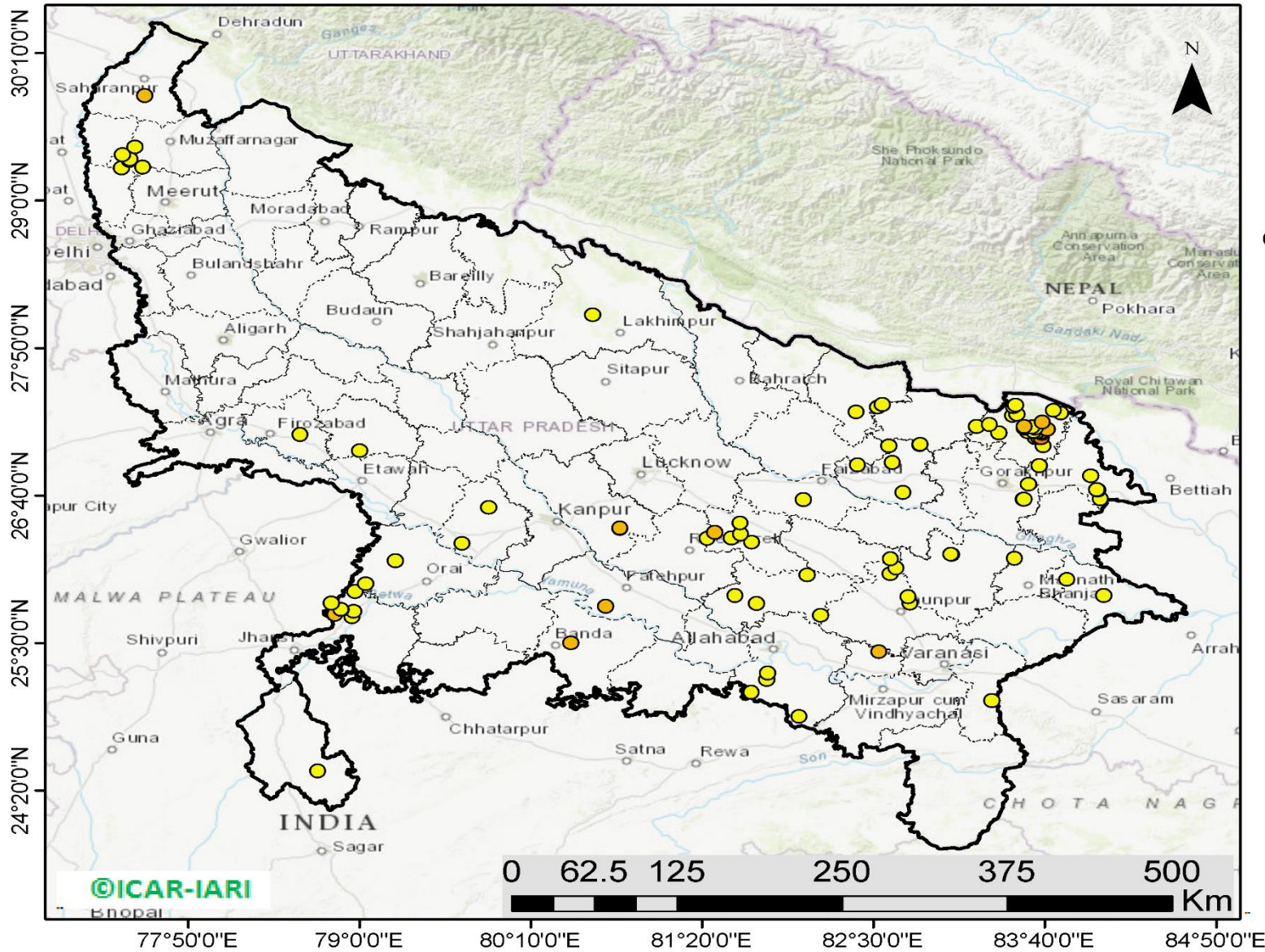
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Haryana (01 Oct to 23-Nov 2019)



(c) UP

RICE RESIDUE BURNING IN UTTAR PRADESH



100 burning events detected in Uttar Pradesh on 23rd November 2019

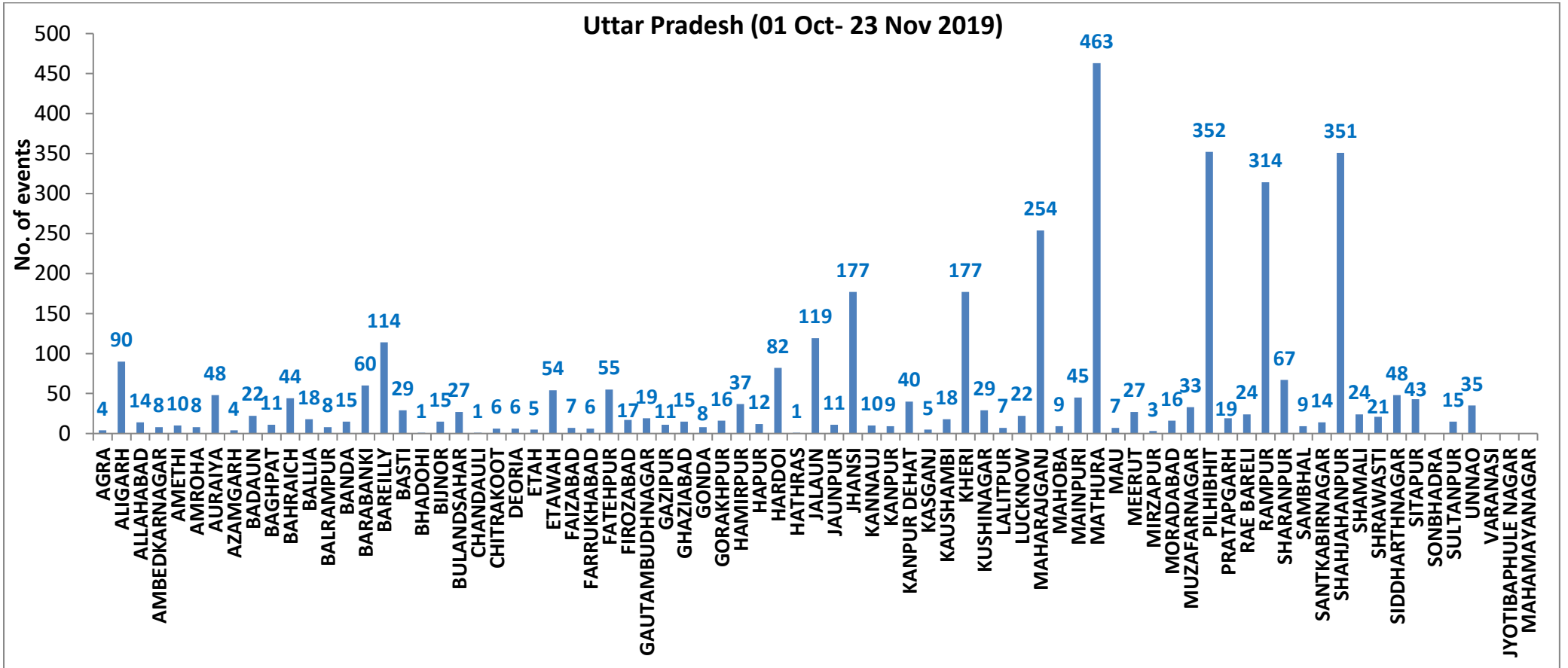
Fire Intensity (W/m²)

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



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

District-wise cumulative number of residues burning events in Uttar Pradesh (01 Oct to 23-Nov 2019)



State-wise, date-wise and district-wise number of residues burning events detected in 2016, 2017, 2018 and 2019
(Period: 01-Oct to 23-Nov)

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

03-Nov	2646	972	2109	3806	68	202	240	275	56	181	75	409	2770	1355	2424	4490
04-Nov	6001	882	4603	4477	383	77	499	146	75	183	168	265	6459	1142	5270	4888
05-Nov	4199	2989	2876	4137	253	129	625	345	124	163	367	125	4576	3281	3868	4607
06-Nov	4642	3071	171	6303	243	222	26	322	118	130	357	215	5003	3423	554	6840
07-Nov	189	4033	420	8575	2	568	46	821	33	108	149	244	224	4709	615	9640
08-Nov	462	4450	2256	4129	16	313	128	432	54	338	43	419	532	5101	2427	4980
09-Nov	2003	2083	675	4857	199	199	311	608	96	294	107	205	2298	2473	1093	5670
10-Nov	2046	1675	1642	2468	151	85	509	484	147	125	131	109	2344	1885	2282	3061
11-Nov	783	1364	103	5040	78	196	29	716	174	45	358	129	1035	1605	490	5885
12-Nov	520	1256	33	1477	68	122	3	634	210	45	269	129	798	1423	305	2240
13-Nov	10	1563	237	885	16	146	7	389	79	94	109	338	105	1803	353	1612
14-Nov	0	765	1101	692	1	189	340	171	22	128	95	247	23	1082	1536	1110
15-Nov	92	1480	5	871	29	107	40	107	111	146	123	154	232	1733	168	1132
16-Nov	23	1250	8	911	59	204	17	318	79	112	218	123	161	1566	243	1352
17-Nov	332	1132	217	638	85	289	12	299	265	103	249	130	682	1524	478	1067
18-Nov	740	1400	2147	568	70	356	139	312	113	111	180	217	923	1867	2466	1097
19-Nov	1221	752	2200	168	82	159	471	125	39	3	122	273	1342	914	2793	566
20-Nov	1007	385	1857	240	74	88	325	204	64	243	101	183	1145	716	2283	627
21-Nov	151	480	2310	112	37	161	378	115	84	107	205	86	272	748	2893	313
22-Nov	21	287	719	99	19	122	154	118	116	72	281	148	156	481	1154	365
23-Nov	283	317	1033	54	14	180	259	97	100	106	163	151	400	603	1455	302
Total	50094	59198	65352	102245	6293	8809	12067	15458	3725	5789	7790	8771	60112	73796	85209	126474

(a) Punjab

Districts	01Oct-23 Nov			
	2016	2017	2018	2019
AMRITSAR	2170	1340	1326	1396
BARNALA	5697	3343	3264	2963
BATHINDA	8838	5554	6328	5294
FARIDKOT	4626	3439	3048	2305
FATEHGARH SAHIB	2461	1633	857	820
FAZILKA	0	0	0	2505
FIROZPUR	13608	9591	9915	4621
GURDASPUR	2215	1575	1153	1472
HOSHIARPUR	900	488	198	311
JALANDHAR	4660	2088	1380	1511
KAPURTHALA	3134	1608	747	1352
LUDHIANA	9535	4539	2973	2269
MANSA	5640	4440	4300	3561
MOGA	6393	2605	2721	2147
MUKTSAR	7025	5198	5722	3534
NAWASHAHR (SBS Nagar)	1609	812	381	264
PATHANKOT	0	0	0	6
PATIALA	6539	5028	4213	3851
RUPNAGAR	717	326	86	118
SANGRUR	11860	8394	7772	6357
SAS NAGAR	115	107	104	150
TARN TARAN	4503	3244	2710	3287
Total	102245	65352	59198	50094

(b) Haryana

Districts	01Oct-23 Nov			
	2016	2017	2018	2019
AMBALA	531	495	329	338
BHIWANI	85	35	15	11
FARIDABAD	288	341	185	10
FATEHABAD	4808	3554	2453	1191
GURUGRAM	0	0	0	4
HISAR	396	178	195	116
JHAJJAR	33	18	26	4
JIND	854	936	871	576
KAITHAL	1748	1512	1290	1258
KARNAL	1626	1503	848	1081
KURUKSHETRA	1078	1146	680	738
MAHENDRAGARH	0	0	0	2
MEWAT	0	0	0	3
PALWAL	0	0	0	188
PANCHKULA	0	0	3	21
PANIPAT	92	94	58	39
REWARI	0	0	0	3
ROHTAK	92	70	31	21
SIRSA	3497	1807	1601	407
SONIPAT	87	68	33	32
YAMUNANAGAR	243	310	191	250
Total	15458	12067	8809	6293

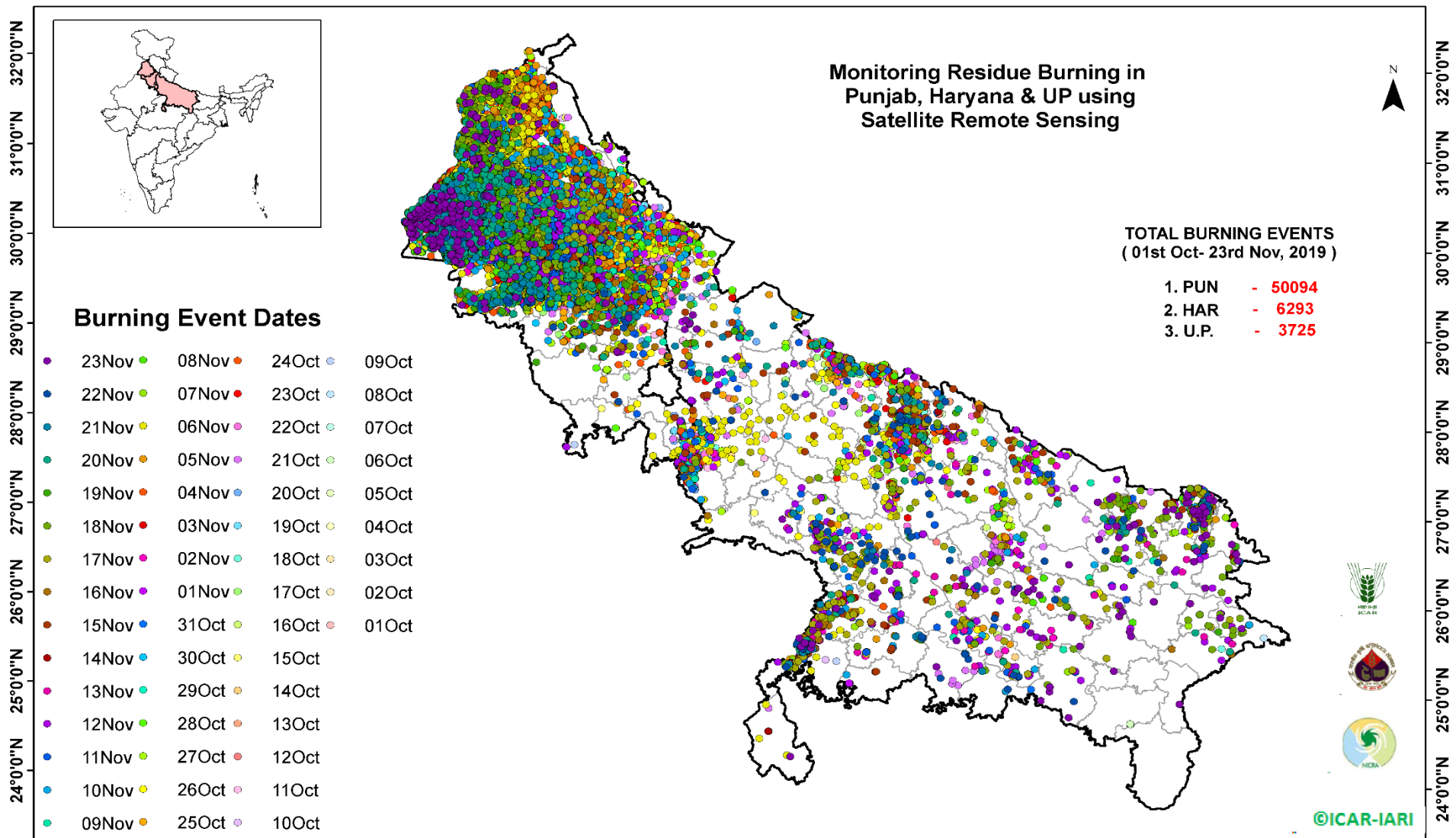
(c) Uttar Pradesh

Districts	01Oct-23 Nov			
	2016	2017	2018	2019
AGRA	0	0	0	4
ALIGARH	53	80	92	90
ALLAHABAD	5	13	13	14
AMBEDKARNAGAR	69	50	16	8
AMETHI	0	0	0	10
AMROHA	0	0	0	8
AURAIYA	238	211	59	48
AZAMGARH	37	41	28	4
BADAUN	7	7	11	22
BAGHPAT	0	0	0	11
BAHRAICH	71	40	58	44
BALLIA	18	37	17	18
BALRAMPUR	34	27	41	8
BANDA	2	17	9	15
BARABANKI	214	166	171	60
BAREILLY	247	218	114	114
BASTI	142	184	116	29
BHADOHI	0	0	0	1
BIJNOR	58	54	13	15
BULANDSAHAR	29	30	15	27
CHANDAULI	11	9	1	1
CHITRAKOOT	0	0	0	6
DEORIA	61	74	55	6
ETAH	18	31	26	5
ETAWAH	150	120	48	54
FAIZABAD	14	12	8	7
FARRUKHABAD	0	0	0	6
FATEHPUR	66	53	78	55
FIROZABAD	23	18	9	17

GAUTAMBUDHNAGAR	25	42	12	19
GAZIPUR	13	14	17	11
GHAZIABAD	77	51	35	15
GONDA	46	34	18	8
GORAKHPUR	63	112	121	16
HAMIRPUR	0	0	1	37
HAPUR	0	0	0	12
HARDOI	244	200	109	82
HATHRAS	0	0	0	1
JALAUN	0	0	0	119
JAUNPUR	19	25	18	11
JHANSI	0	0	2	177
KANNAUJ	33	18	6	10
KANPUR	16	9	13	9
KANPUR DEHAT	59	63	21	40
KASGANJ	0	0	0	5
KAUSHAMBI	26	45	42	18
KHERI	440	275	202	177
KUSHINAGAR	53	140	129	29
LALITPUR	0	0	0	7
LUCKNOW	61	30	26	22
MAHARAJGANJ	646	994	968	254
MAHOBA	0	0	0	9
MAINPURI	87	90	47	45
MATHURA	1454	1083	1048	463
MAU	12	18	12	7
MEERUT	81	83	20	27
MIRZAPUR	5	13	6	3
MORADABAD	50	36	13	16
MUZAFARNAGAR	133	146	45	33
PILHIBHIT	940	723	431	352
PRATAPGARH	39	51	31	19

RAE BARELI	96	90	43	24
RAMPUR	619	628	223	314
SHARANPUR	107	125	62	67
SAMBHAL	0	0	0	9
SANTKABIRNAGAR	55	61	51	14
SHAHJAHANPUR	1141	684	381	351
SHAMALI	0	0	0	24
SHRAWASTI	32	31	36	21
SIDDHARTHANAGAR	246	184	464	48
SITAPUR	124	73	42	43
SONBHADRA	15	14	11	0
SULTANPUR	69	44	33	15
UNNAO	63	54	40	35
VARANASI	2	0	0	0
JYOTIBAPHULE NAGAR	11	13	4	0
MAHAMAYANAGAR	2	2	8	0
Total	8771	7790	5789	3725

Map of Cumulative Burning Events (01 Oct – 23 Nov 2019)



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

Details of residue burning events in Punjab on 23-Nov-2019

S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m2)
1	AMRITSAR	AJNALA	S-NPP	74.59841	31.70794	13:00:00	D	4.40
2	AMRITSAR	AJNALA	S-NPP	74.59661	31.71072	13:00:00	D	3.90
3	AMRITSAR	AJNALA	S-NPP	74.64879	31.71903	13:00:00	D	10.20
4	AMRITSAR	AJNALA	AQUA	74.57000	31.79000	14:10:00	D	8.80
5	AMRITSAR	AJNALA	S-NPP	74.70145	31.84446	13:00:00	D	2.90
6	AMRITSAR	AJNALA	S-NPP	74.83089	31.85008	13:00:00	D	3.50
7	AMRITSAR	AJNALA	S-NPP	74.92513	31.86119	13:00:00	D	3.00
8	AMRITSAR	AJNALA	S-NPP	74.87276	31.88315	13:00:00	D	5.80
9	AMRITSAR	AJNALA	S-NPP	74.87532	31.88362	13:00:00	D	5.60
10	AMRITSAR	AJNALA	S-NPP	74.83359	31.88863	13:00:00	D	3.40
11	AMRITSAR	AMRITSAR I	S-NPP	74.95056	31.81438	13:00:00	D	2.50
12	AMRITSAR	AMRITSAR II	AQUA	74.66900	31.59300	14:10:00	D	10.30
13	AMRITSAR	AMRITSAR II	AQUA	74.68900	31.59500	14:10:00	D	13.40
14	AMRITSAR	BABA BAKALA	S-NPP	75.25667	31.57985	13:00:00	D	11.60
15	BARNALA	BARNALA	S-NPP	75.52522	30.53612	13:00:00	D	13.50
16	BARNALA	TAPPA	TERRA	75.50800	30.16500	10:55:00	D	34.00
17	BATHINDA	BATHINDA	S-NPP	74.76614	30.08935	13:00:00	D	4.90
18	BATHINDA	BATHINDA	S-NPP	74.76823	30.09047	13:00:00	D	5.50
19	BATHINDA	BATHINDA	S-NPP	74.75237	30.10196	13:00:00	D	4.30
20	BATHINDA	BATHINDA	AQUA	74.70900	30.14500	14:10:00	D	15.60
21	BATHINDA	BATHINDA	AQUA	74.72800	30.14700	14:10:00	D	16.90
22	BATHINDA	BATHINDA	S-NPP	74.72351	30.14978	13:00:00	D	11.80
23	BATHINDA	BATHINDA	S-NPP	74.72212	30.15448	13:00:00	D	11.80
24	BATHINDA	BATHINDA	AQUA	74.84400	30.17000	14:10:00	D	17.50
25	BATHINDA	BATHINDA	AQUA	74.86400	30.17200	14:10:00	D	11.30
26	BATHINDA	BATHINDA	AQUA	74.86000	30.20900	14:10:00	D	23.50
27	BATHINDA	BATHINDA	S-NPP	75.11396	30.27064	13:00:00	D	2.90
28	BATHINDA	BATHINDA	S-NPP	74.80933	30.27396	13:00:00	D	19.80
29	BATHINDA	BATHINDA	AQUA	74.82500	30.38700	14:10:00	D	20.80
30	BATHINDA	RAMPURA PHUL	AQUA	75.05500	30.47400	14:10:00	D	19.60

31	BATHINDA	TALWANDI SABO	S-NPP	74.90921	30.05215	13:00:00	D	3.90
32	FARIDKOT	FARIDKOT	AQUA	74.78600	30.49700	14:10:00	D	11.30
33	FARIDKOT	FARIDKOT	AQUA	74.77800	30.50200	14:10:00	D	20.30
34	FARIDKOT	FARIDKOT	S-NPP	74.78362	30.59212	13:00:00	D	4.20
35	FARIDKOT	FARIDKOT	S-NPP	74.67733	30.59814	13:00:00	D	6.10
36	FARIDKOT	FARIDKOT	S-NPP	74.91466	30.68007	13:00:00	D	2.80
37	FARIDKOT	FARIDKOT	AQUA	74.48600	30.68100	14:10:00	D	28.10
38	FARIDKOT	FARIDKOT	AQUA	74.89200	30.68900	14:10:00	D	28.20
39	FARIDKOT	FARIDKOT	AQUA	74.88400	30.69300	14:10:00	D	13.60
40	FARIDKOT	FARIDKOT	AQUA	74.90400	30.69500	14:10:00	D	18.10
41	FARIDKOT	JAITO	S-NPP	74.83801	30.51946	13:00:00	D	34.60
42	FARIDKOT	JAITO	S-NPP	74.83663	30.52409	13:00:00	D	11.30
43	FAZILKA	ABOHAR	S-NPP	74.07770	30.05016	14:36:00	D	7.30
44	FAZILKA	ABOHAR	S-NPP	74.07767	30.05146	14:36:00	D	6.20
45	FAZILKA	ABOHAR	S-NPP	74.27111	30.08369	13:00:00	D	5.50
46	FAZILKA	ABOHAR	AQUA	74.31500	30.10700	14:10:00	D	15.80
47	FAZILKA	ABOHAR	S-NPP	74.25658	30.11580	14:36:00	D	7.40
48	FAZILKA	ABOHAR	S-NPP	74.25410	30.11607	14:36:00	D	10.90
49	FAZILKA	ABOHAR	AQUA	74.25700	30.12500	14:10:00	D	36.50
50	FAZILKA	ABOHAR	S-NPP	74.35219	30.14023	13:00:00	D	8.60
51	FAZILKA	ABOHAR	S-NPP	74.26439	30.14581	13:00:00	D	5.60
52	FAZILKA	ABOHAR	S-NPP	74.34793	30.15463	13:00:00	D	6.70
53	FAZILKA	ABOHAR	AQUA	74.20900	30.17500	14:10:00	D	7.90
54	FAZILKA	ABOHAR	AQUA	74.26300	30.18000	14:10:00	D	9.30
55	FAZILKA	ABOHAR	S-NPP	74.31942	30.18401	13:00:00	D	5.70
56	FAZILKA	ABOHAR	S-NPP	74.34267	30.19439	13:00:00	D	4.10
57	FAZILKA	FAZILKA	AQUA	74.01000	30.19000	14:10:00	D	27.00
58	FAZILKA	FAZILKA	S-NPP	74.04286	30.23042	13:00:00	D	9.40
59	FAZILKA	FAZILKA	S-NPP	74.04927	30.23188	13:00:00	D	19.60
60	FAZILKA	FAZILKA	S-NPP	73.97354	30.23780	14:36:00	D	23.00
61	FAZILKA	FAZILKA	S-NPP	73.97343	30.23962	14:36:00	D	19.70
62	FAZILKA	FAZILKA	S-NPP	73.99834	30.24111	13:00:00	D	7.30
63	FAZILKA	FAZILKA	S-NPP	73.99670	30.24122	13:00:00	D	5.60

64	FAZILKA	FAZILKA	AQUA	73.97800	30.24400	14:10:00	D	19.80
65	FAZILKA	FAZILKA	S-NPP	74.01308	30.29910	14:36:00	D	8.40
66	FAZILKA	FAZILKA	S-NPP	74.17085	30.30088	13:00:00	D	4.50
67	FAZILKA	FAZILKA	S-NPP	74.16878	30.30215	13:00:00	D	7.60
68	FAZILKA	FAZILKA	S-NPP	73.98787	30.30548	14:36:00	D	3.60
69	FAZILKA	FAZILKA	S-NPP	73.98617	30.30628	14:36:00	D	5.70
70	FAZILKA	FAZILKA	S-NPP	74.27686	30.30810	14:36:00	D	3.10
71	FAZILKA	FAZILKA	AQUA	73.98100	30.31100	14:10:00	D	13.30
72	FAZILKA	FAZILKA	S-NPP	74.24116	30.31154	13:00:00	D	10.10
73	FAZILKA	FAZILKA	S-NPP	74.23889	30.31325	13:00:00	D	8.10
74	FAZILKA	FAZILKA	AQUA	74.23800	30.31700	14:10:00	D	10.10
75	FAZILKA	FAZILKA	AQUA	74.10500	30.32300	14:10:00	D	9.00
76	FAZILKA	FAZILKA	AQUA	74.02900	30.35100	14:10:00	D	14.90
77	FAZILKA	FAZILKA	S-NPP	74.17204	30.35593	14:36:00	D	7.70
78	FAZILKA	FAZILKA	S-NPP	73.91798	30.35860	13:00:00	D	13.10
79	FAZILKA	FAZILKA	S-NPP	73.91952	30.35932	13:00:00	D	39.50
80	FAZILKA	FAZILKA	S-NPP	73.92446	30.36011	13:00:00	D	23.30
81	FAZILKA	FAZILKA	AQUA	74.01000	30.36100	14:10:00	D	11.40
82	FAZILKA	FAZILKA	S-NPP	73.91774	30.36215	14:36:00	D	18.20
83	FAZILKA	FAZILKA	S-NPP	73.93424	30.36271	14:36:00	D	7.80
84	FAZILKA	FAZILKA	S-NPP	74.17010	30.36304	14:36:00	D	10.10
85	FAZILKA	FAZILKA	S-NPP	73.97745	30.36726	13:00:00	D	3.70
86	FAZILKA	FAZILKA	S-NPP	73.99226	30.38635	13:00:00	D	5.90
87	FAZILKA	FAZILKA	S-NPP	73.99962	30.40125	14:36:00	D	7.80
88	FAZILKA	FAZILKA	S-NPP	73.99954	30.40228	14:36:00	D	8.00
89	FAZILKA	FAZILKA	AQUA	74.08600	30.41300	14:10:00	D	38.50
90	FAZILKA	FAZILKA	AQUA	74.07500	30.41400	14:10:00	D	23.60
91	FAZILKA	FAZILKA	S-NPP	74.11283	30.41430	13:00:00	D	9.40
92	FAZILKA	FAZILKA	S-NPP	73.99917	30.41578	14:36:00	D	9.70
93	FAZILKA	FAZILKA	AQUA	74.09200	30.41600	14:10:00	D	30.70
94	FAZILKA	FAZILKA	S-NPP	74.12540	30.41721	13:00:00	D	17.40
95	FAZILKA	FAZILKA	S-NPP	74.11139	30.41913	13:00:00	D	10.70
96	FAZILKA	FAZILKA	S-NPP	74.12396	30.42204	13:00:00	D	9.00

97	FAZILKA	FAZILKA	S-NPP	73.97386	30.42215	14:36:00	D	14.80
98	FAZILKA	FAZILKA	S-NPP	73.98221	30.42245	14:36:00	D	12.00
99	FAZILKA	FAZILKA	S-NPP	73.97363	30.42333	14:36:00	D	7.80
100	FAZILKA	FAZILKA	S-NPP	73.98199	30.42358	14:36:00	D	7.80
101	FAZILKA	FAZILKA	S-NPP	74.01573	30.42365	14:36:00	D	15.10
102	FAZILKA	FAZILKA	S-NPP	74.00714	30.42434	14:36:00	D	10.50
103	FAZILKA	FAZILKA	S-NPP	74.01558	30.42460	14:36:00	D	10.50
104	FAZILKA	FAZILKA	AQUA	73.97700	30.42600	14:10:00	D	43.60
105	FAZILKA	FAZILKA	S-NPP	73.98199	30.42971	14:36:00	D	12.00
106	FAZILKA	FAZILKA	S-NPP	73.98174	30.43085	14:36:00	D	7.80
107	FAZILKA	FAZILKA	S-NPP	73.97343	30.43667	14:36:00	D	6.10
108	FAZILKA	FAZILKA	AQUA	74.22800	30.43900	14:10:00	D	10.70
109	FAZILKA	FAZILKA	AQUA	74.21700	30.44000	14:10:00	D	18.50
110	FAZILKA	FAZILKA	S-NPP	74.14469	30.44228	13:00:00	D	4.30
111	FAZILKA	FAZILKA	S-NPP	74.06554	30.44732	14:36:00	D	3.50
112	FAZILKA	FAZILKA	S-NPP	74.06532	30.44800	14:36:00	D	3.80
113	FAZILKA	FAZILKA	S-NPP	74.10264	30.44812	13:00:00	D	9.80
114	FAZILKA	FAZILKA	S-NPP	74.12781	30.45387	13:00:00	D	4.90
115	FAZILKA	FAZILKA	S-NPP	74.03144	30.46065	14:36:00	D	5.80
116	FAZILKA	FAZILKA	S-NPP	74.03113	30.46151	14:36:00	D	10.50
117	FAZILKA	FAZILKA	AQUA	74.02500	30.46500	14:10:00	D	48.10
118	FAZILKA	FAZILKA	S-NPP	74.03086	30.46879	14:36:00	D	9.30
119	FAZILKA	FAZILKA	AQUA	74.07800	30.47100	14:10:00	D	11.80
120	FAZILKA	FAZILKA	S-NPP	74.10680	30.47854	14:36:00	D	13.70
121	FAZILKA	FAZILKA	S-NPP	74.16664	30.48044	14:36:00	D	5.60
122	FAZILKA	FAZILKA	S-NPP	74.08711	30.49961	14:36:00	D	6.10
123	FAZILKA	FAZILKA	S-NPP	74.08912	30.49990	14:36:00	D	9.00
124	FAZILKA	FAZILKA	S-NPP	74.12576	30.50493	13:00:00	D	11.60
125	FAZILKA	FAZILKA	S-NPP	74.12353	30.50654	13:00:00	D	5.70
126	FAZILKA	FAZILKA	AQUA	74.06700	30.51300	14:10:00	D	20.50
127	FAZILKA	JALALABAD	S-NPP	74.24467	30.46814	14:36:00	D	5.80
128	FAZILKA	JALALABAD	S-NPP	74.24474	30.46845	14:36:00	D	4.00
129	FAZILKA	JALALABAD	S-NPP	74.31973	30.49762	13:00:00	D	6.50

130	FAZILKA	JALALABAD	AQUA	74.23900	30.49900	14:10:00	D	20.00
131	FAZILKA	JALALABAD	S-NPP	74.33228	30.52081	13:00:00	D	3.90
132	FAZILKA	JALALABAD	AQUA	74.17500	30.52300	14:10:00	D	19.90
133	FAZILKA	JALALABAD	S-NPP	74.38234	30.52703	13:00:00	D	7.00
134	FAZILKA	JALALABAD	AQUA	74.18000	30.52800	14:10:00	D	15.20
135	FAZILKA	JALALABAD	S-NPP	74.29472	30.53089	13:00:00	D	7.00
136	FAZILKA	JALALABAD	S-NPP	74.38091	30.53177	13:00:00	D	14.30
137	FAZILKA	JALALABAD	S-NPP	74.29601	30.53300	13:00:00	D	4.80
138	FAZILKA	JALALABAD	AQUA	74.30300	30.53600	14:10:00	D	29.80
139	FAZILKA	JALALABAD	S-NPP	74.37949	30.53652	13:00:00	D	14.30
140	FAZILKA	JALALABAD	S-NPP	74.33733	30.54076	13:00:00	D	9.20
141	FAZILKA	JALALABAD	S-NPP	74.33267	30.54123	13:00:00	D	7.30
142	FAZILKA	JALALABAD	S-NPP	74.33876	30.54259	13:00:00	D	14.20
143	FAZILKA	JALALABAD	S-NPP	74.32983	30.54412	13:00:00	D	9.20
144	FAZILKA	JALALABAD	S-NPP	74.33592	30.54552	13:00:00	D	9.20
145	FAZILKA	JALALABAD	S-NPP	74.33123	30.54598	13:00:00	D	7.30
146	FAZILKA	JALALABAD	S-NPP	74.22948	30.55159	13:00:00	D	5.70
147	FAZILKA	JALALABAD	S-NPP	74.14316	30.55226	13:00:00	D	9.30
148	FAZILKA	JALALABAD	AQUA	74.37600	30.55400	14:10:00	D	22.00
149	FAZILKA	JALALABAD	S-NPP	74.34519	30.56433	13:00:00	D	6.20
150	FAZILKA	JALALABAD	S-NPP	74.18234	30.57663	13:00:00	D	12.50
151	FAZILKA	JALALABAD	S-NPP	74.20799	30.62044	14:36:00	D	35.40
152	FAZILKA	JALALABAD	S-NPP	74.21218	30.62074	14:36:00	D	29.00
153	FAZILKA	JALALABAD	S-NPP	74.19910	30.62756	14:36:00	D	28.10
154	FAZILKA	JALALABAD	S-NPP	74.20775	30.62779	14:36:00	D	35.40
155	FAZILKA	JALALABAD	S-NPP	74.20331	30.62782	14:36:00	D	45.50
156	FAZILKA	JALALABAD	S-NPP	74.21198	30.62810	14:36:00	D	29.00
157	FAZILKA	JALALABAD	AQUA	74.32100	30.62900	14:10:00	D	13.70
158	FAZILKA	JALALABAD	AQUA	74.22700	30.63200	14:10:00	D	34.60
159	FAZILKA	JALALABAD	AQUA	74.32800	30.63300	14:10:00	D	23.70
160	FAZILKA	JALALABAD	S-NPP	74.22911	30.63603	14:36:00	D	5.50
161	FAZILKA	JALALABAD	S-NPP	74.22848	30.64062	13:00:00	D	5.10
162	FAZILKA	JALALABAD	S-NPP	74.22821	30.64324	13:00:00	D	4.10

163	FAZILKA	JALALABAD	AQUA	74.35700	30.64400	14:10:00	D	58.40
164	FAZILKA	JALALABAD	AQUA	74.37600	30.64600	14:10:00	D	11.80
165	FAZILKA	JALALABAD	AQUA	74.35500	30.65600	14:10:00	D	39.70
166	FAZILKA	JALALABAD	S-NPP	74.40244	30.66558	13:00:00	D	15.10
167	FAZILKA	JALALABAD	S-NPP	74.40274	30.66708	13:00:00	D	23.90
168	FAZILKA	JALALABAD	S-NPP	74.40103	30.67030	13:00:00	D	15.10
169	FAZILKA	JALALABAD	S-NPP	74.33521	30.67540	13:00:00	D	6.60
170	FAZILKA	JALALABAD	AQUA	74.46100	30.72700	14:10:00	D	13.70
171	FAZILKA	JALALABAD	S-NPP	74.45399	30.72777	13:00:00	D	2.50
172	FAZILKA	JALALABAD	AQUA	74.45500	30.73100	14:10:00	D	17.20
173	FAZILKA	JALALABAD	S-NPP	74.27796	30.77264	13:00:00	D	10.80
174	FIROZPUR	FIROZPUR	S-NPP	74.92811	30.78821	13:00:00	D	6.80
175	FIROZPUR	FIROZPUR	S-NPP	74.92634	30.79009	13:00:00	D	7.50
176	FIROZPUR	FIROZPUR	AQUA	74.56600	30.88200	14:10:00	D	19.20
177	FIROZPUR	FIROZPUR	S-NPP	74.76945	30.96808	13:00:00	D	3.40
178	FIROZPUR	FIROZPUR	S-NPP	74.72226	31.06948	13:00:00	D	6.00
179	FIROZPUR	FIROZPUR	S-NPP	74.78159	31.09981	13:00:00	D	4.30
180	FIROZPUR	FIROZPUR	S-NPP	74.77872	31.10188	13:00:00	D	11.00
181	FIROZPUR	FIROZPUR	S-NPP	74.78022	31.10439	13:00:00	D	4.30
182	FIROZPUR	ZIRA	S-NPP	75.15129	30.87906	13:00:00	D	3.80
183	FIROZPUR	ZIRA	S-NPP	75.21060	30.94951	13:00:00	D	2.90
184	FIROZPUR	ZIRA	AQUA	74.82400	31.03300	14:10:00	D	15.10
185	FIROZPUR	ZIRA	S-NPP	75.13219	31.06118	13:00:00	D	3.70
186	FIROZPUR	ZIRA	S-NPP	75.13480	31.06229	13:00:00	D	2.70
187	GURDASPUR	BATALA	S-NPP	75.32412	31.69534	13:00:00	D	5.00
188	GURDASPUR	BATALA	S-NPP	75.21323	31.73690	13:00:00	D	2.80
189	GURDASPUR	BATALA	S-NPP	75.21504	31.73893	13:00:00	D	2.40
190	GURDASPUR	BATALA	S-NPP	75.21626	31.77208	13:00:00	D	3.20
191	GURDASPUR	BATALA	S-NPP	75.01293	31.85196	13:00:00	D	3.10
192	GURDASPUR	DERA BABA NANAK	AQUA	75.10000	31.96600	14:10:00	D	13.30
193	GURDASPUR	DERA BABA NANAK	AQUA	75.09200	31.96700	14:10:00	D	13.20
194	HOSHIARPUR	GARHSHANKAR	S-NPP	76.13855	31.20299	13:00:00	D	3.00
195	HOSHIARPUR	MUKERIAN	S-NPP	75.67526	31.93102	13:00:00	D	4.00

196	JALANDHAR	JALANDHAR I	S-NPP	75.74073	31.32386	13:00:00	D	3.80
197	JALANDHAR	JALANDHAR II	S-NPP	75.70534	31.51269	13:00:00	D	1.90
198	KAPURTHALA	BHOLATH	S-NPP	75.50890	31.50672	13:00:00	D	2.50
199	LUDHIANA	JAGRAON	S-NPP	75.54927	30.84271	13:00:00	D	4.90
200	LUDHIANA	RAIKOT	S-NPP	75.73620	30.70102	13:00:00	D	3.30
201	LUDHIANA	SAMRALA	S-NPP	76.14143	30.88757	13:00:00	D	3.60
202	LUDHIANA	SAMRALA	S-NPP	76.14617	30.88857	13:00:00	D	3.60
203	MANSA	MANSA	S-NPP	75.45149	30.17244	13:00:00	D	4.80
204	MANSA	SARDULGARH	METOP-2	75.30069	29.57127	20:29:00	N	12.50
205	MANSA	SARDULGARH	S-NPP	75.28863	29.79665	13:00:00	D	4.10
206	MOGA	BAGHA PURANA	S-NPP	74.97449	30.65903	13:00:00	D	6.70
207	MOGA	BAGHA PURANA	S-NPP	74.91730	30.68325	13:00:00	D	5.00
208	MOGA	MOGA	S-NPP	75.28601	30.85164	13:00:00	D	11.40
209	MUKTSAR	GIDDARBAHA	AQUA	74.69100	30.24500	14:10:00	D	10.50
210	MUKTSAR	GIDDARBAHA	AQUA	74.59300	30.24800	14:10:00	D	10.50
211	MUKTSAR	GIDDARBAHA	AQUA	74.61200	30.25000	14:10:00	D	10.30
212	MUKTSAR	GIDDARBAHA	AQUA	74.51600	30.25300	14:10:00	D	12.60
213	MUKTSAR	GIDDARBAHA	AQUA	74.59100	30.26000	14:10:00	D	54.00
214	MUKTSAR	GIDDARBAHA	AQUA	74.77200	30.33300	14:10:00	D	12.40
215	MUKTSAR	GIDDARBAHA	S-NPP	74.57771	30.33637	13:00:00	D	18.70
216	MUKTSAR	GIDDARBAHA	S-NPP	74.64869	30.35232	13:00:00	D	7.20
217	MUKTSAR	GIDDARBAHA	S-NPP	74.61539	30.37994	13:00:00	D	9.50
218	MUKTSAR	GIDDARBAHA	AQUA	74.72500	30.38900	14:10:00	D	10.00
219	MUKTSAR	GIDDARBAHA	S-NPP	74.65312	30.47834	13:00:00	D	5.30
220	MUKTSAR	MALAUT	S-NPP	74.61599	29.92644	13:00:00	D	7.50
221	MUKTSAR	MALAUT	AQUA	74.55300	29.94900	14:10:00	D	90.10
222	MUKTSAR	MALAUT	S-NPP	74.53551	29.95248	13:00:00	D	4.50
223	MUKTSAR	MALAUT	S-NPP	74.53686	29.95446	13:00:00	D	8.30
224	MUKTSAR	MALAUT	AQUA	74.48400	30.00800	14:10:00	D	20.30
225	MUKTSAR	MALAUT	AQUA	74.50200	30.01000	14:10:00	D	13.70
226	MUKTSAR	MALAUT	AQUA	74.48800	30.01400	14:10:00	D	30.40
227	MUKTSAR	MALAUT	AQUA	74.57700	30.01700	14:10:00	D	9.90
228	MUKTSAR	MALAUT	AQUA	74.59600	30.01900	14:10:00	D	18.20

229	MUKTSAR	MALAUT	S-NPP	74.49948	30.03081	13:00:00	D	4.80
230	MUKTSAR	MALAUT	AQUA	74.59000	30.06600	14:10:00	D	15.00
231	MUKTSAR	MALAUT	AQUA	74.60900	30.06800	14:10:00	D	14.30
232	MUKTSAR	MALAUT	AQUA	74.54600	30.11000	14:10:00	D	19.10
233	MUKTSAR	MALAUT	AQUA	74.55700	30.11900	14:10:00	D	25.80
234	MUKTSAR	MALAUT	S-NPP	74.35267	30.16083	13:00:00	D	6.70
235	MUKTSAR	MALAUT	S-NPP	74.56294	30.17321	13:00:00	D	5.30
236	MUKTSAR	MALAUT	S-NPP	74.56430	30.17467	13:00:00	D	4.10
237	MUKTSAR	MALAUT	AQUA	74.36800	30.22600	14:10:00	D	13.10
238	MUKTSAR	MALAUT	AQUA	74.39400	30.26100	14:10:00	D	12.80
239	MUKTSAR	MALAUT	AQUA	74.40000	30.26500	14:10:00	D	15.30
240	MUKTSAR	MALAUT	AQUA	74.31700	30.37900	14:10:00	D	13.10
241	MUKTSAR	MALAUT	AQUA	74.33600	30.38100	14:10:00	D	15.80
242	MUKTSAR	MUKTSAR	S-NPP	74.56339	30.36334	13:00:00	D	4.40
243	MUKTSAR	MUKTSAR	AQUA	74.39900	30.36900	14:10:00	D	29.80
244	MUKTSAR	MUKTSAR	AQUA	74.39300	30.37400	14:10:00	D	23.70
245	MUKTSAR	MUKTSAR	AQUA	74.41100	30.37600	14:10:00	D	9.10
246	MUKTSAR	MUKTSAR	AQUA	74.48600	30.38300	14:10:00	D	9.80
247	MUKTSAR	MUKTSAR	S-NPP	74.45197	30.38772	13:00:00	D	9.20
248	MUKTSAR	MUKTSAR	S-NPP	74.45658	30.39383	13:00:00	D	12.90
249	MUKTSAR	MUKTSAR	S-NPP	74.43708	30.39446	13:00:00	D	7.00
250	MUKTSAR	MUKTSAR	AQUA	74.42500	30.41300	14:10:00	D	19.20
251	MUKTSAR	MUKTSAR	AQUA	74.49900	30.43300	14:10:00	D	11.10
252	MUKTSAR	MUKTSAR	S-NPP	74.56622	30.45389	13:00:00	D	5.60
253	MUKTSAR	MUKTSAR	AQUA	74.48500	30.48700	14:10:00	D	15.00
254	MUKTSAR	MUKTSAR	S-NPP	74.58035	30.51217	13:00:00	D	5.50
255	MUKTSAR	MUKTSAR	S-NPP	74.57699	30.51566	13:00:00	D	9.50
256	MUKTSAR	MUKTSAR	S-NPP	74.57559	30.52036	13:00:00	D	9.50
257	MUKTSAR	MUKTSAR	S-NPP	74.46346	30.53520	13:00:00	D	4.90
258	MUKTSAR	MUKTSAR	S-NPP	74.46802	30.54128	13:00:00	D	10.00
259	MUKTSAR	MUKTSAR	S-NPP	74.55714	30.56130	13:00:00	D	5.40
260	MUKTSAR	MUKTSAR	AQUA	74.58500	30.57400	14:10:00	D	20.10
261	MUKTSAR	MUKTSAR	AQUA	74.48800	30.57700	14:10:00	D	12.40

262	MUKTSAR	MUKTSAR	S-NPP	74.38931	30.58318	13:00:00	D	5.40
263	TARN TARAN	KHADOOR SAHIB	AQUA	74.96000	31.30700	14:10:00	D	15.50
264	TARN TARAN	KHADOOR SAHIB	AQUA	74.95400	31.30800	14:10:00	D	28.30
265	TARN TARAN	KHADOOR SAHIB	AQUA	74.80400	31.33200	14:10:00	D	12.20
266	TARN TARAN	KHADOOR SAHIB	S-NPP	74.85069	31.34727	13:00:00	D	3.80
267	TARN TARAN	KHADOOR SAHIB	S-NPP	74.96806	31.38312	13:00:00	D	17.10
268	TARN TARAN	KHADOOR SAHIB	AQUA	75.00900	31.38800	14:10:00	D	15.20
269	TARN TARAN	KHADOOR SAHIB	S-NPP	74.86464	31.39874	13:00:00	D	6.10
270	TARN TARAN	KHADOOR SAHIB	S-NPP	74.65948	31.48215	13:00:00	D	3.70
271	TARN TARAN	KHADOOR SAHIB	S-NPP	74.83696	31.48267	13:00:00	D	5.70
272	TARN TARAN	KHADOOR SAHIB	S-NPP	74.84244	31.48388	13:00:00	D	9.50
273	TARN TARAN	KHADOOR SAHIB	S-NPP	75.17856	31.52496	13:00:00	D	6.90
274	TARN TARAN	KHADOOR SAHIB	AQUA	74.74200	31.55700	14:10:00	D	8.90
275	TARN TARAN	KHADOOR SAHIB	S-NPP	74.72939	31.55923	13:00:00	D	3.00
276	TARN TARAN	KHADOOR SAHIB	AQUA	74.73500	31.56100	14:10:00	D	10.30
277	TARN TARAN	PATTI	S-NPP	74.71248	31.08958	13:00:00	D	7.40
278	TARN TARAN	PATTI	S-NPP	74.70979	31.09122	13:00:00	D	5.80
279	TARN TARAN	PATTI	S-NPP	74.71543	31.09249	13:00:00	D	5.80
280	TARN TARAN	PATTI	S-NPP	74.62801	31.14177	13:00:00	D	5.10
281	TARN TARAN	PATTI	S-NPP	74.94006	31.21548	13:00:00	D	1.70
282	TARN TARAN	PATTI	S-NPP	74.71811	31.22215	13:00:00	D	8.50
283	TARN TARAN	PATTI	AQUA	74.83100	31.32000	14:10:00	D	17.40
284	TARN TARAN	PATTI	AQUA	74.82600	31.32200	14:10:00	D	18.40
285	TARN TARAN	PATTI	S-NPP	74.73299	31.34522	13:00:00	D	3.00
286	TARN TARAN	PATTI	S-NPP	74.60268	31.41072	13:00:00	D	4.20

Details of residue burning events in Haryana on 23-Nov-2019

S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m ²)
1	AMBALA	AMBALA	S-NPP	76.80238	30.41231	13:00:00	D	5.50
2	FATEHABAD	FATEHABAD	METOP-2	75.49238	29.55330	20:29:00	N	7.00
3	FATEHABAD	RATIA	S-NPP	75.57242	29.73052	13:00:00	D	8.90
4	HISAR	NARNAUND	TERRA	76.14700	29.29000	10:55:00	D	8.00
5	JIND	SAFIDON	S-NPP	76.51566	29.33117	13:00:00	D	6.70
6	KAITHAL	KAITHAL	S-NPP	76.40401	29.53152	13:00:00	D	3.70
7	KARNAL	NILOKHERI	METOP-2	76.84149	29.82280	20:29:00	N	6.00
8	PANIPAT	ISRANA	S-NPP	76.68960	29.37201	13:00:00	D	6.40
9	ROHTAK	ROHTAK	S-NPP	76.56183	28.98405	13:00:00	D	3.30
10	ROHTAK	ROHTAK	S-NPP	76.55949	28.99273	13:00:00	D	3.70
11	SIRSA	ELLENABAD	METOP-2	74.64797	29.46347	20:29:00	N	7.00
12	SIRSA	RANIA	S-NPP	74.79298	29.54125	13:00:00	D	6.90
13	SIRSA	SIRSA	METOP-2	74.93187	29.42754	20:29:00	N	8.25
14	SIRSA	SIRSA	AQUA	74.91800	29.50000	14:10:00	D	13.90

Details of residue burning events in Uttar Pradesh on 23-Nov-2019

S. No.	District	Tehsil / Block	Satellite	Longitude	Latitude	Time (IST)	Day / Night	Fire Power (W/m ²)
1	ALLAHABAD	BARA	S-NPP	81.66785	25.11055	01:42:00	N	0.50
2	ALLAHABAD	BARA	S-NPP	81.77159	25.20924	01:42:00	N	0.40
3	ALLAHABAD	BARA	S-NPP	81.77782	25.26259	01:42:00	N	0.60
4	ALLAHABAD	KORAWN	S-NPP	81.99374	24.91732	12:54:00	D	2.80
5	AMETHI	GAURIGANJ	S-NPP	81.67075	26.29664	12:54:00	D	1.30
6	AMETHI	GAURIGANJ	S-NPP	81.59520	26.36348	12:54:00	D	1.60
7	AMETHI	MUSAFIRKHANA	S-NPP	81.59157	26.44720	01:42:00	N	0.40
8	AZAMGARH	BURHANPUR	S-NPP	83.02971	26.19797	12:54:00	D	2.60
9	AZAMGARH	BURHANPUR	S-NPP	83.02905	26.20133	12:54:00	D	2.60
10	BALLIA	BALLIA	S-NPP	84.06810	25.87472	12:54:00	D	2.00
11	BALLIA	RASRA	S-NPP	83.81770	26.00161	12:54:00	D	2.10
12	BALRAMPUR	TULSIPUR	S-NPP	82.52876	27.36347	12:54:00	D	1.80
13	BALRAMPUR	UTRAULA	S-NPP	82.38174	27.32649	01:42:00	N	0.60
14	BANDA	BANDA	S-NPP	80.43759	25.50010	12:54:00	D	5.30
15	BASTI	BASTI	S-NPP	82.70107	26.69029	12:54:00	D	2.90
16	BASTI	BHANPUR	S-NPP	82.60419	27.05711	01:42:00	N	1.40
17	BASTI	HARRAIYA	S-NPP	82.39303	26.91104	01:42:00	N	0.50
18	BASTI	HARRAIYA	S-NPP	82.62933	26.92795	12:54:00	D	2.30
19	BASTI	RUDHAULI	S-NPP	82.76163	27.04544	01:42:00	N	0.30
20	BHADOHI	BHADOHI	S-NPP	82.53776	25.43020	12:54:00	D	7.90
21	CHANDAULI	CHAKIA	S-NPP	83.30643	25.04531	12:54:00	D	2.10
22	DEORIA	BARHAJ	S-NPP	83.64602	26.33961	01:42:00	N	0.10
23	FAIZABAD	BIKAPUR	S-NPP	82.02418	26.63316	12:54:00	D	3.30
24	FATEHPUR	FATEHPUR	S-NPP	80.67455	25.79178	12:54:00	D	7.50
25	FIROZABAD	SIKOHABAD	S-NPP	78.59590	27.14939	01:42:00	N	0.80
26	GORAKHPUR	CHAURI CHAURA	S-NPP	83.51981	26.63860	12:54:00	D	2.90
27	GORAKHPUR	CHAURI CHAURA	S-NPP	83.52370	26.63922	12:54:00	D	2.90
28	GORAKHPUR	GORAKHPUR	S-NPP	83.55698	26.75616	12:54:00	D	2.80
29	JALAUN	JALAUN	S-NPP	79.24409	26.15216	12:54:00	D	3.00
30	JALAUN	KONCH	S-NPP	79.04111	25.96635	01:42:00	N	0.50

31	JAUNPUR	JAUNPUR	S-NPP	82.74862	25.81551	12:54:00	D	3.30
32	JAUNPUR	SHHGANJ	S-NPP	82.73878	25.86666	12:54:00	D	1.70
33	JAUNPUR	SHHGANJ	S-NPP	82.61478	26.04570	12:54:00	D	3.60
34	JAUNPUR	SHHGANJ	S-NPP	82.65643	26.09482	12:54:00	D	2.10
35	JAUNPUR	SHHGANJ	S-NPP	82.61727	26.16517	12:54:00	D	2.20
36	JHANSI	MOTH	S-NPP	78.94974	25.70598	12:54:00	D	2.80
37	JHANSI	MOTH	S-NPP	78.82910	25.72354	12:54:00	D	7.20
38	JHANSI	MOTH	S-NPP	78.83311	25.72433	12:54:00	D	7.20
39	JHANSI	MOTH	S-NPP	78.96032	25.74924	12:54:00	D	3.20
40	JHANSI	MOTH	S-NPP	78.87839	25.76284	12:54:00	D	4.60
41	JHANSI	MOTH	S-NPP	78.87344	25.76611	12:54:00	D	3.40
42	JHANSI	MOTH	S-NPP	78.80870	25.81603	12:54:00	D	4.70
43	JHANSI	MOTH	S-NPP	78.96990	25.90652	12:54:00	D	3.50
44	KANPUR DEHAT	RASULABAD	S-NPP	79.88084	26.57177	01:42:00	N	0.50
45	KANPUR DEHAT	SIKANDRA	S-NPP	79.69988	26.28773	01:42:00	N	1.30
46	KHERI	GOLA	S-NPP	80.58846	28.09519	01:42:00	N	0.70
47	KUSHINAGAR	HATA	S-NPP	83.62852	26.90349	12:54:00	D	2.80
48	KUSHINAGAR	HATA	S-NPP	83.67700	26.93456	01:42:00	N	0.30
49	KUSHINAGAR	KASAYA	S-NPP	84.04517	26.63987	12:54:00	D	2.40
50	KUSHINAGAR	KASAYA	S-NPP	84.01988	26.71389	12:54:00	D	2.30
51	KUSHINAGAR	KASAYA	S-NPP	83.97910	26.82249	12:54:00	D	2.10
52	KUSHINAGAR	TAMKUHI RAJ	S-NPP	84.02742	26.71197	12:54:00	D	3.90
53	LALITPUR	KHAGA	S-NPP	78.71539	24.48850	12:54:00	D	2.40
54	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.65842	27.05739	12:54:00	D	1.30
55	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.60225	27.12313	12:54:00	D	3.10
56	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.62623	27.12349	12:54:00	D	3.50
57	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.64177	27.12594	12:54:00	D	13.40
58	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.65150	27.15817	12:54:00	D	3.10
59	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.63725	27.16958	12:54:00	D	2.10
60	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.54839	27.17272	12:54:00	D	3.30
61	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.61651	27.17316	12:54:00	D	2.20
62	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.59187	27.17612	12:54:00	D	2.60
63	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.68130	27.19011	12:54:00	D	6.50

64	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.52701	27.19905	12:54:00	D	1.30
65	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.59905	27.20017	12:54:00	D	2.80
66	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.58089	27.21096	12:54:00	D	2.30
67	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.52831	27.21291	12:54:00	D	7.30
68	MAHARAJGANJ	NAUTANWA	S-NPP	83.44718	27.29857	12:54:00	D	2.90
69	MAHARAJGANJ	NAUTANWA	S-NPP	83.47776	27.30683	12:54:00	D	3.40
70	MAHARAJGANJ	NAUTANWA	S-NPP	83.45362	27.36795	12:54:00	D	2.70
71	MAHARAJGANJ	NAUTANWA	S-NPP	83.46729	27.38035	12:54:00	D	2.60
72	MAHARAJGANJ	NICHLAUL	S-NPP	83.64960	27.24906	12:54:00	D	7.10
73	MAHARAJGANJ	NICHLAUL	S-NPP	83.77653	27.31656	12:54:00	D	1.20
74	MAHARAJGANJ	NICHLAUL	S-NPP	83.72816	27.33936	12:54:00	D	2.30
75	MAHARAJGANJ	PHARENDA	S-NPP	83.35322	27.16117	12:54:00	D	3.00
76	MAHARAJGANJ	PHARENDA	S-NPP	83.20130	27.21238	12:54:00	D	1.50
77	MAHARAJGANJ	PHARENDA	S-NPP	83.29102	27.23009	12:54:00	D	2.80
78	MAINPURI	KARHAL	S-NPP	79.00123	27.02107	01:42:00	N	1.00
79	MAU	GHOSI	S-NPP	83.46117	26.16895	12:54:00	D	1.80
80	MUZAFARNAGAR	BUDHANA	S-NPP	77.37733	29.25918	13:00:00	D	4.90
81	MUZAFARNAGAR	BUDHANA	S-NPP	77.52410	29.26330	13:00:00	D	2.90
82	MUZAFARNAGAR	BUDHANA	S-NPP	77.52295	29.26500	13:00:00	D	3.10
83	MUZAFARNAGAR	BUDHANA	S-NPP	77.43398	29.31827	13:00:00	D	3.90
84	MUZAFARNAGAR	BUDHANA	S-NPP	77.43291	29.32237	13:00:00	D	3.90
85	MUZAFARNAGAR	BUDHANA	S-NPP	77.43610	29.32732	13:00:00	D	4.10
86	MUZAFARNAGAR	BUDHANA	S-NPP	77.38403	29.36121	13:00:00	D	2.60
87	MUZAFARNAGAR	BUDHANA	S-NPP	77.47111	29.42204	13:00:00	D	2.70
88	PRATAPGARH	KUNDA	S-NPP	81.70474	25.81299	12:54:00	D	3.70
89	PRATAPGARH	KUNDA	S-NPP	81.55708	25.87428	12:54:00	D	3.30
90	PRATAPGARH	PATTI	S-NPP	82.14092	25.71704	01:42:00	N	0.70
91	PRATAPGARH	PATTI	S-NPP	82.04680	26.03850	12:54:00	D	2.40
92	RAIBEARELI	RAEBARELI	S-NPP	81.36930	26.32776	12:54:00	D	1.30
93	RAIBEARELI	TILOI	S-NPP	81.53394	26.33098	12:54:00	D	1.70
94	RAIBEARELI	TILOI	S-NPP	81.41882	26.37667	12:54:00	D	7.40
95	SHARANPUR	RAMPUR MANIHARRAN	S-NPP	77.53812	29.83090	13:00:00	D	5.30
96	SIDDHARTHANAGAR	BANSI	S-NPP	82.81779	27.06660	01:42:00	N	0.40

97	SIDDHARTHANAGAR	BANSI	S-NPP	82.81846	27.06990	01:42:00	N	0.70
98	SIDDHARTHANAGAR	ITWA	S-NPP	82.56171	27.38632	12:54:00	D	3.70
99	UNNAO	BIGHAPUR	S-NPP	80.77481	26.40607	12:54:00	D	5.60
100	UNNAO	BIGHAPUR	S-NPP	80.77402	26.40970	12:54:00	D	5.60

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 / 1000	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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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)
