



**Bulletin
No. 69**

**Events Date:
22-Nov-2022**

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22-Nov-2022**



MONITORING PADDY RESIDUE BURNING IN INDIA USING SATELLITE REMOTE SENSING DURING 2022



Prepared by:

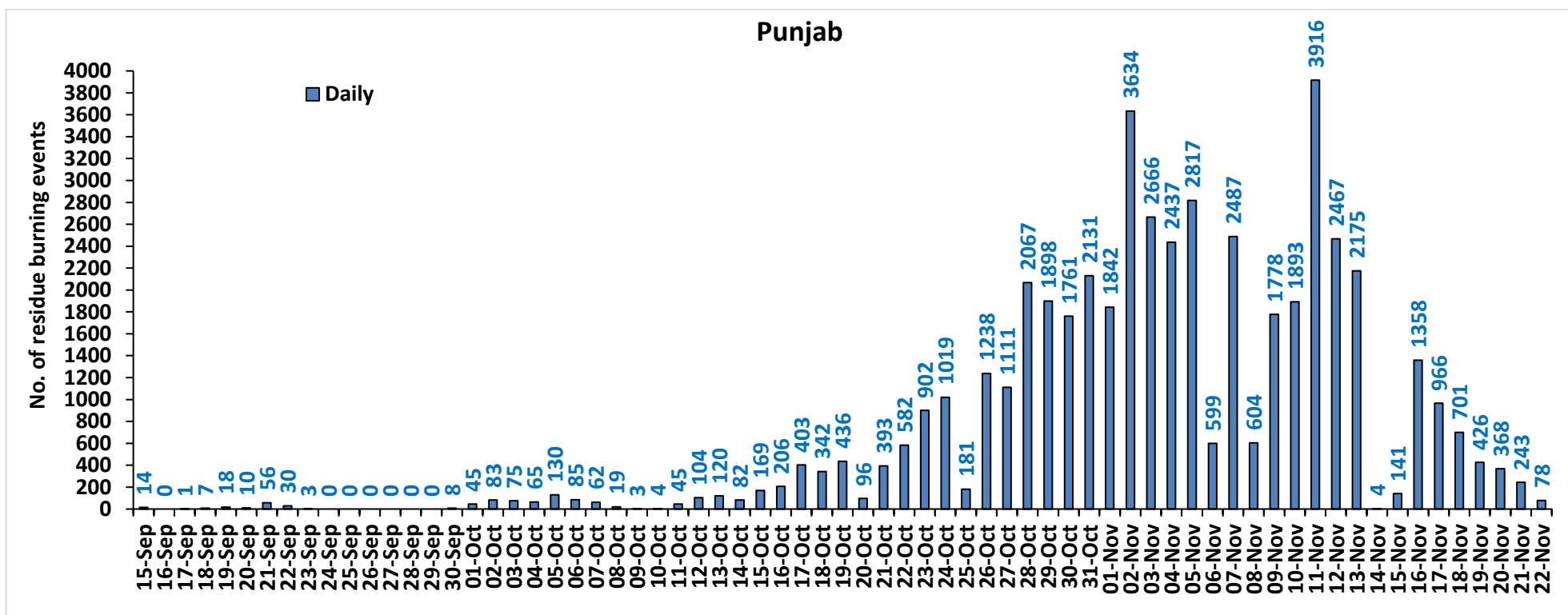
**Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory,
Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012**

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

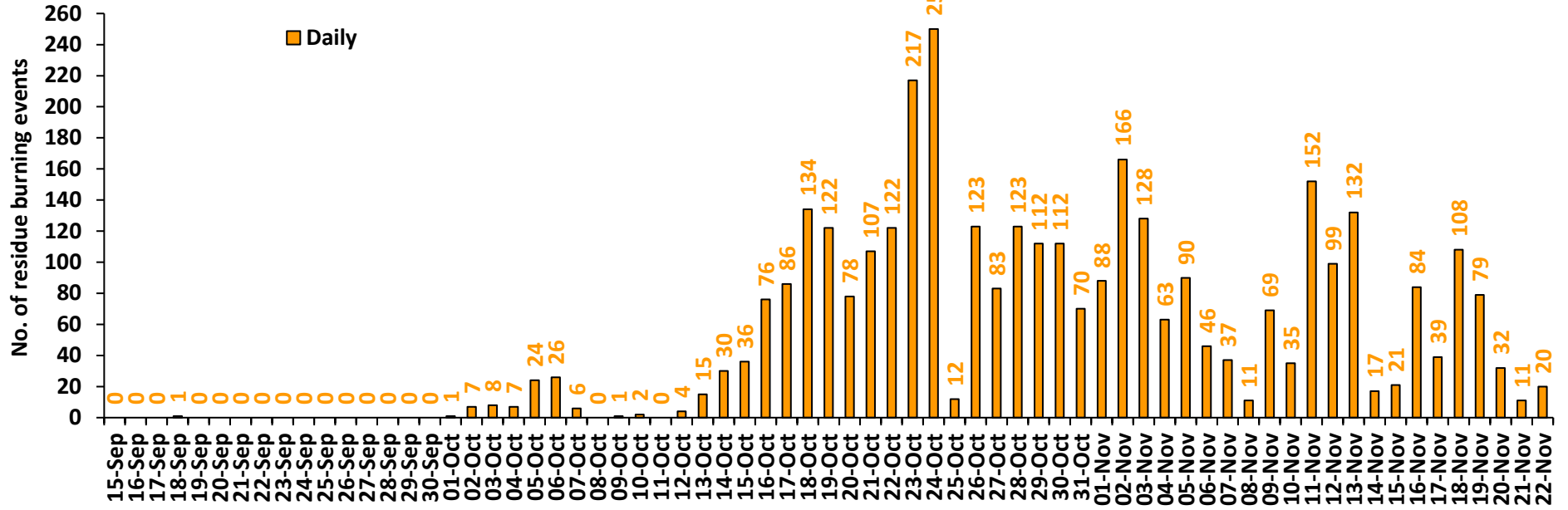
Highlights for 22-Nov-2022

- The active fire events due to rice residue burning were monitored using satellite remote sensing, following the "Standard Protocol for Estimation of Crop Residue Burning Fire Events using Satellite Data".
- Satellites detected **348** residue burning events in the six study States on 22-Nov-2022.
- The state wise events detected on 22-Nov-2022 were **78** in Punjab, **20** in Haryana, **76** in UP, **0** in Delhi, **4** in Rajasthan and **170** in MP.
- Total **66668** burning events were detected in the six states between 15-Sept-2022 and 22-Nov-2022, which are distributed as **49604**, **3522**, **2027**, **9**, **1231** and **10275** in Punjab, Haryana, UP, Delhi, Rajasthan and MP respectively.

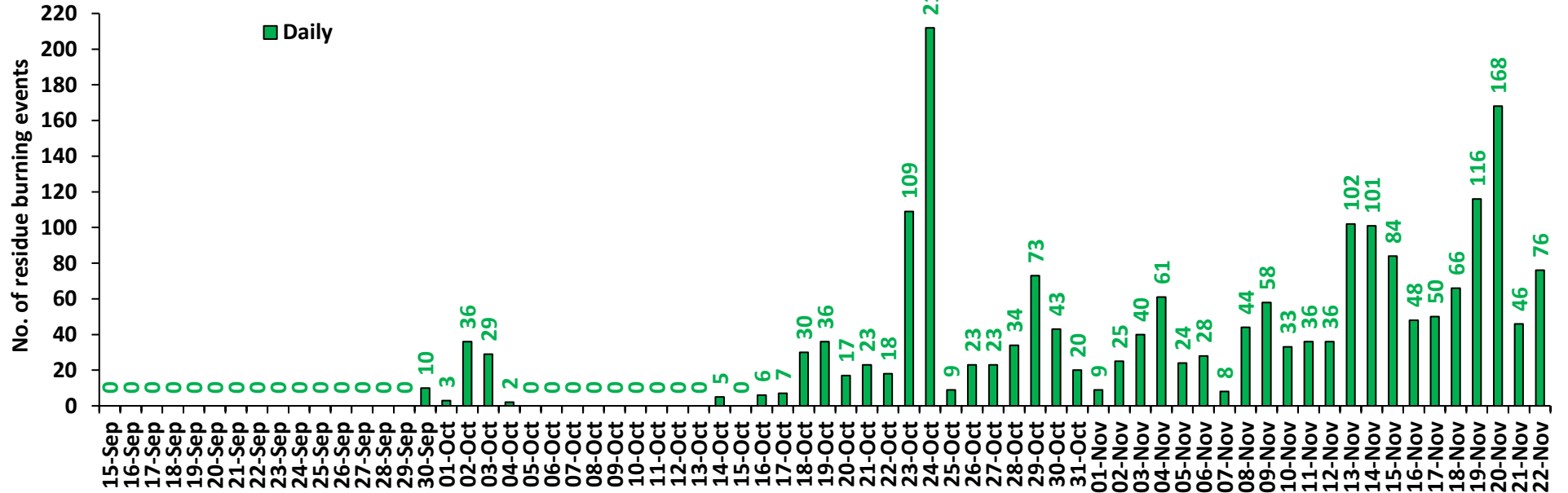
Temporal distribution of rice residue burning events for the study States in 2022



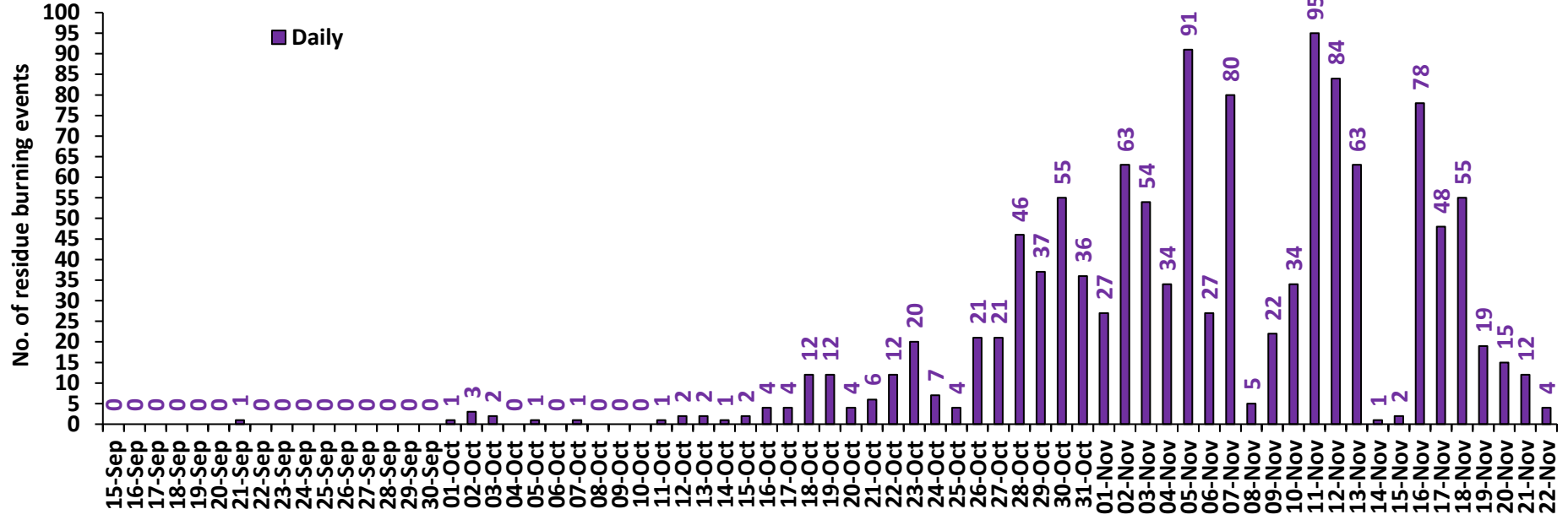
Haryana



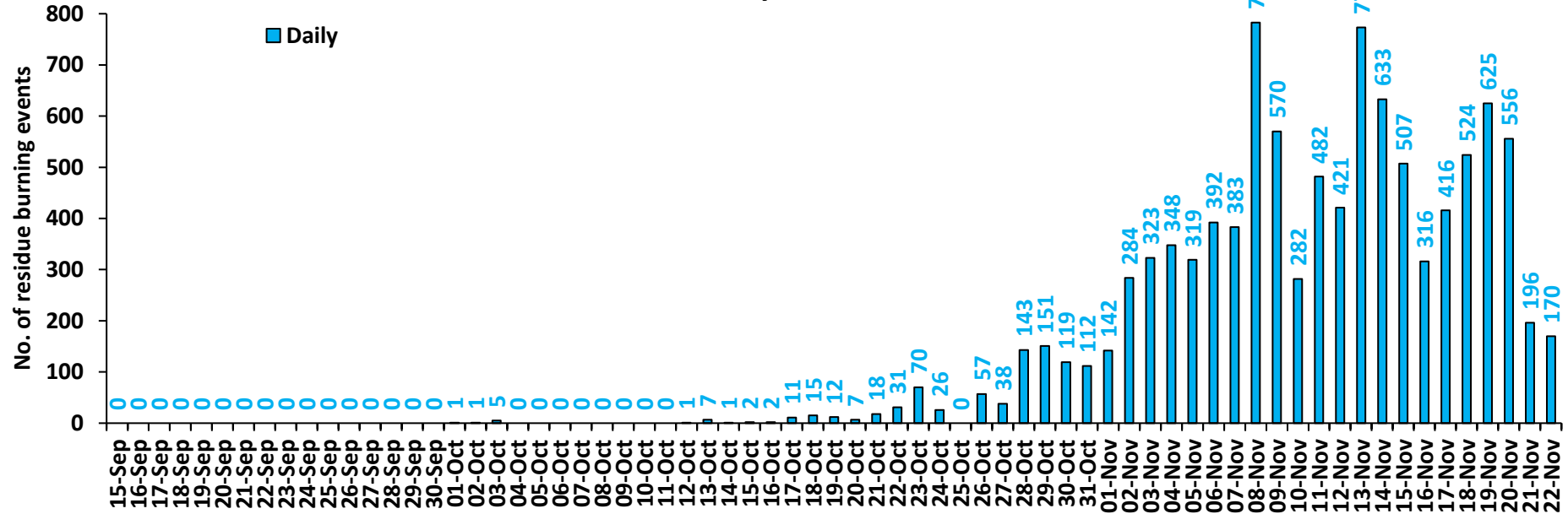
Uttar Pradesh



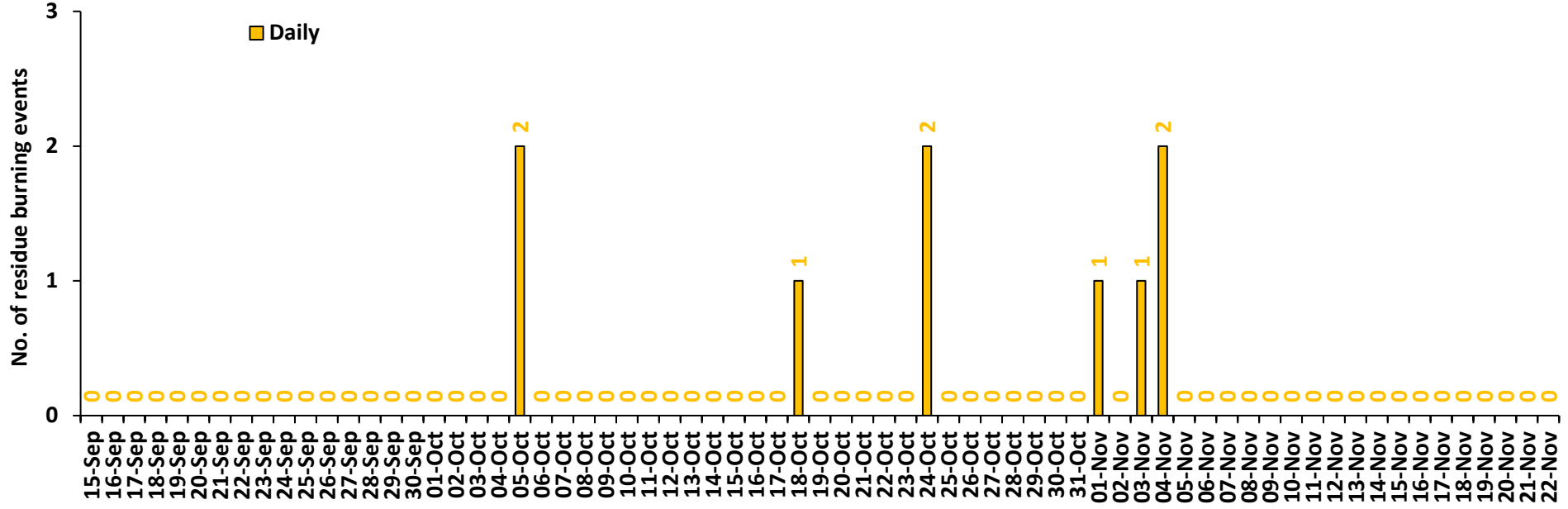
Rajasthan



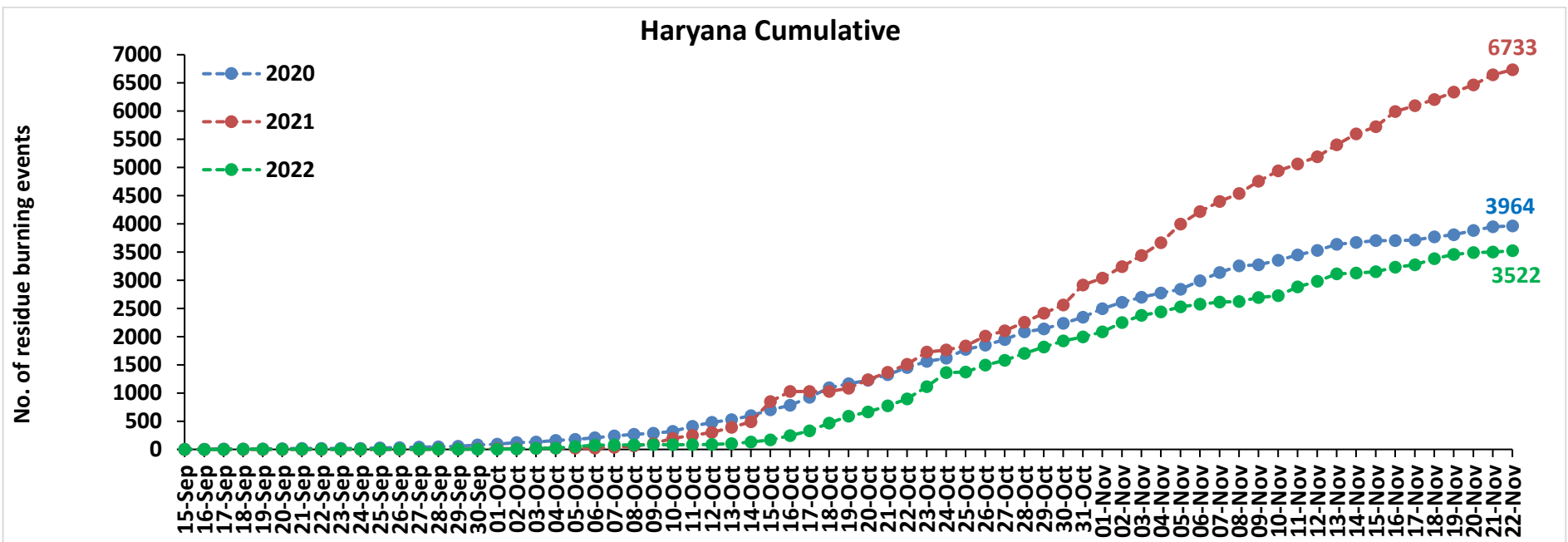
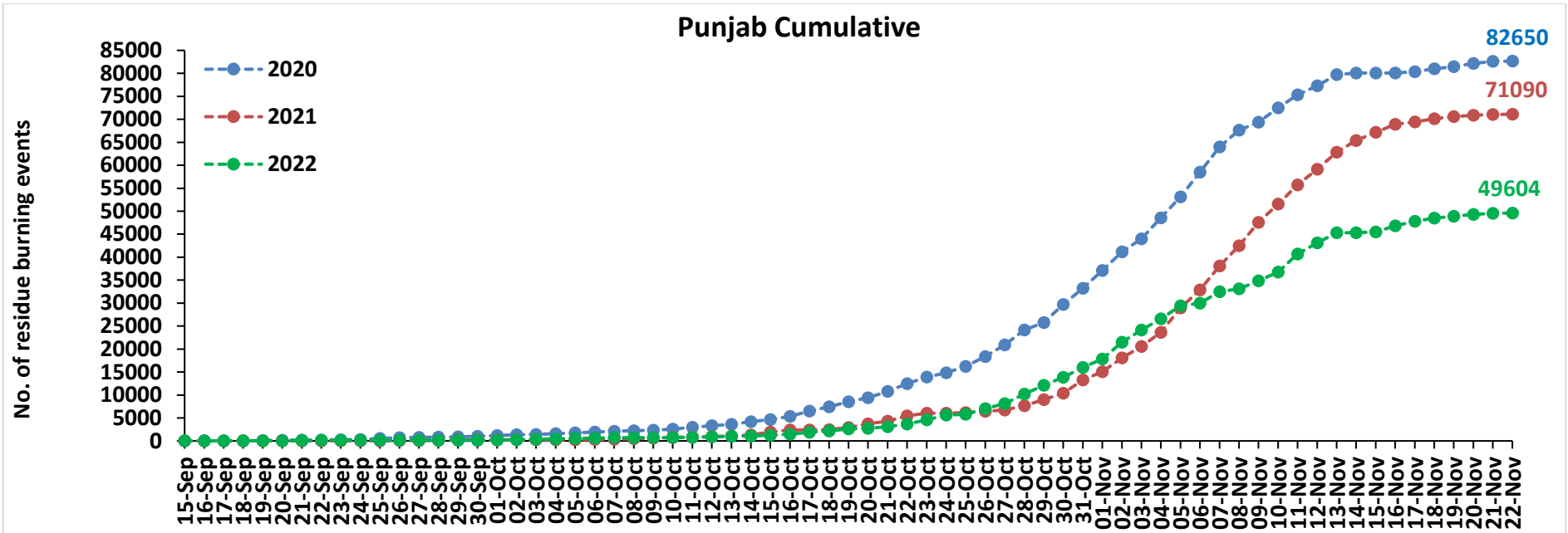
Madhya Pradesh



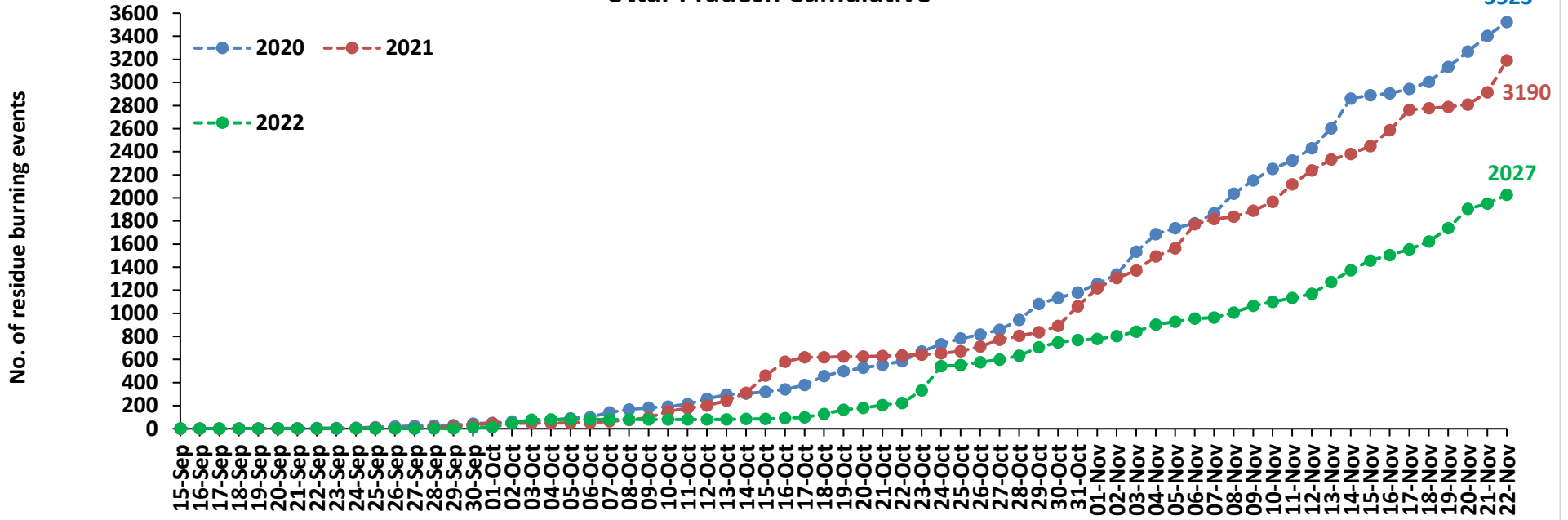
Delhi



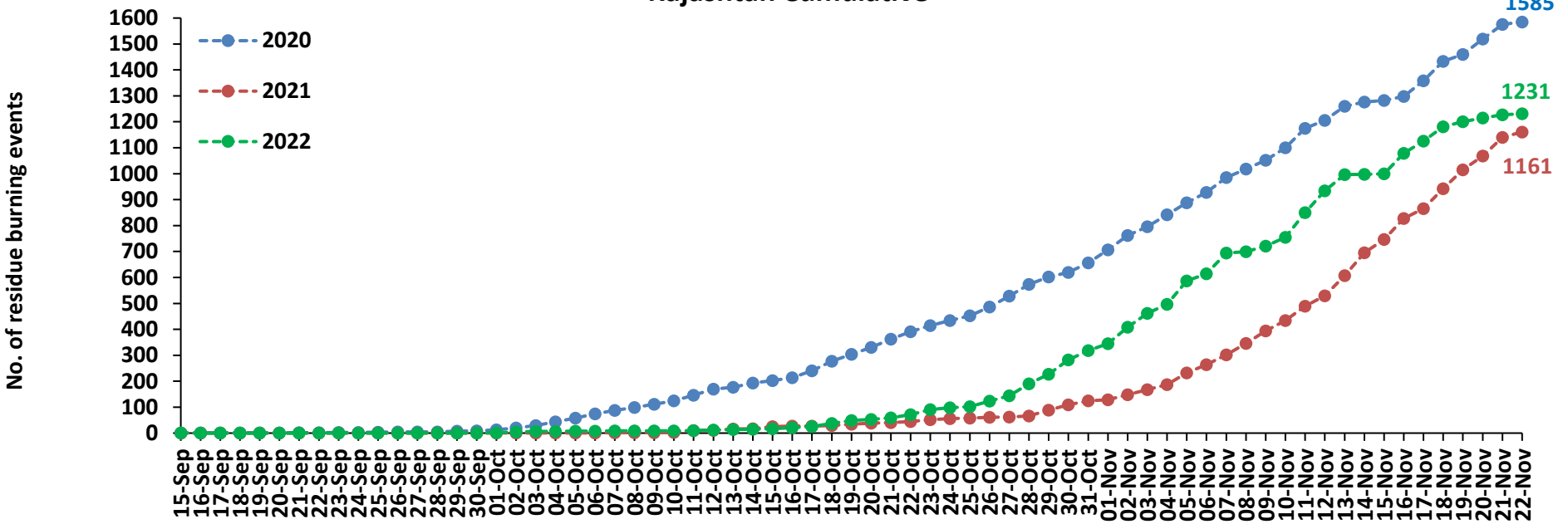
Comparison of residue burning events in current year (2022) with previous years (2020 and 2021) for the study States



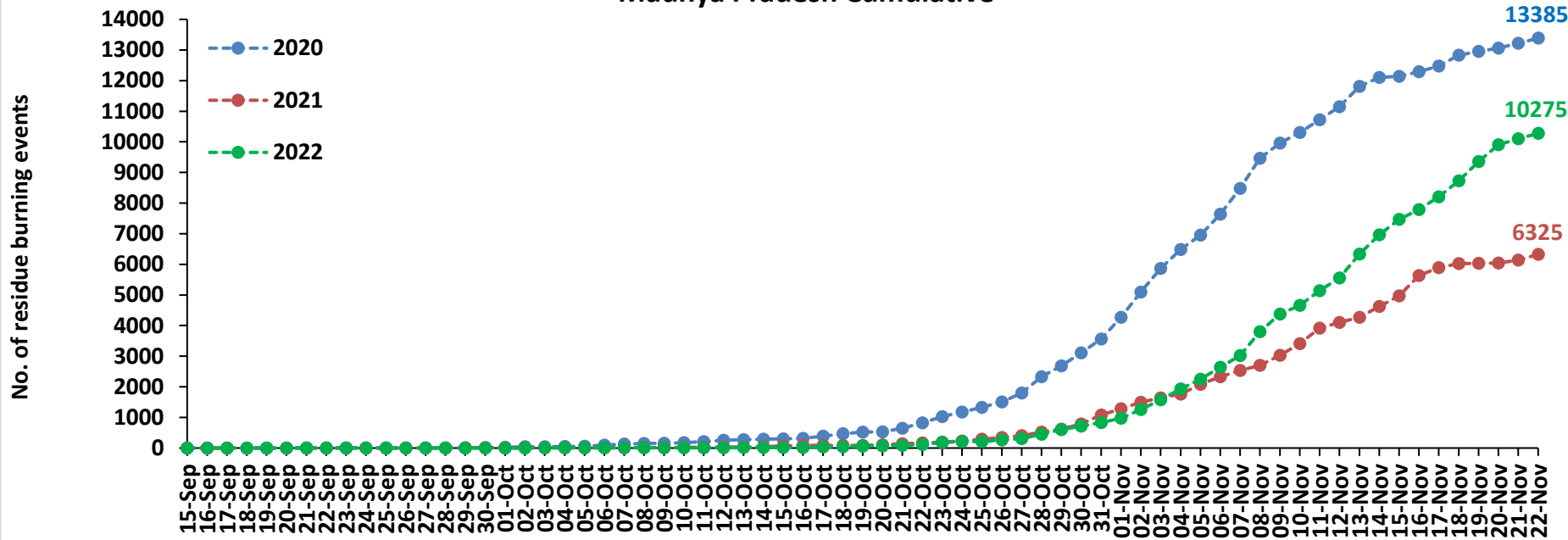
Uttar Pradesh Cumulative



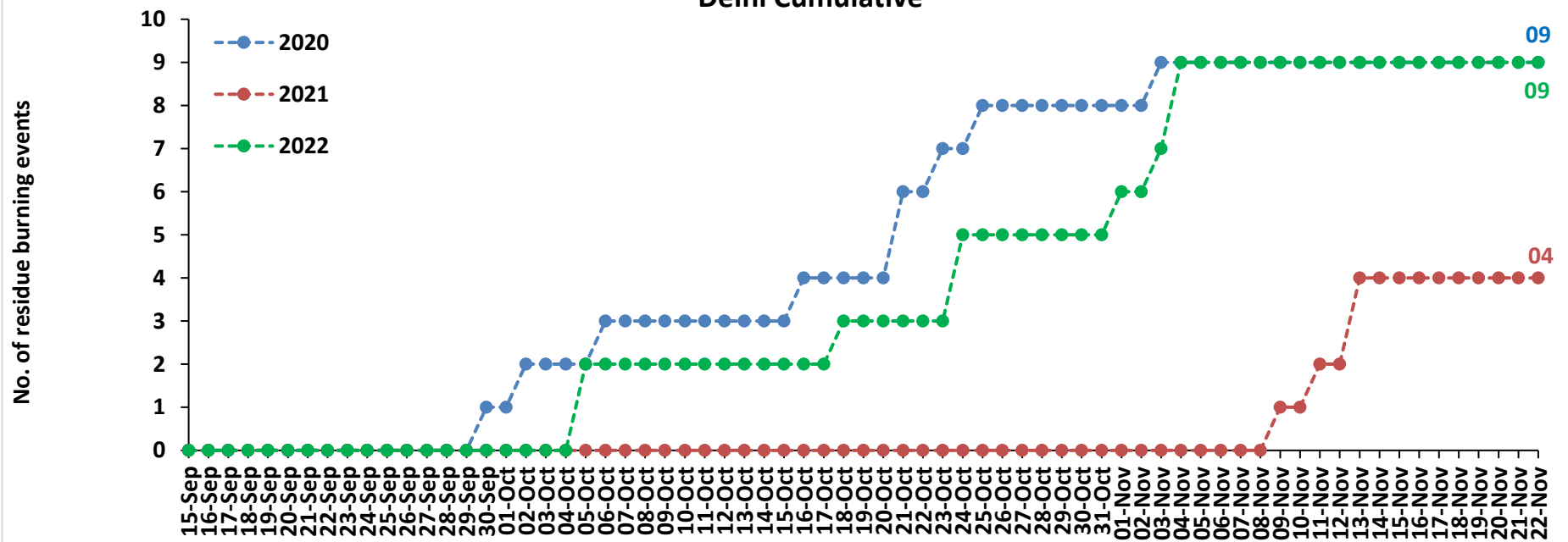
Rajashtan Cumulative



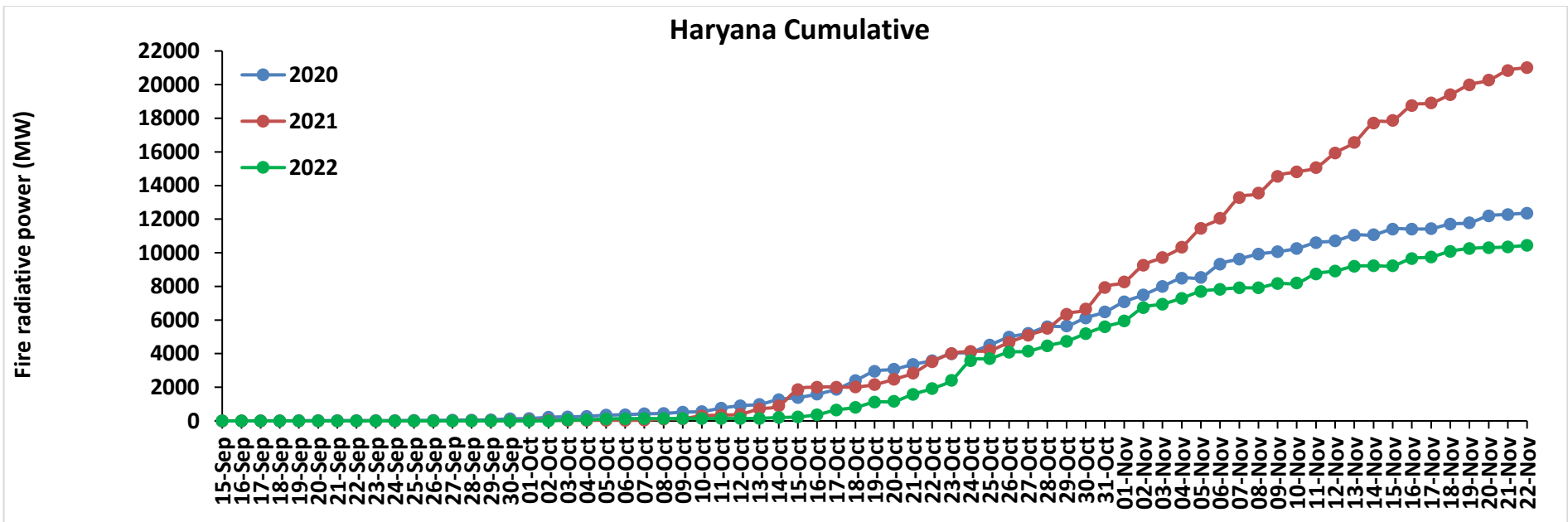
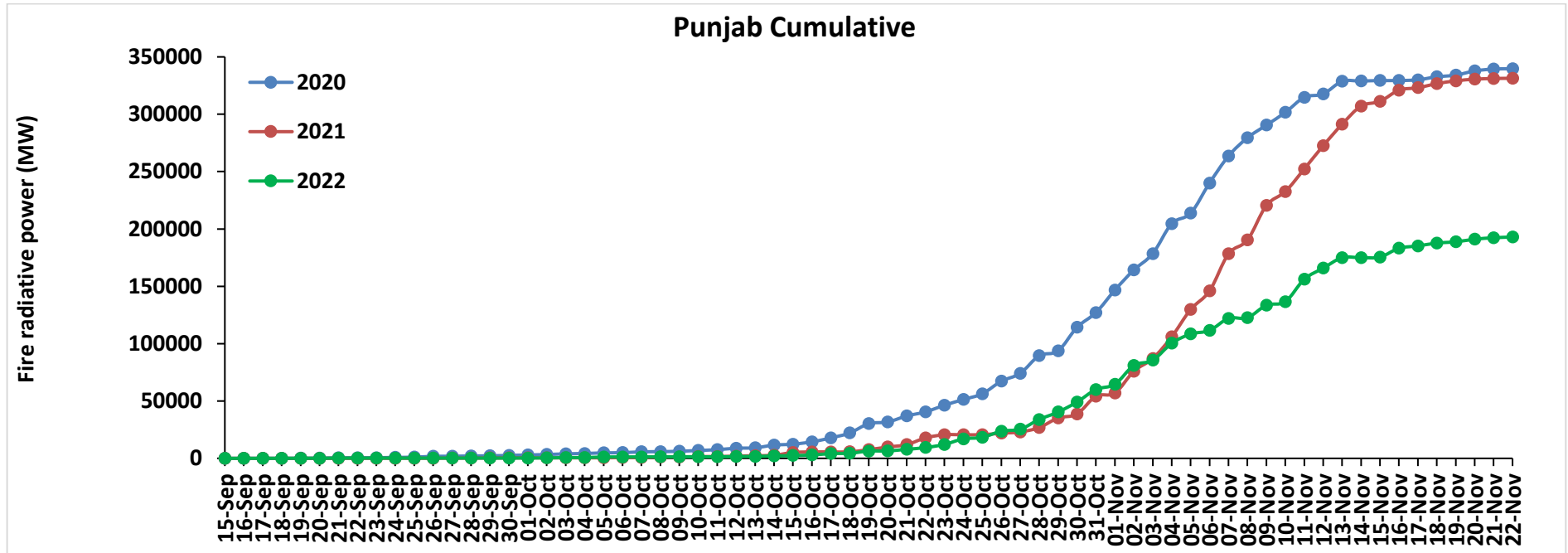
Madhya Pradesh Cumulative



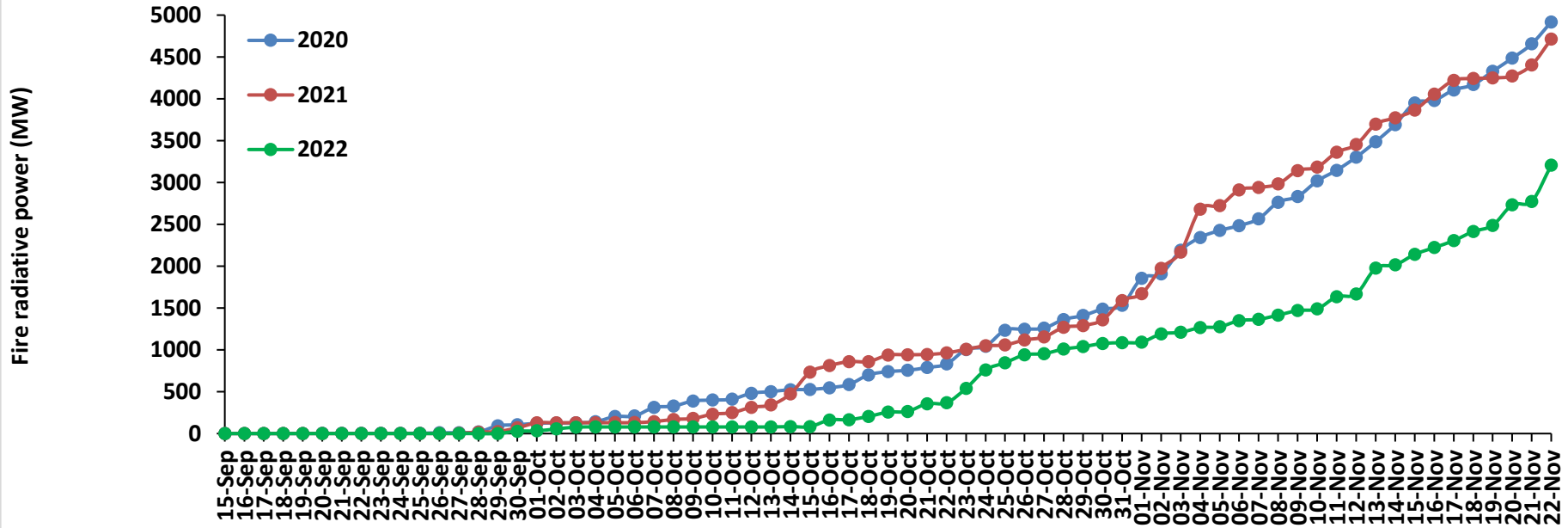
Delhi Cumulative



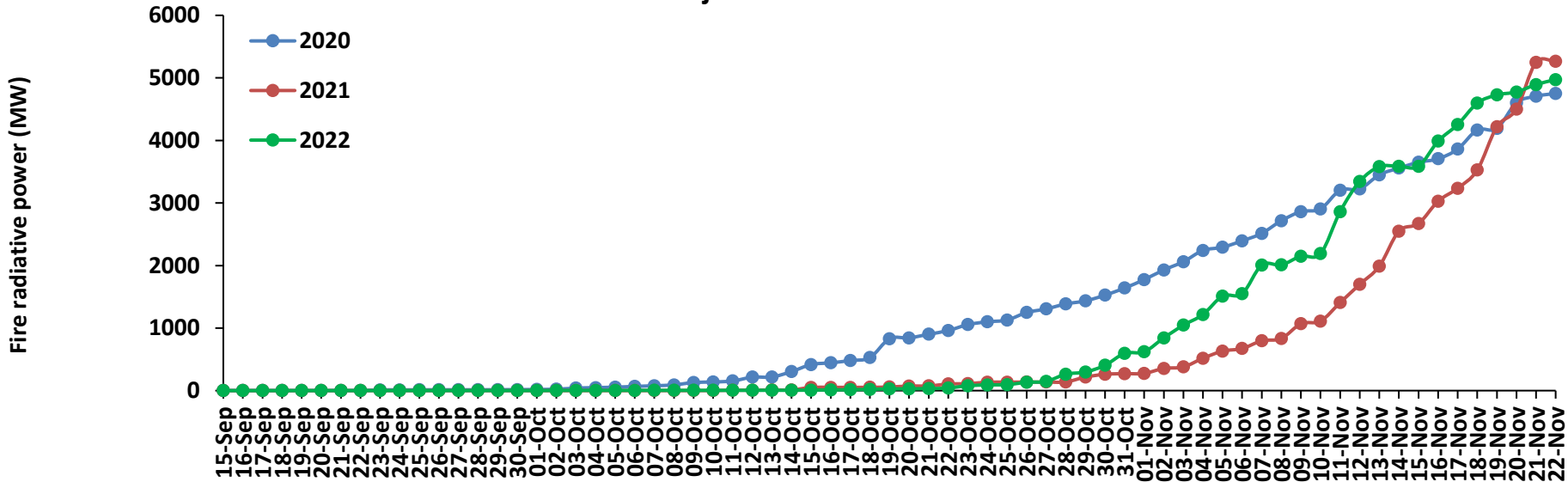
Comparison of residue burning fire power in current year (2022) with previous years (2021 and 2020) for the study States



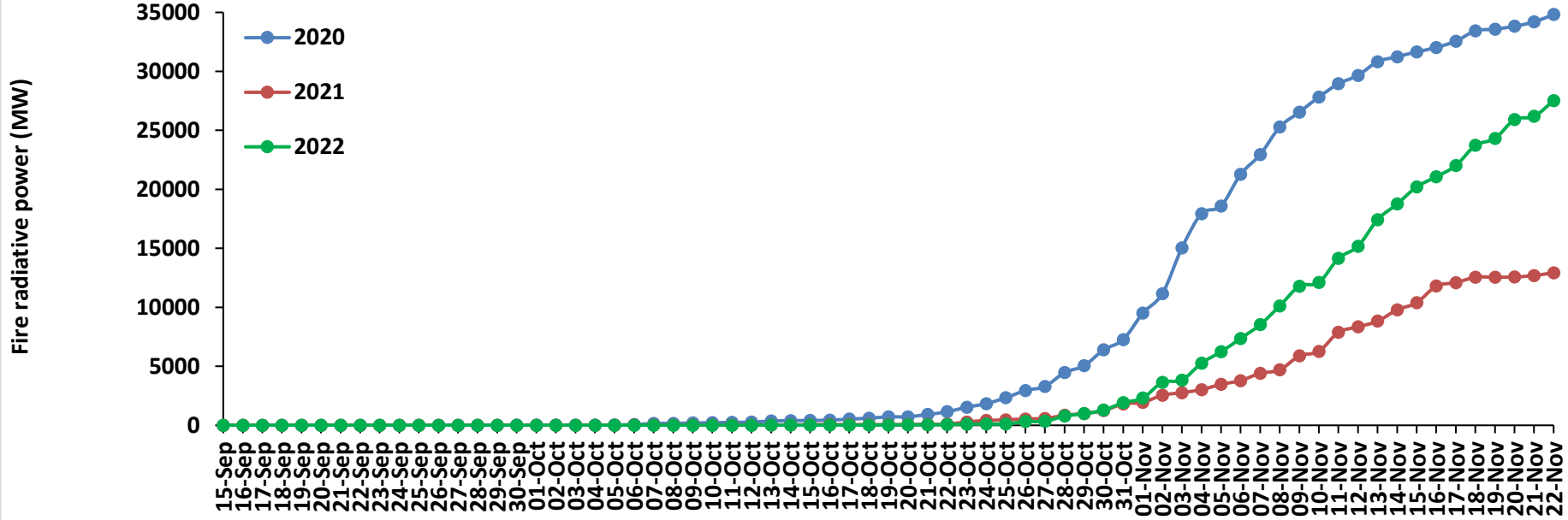
Uttar Pradesh Cumulative



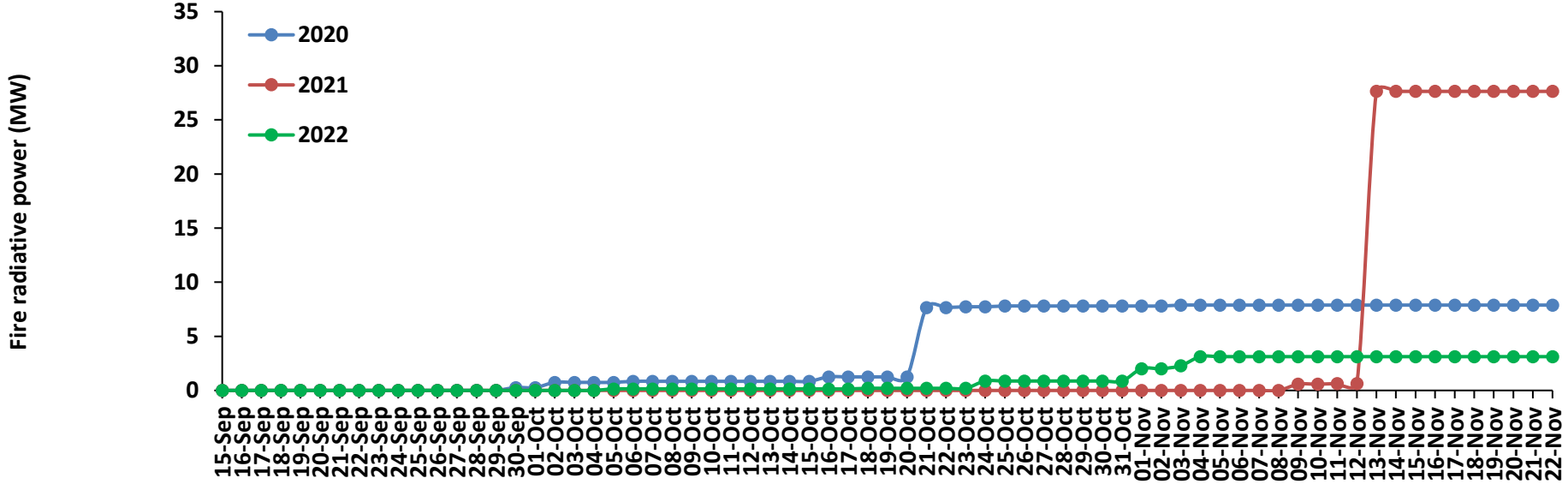
Rajasthan Cumulative



Madhya Pradesh Cumulative

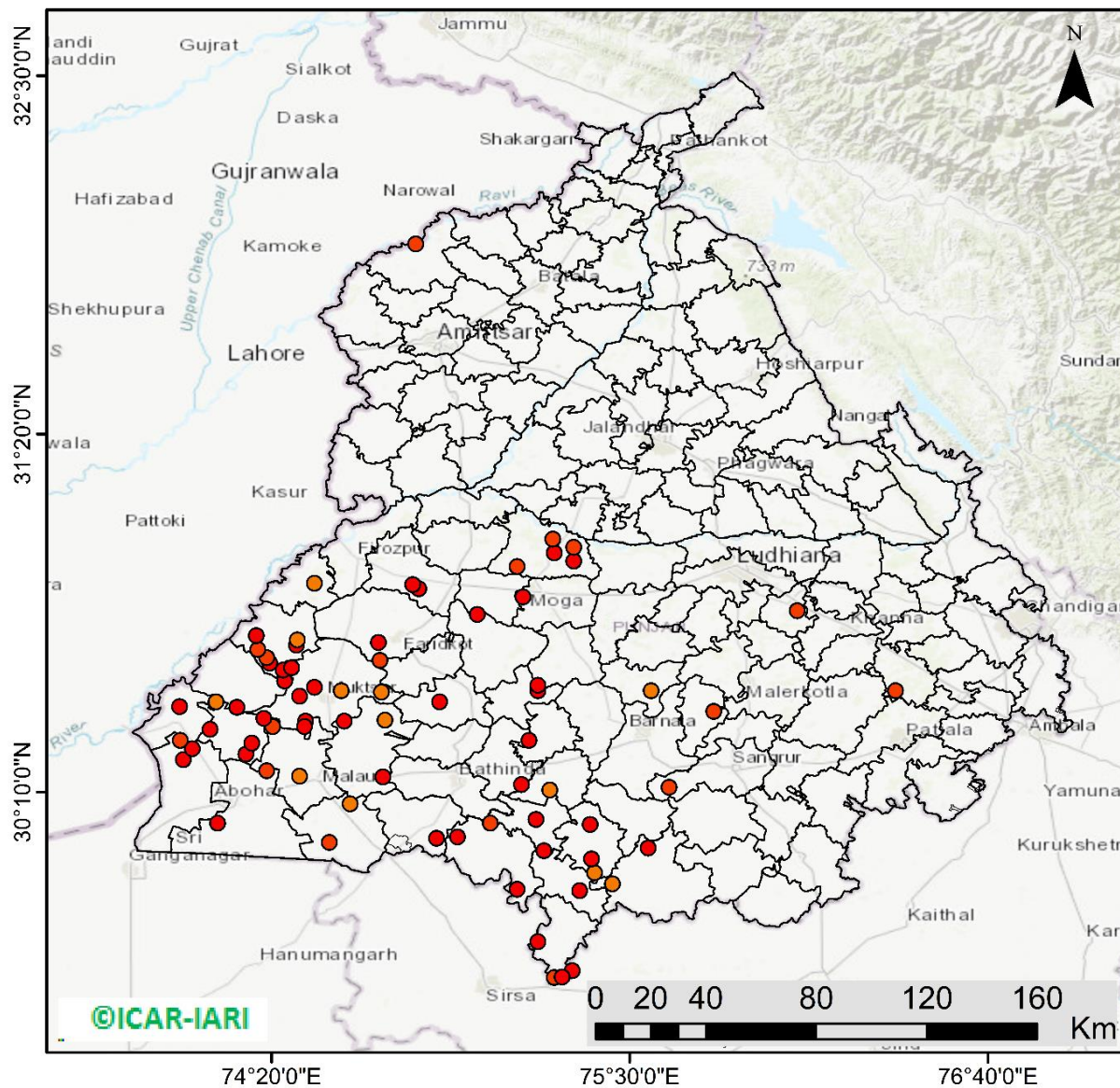


Delhi Cumulative



Punjab

RICE RESIDUE BURNING IN PUNJAB



78 burning events detected in Punjab during (22nd Nov 2022)

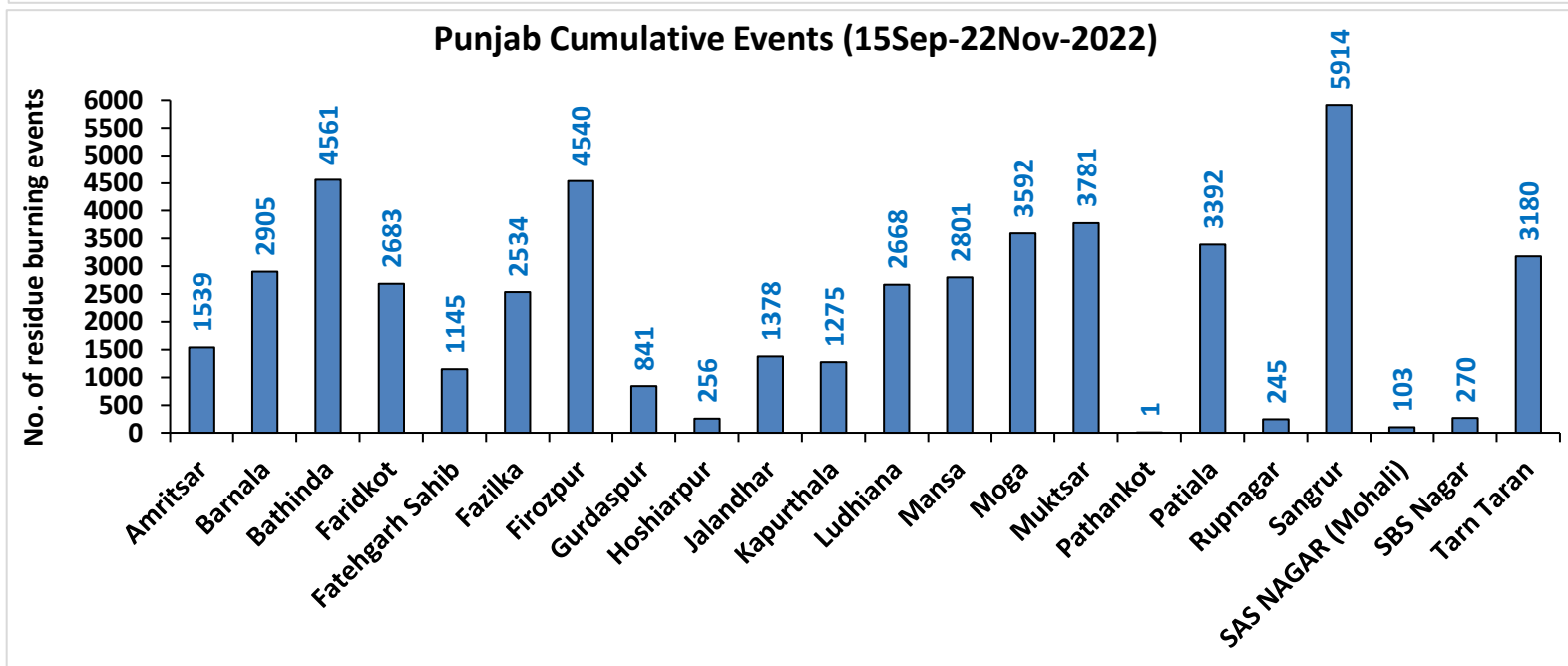
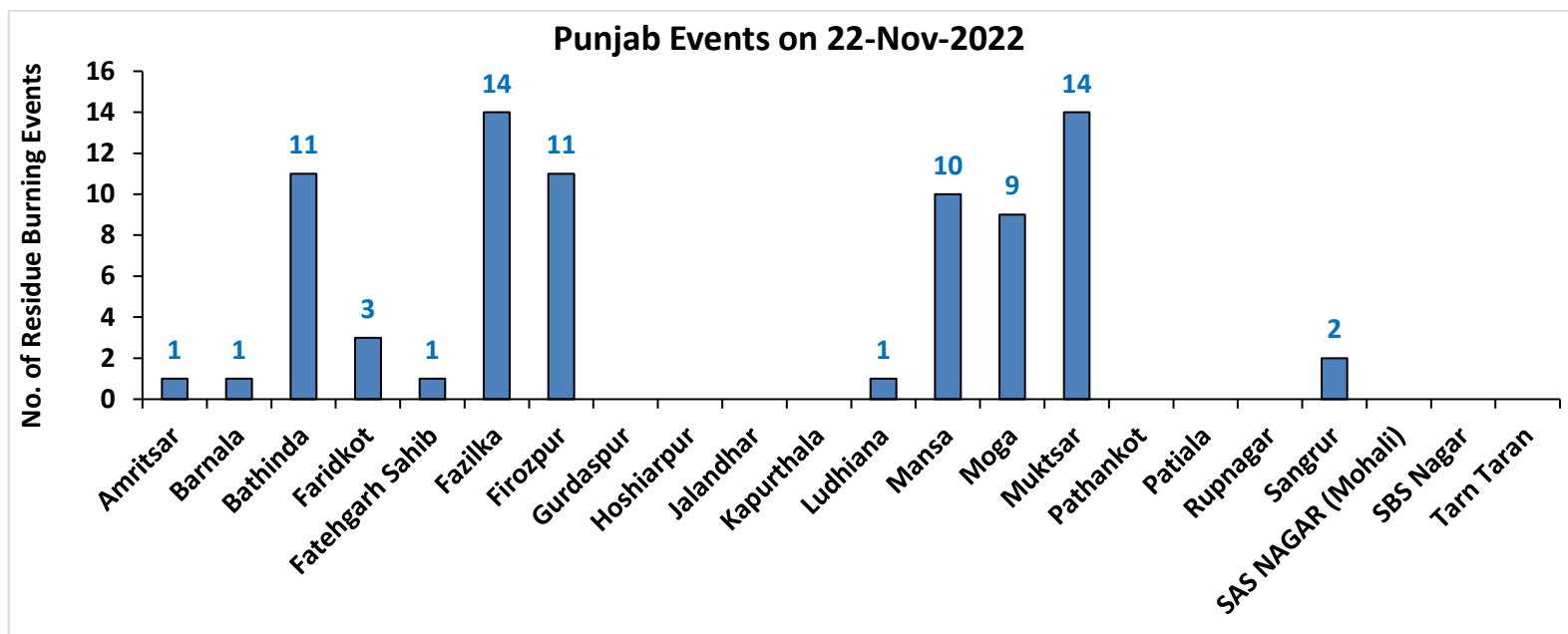
Fire Intensity (W/m²)

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



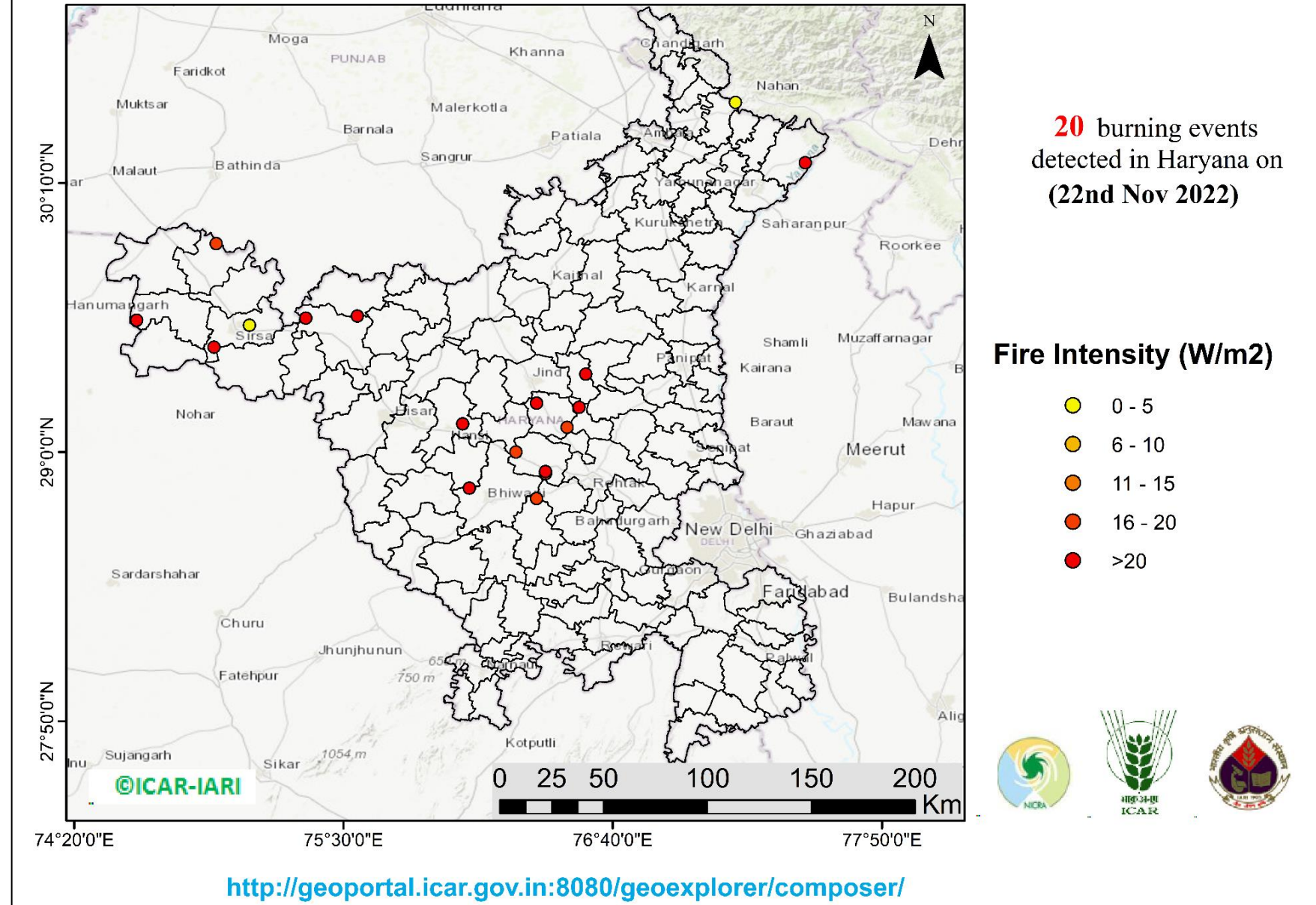
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Punjab (15Sep- 22Nov-2022)

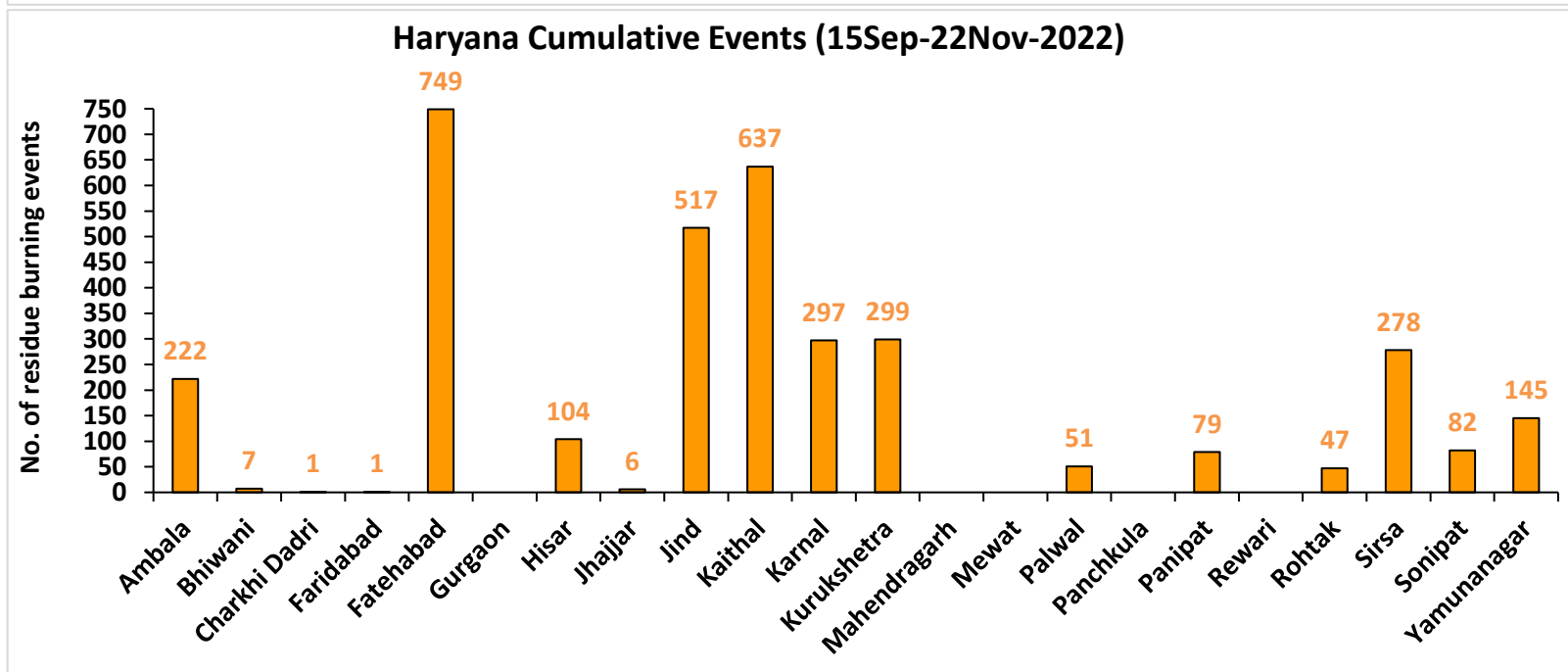
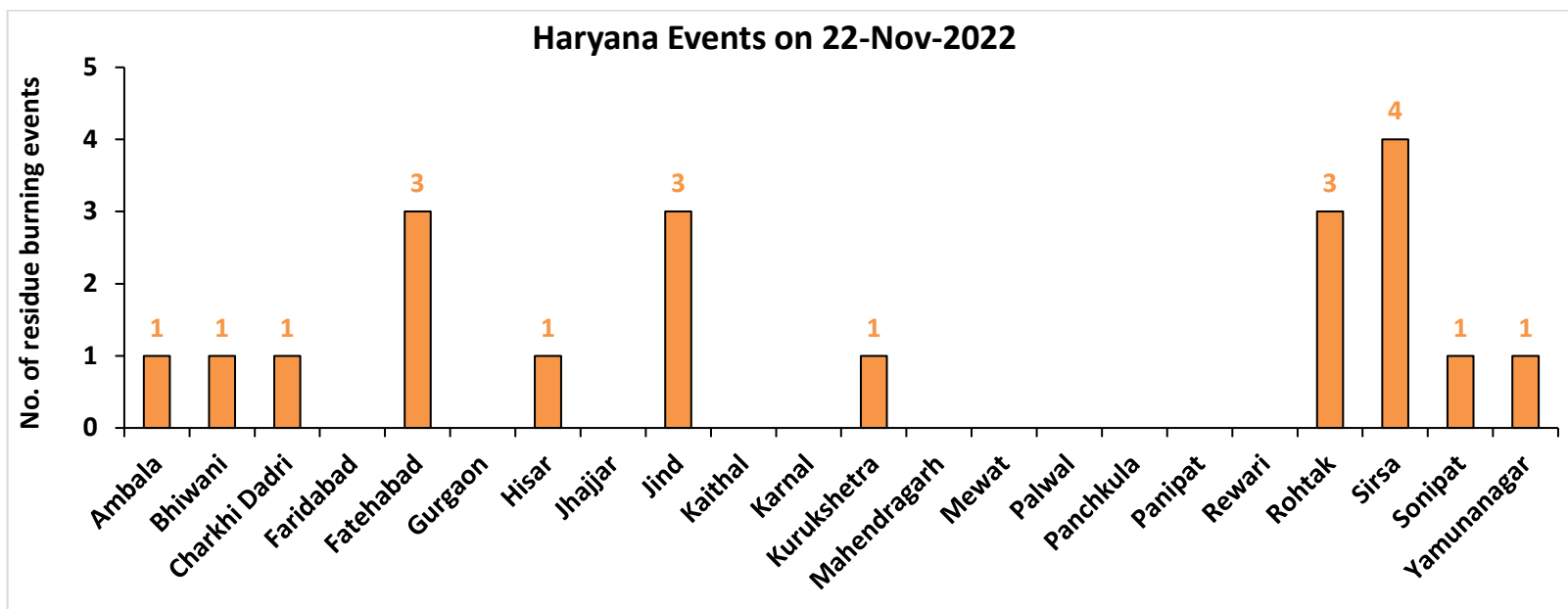


Haryana

RICE RESIDUE BURNING IN HARYANA

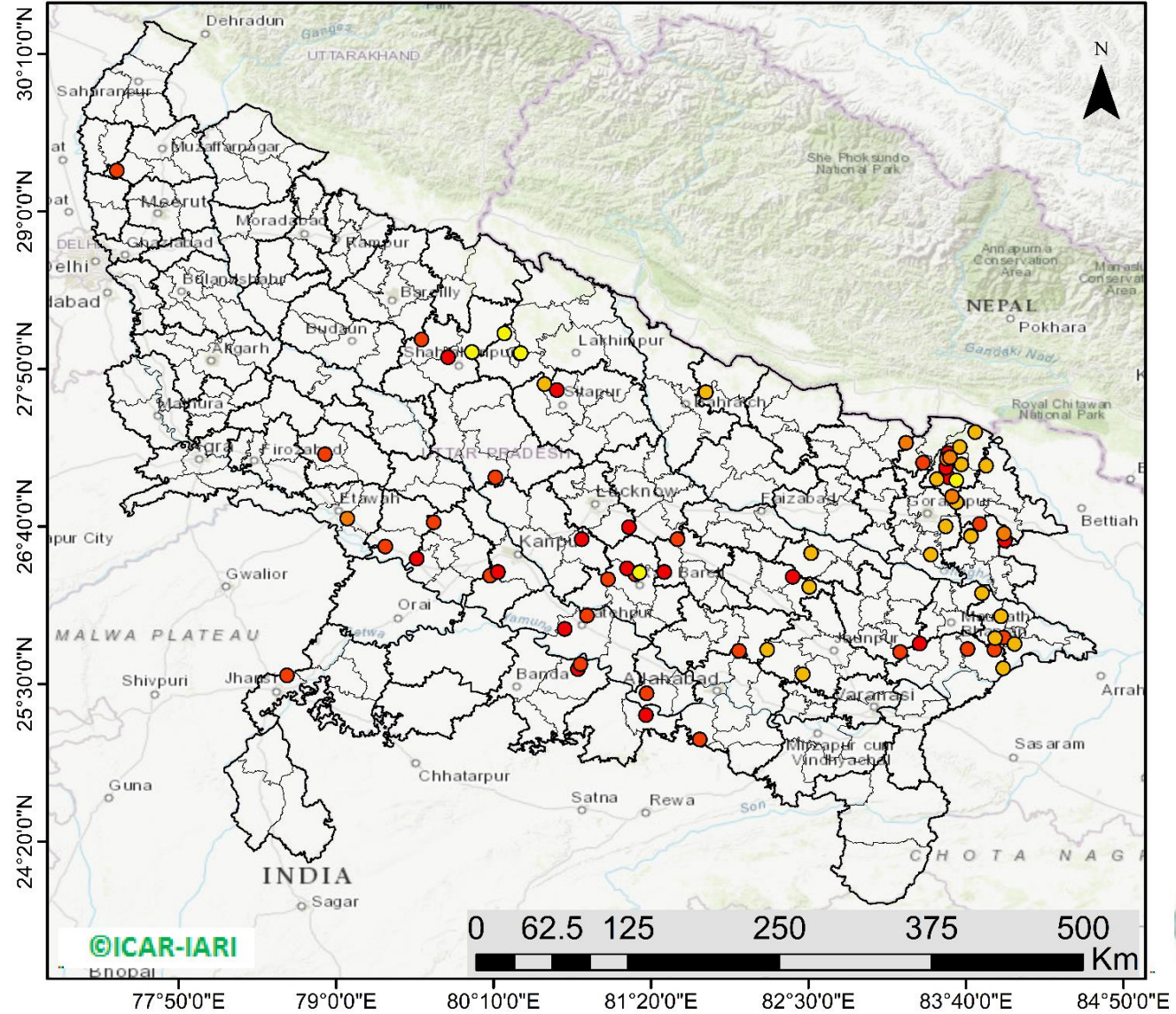


District-wise cumulative number of residues burning events in Haryana (15Sep- 22Nov-2022)



Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



76 burning events detected in Uttar Pradesh on (22nd Nov 2022)

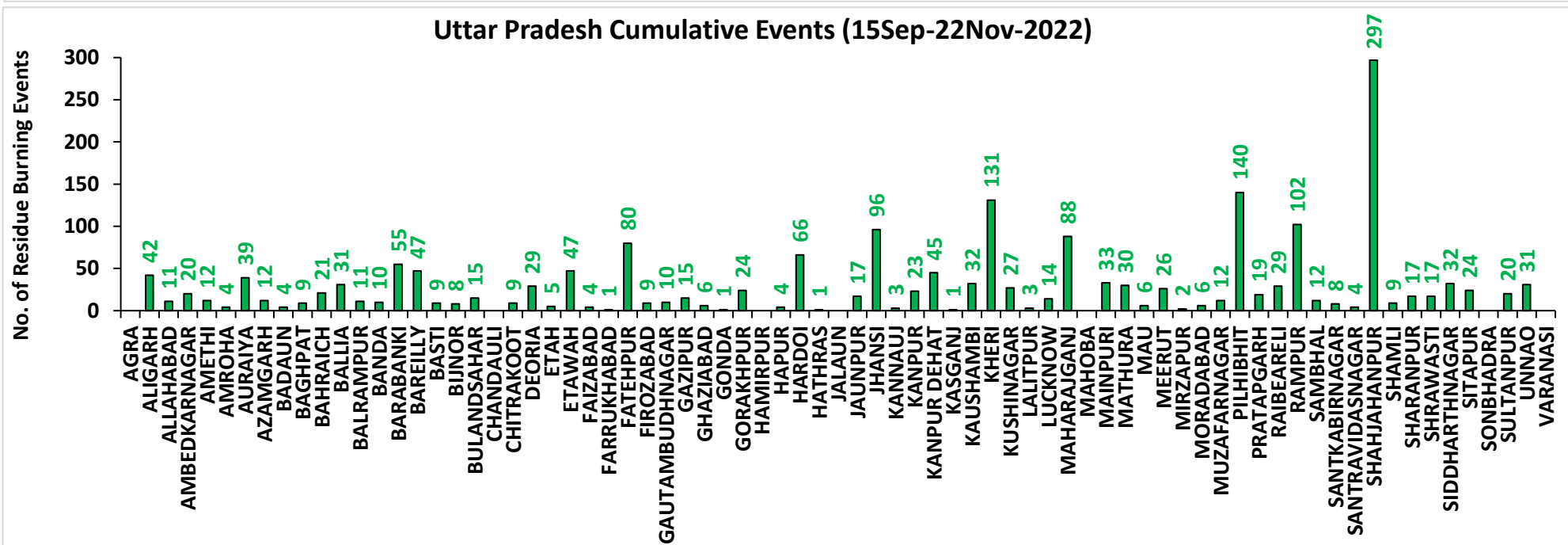
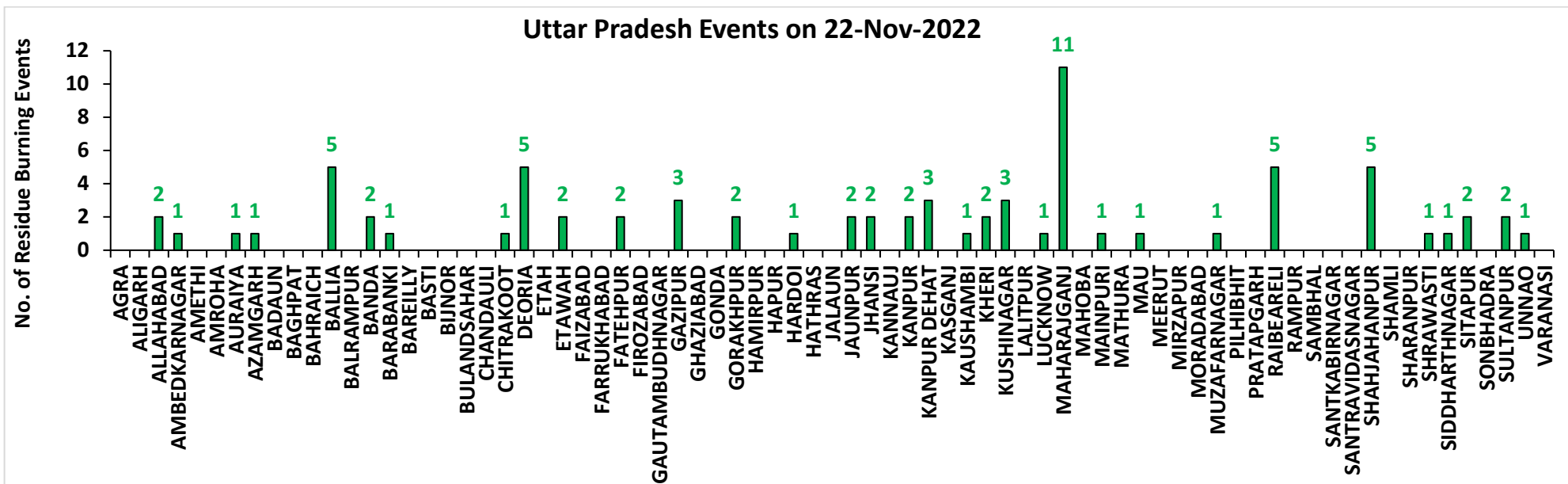
Fire Intensity (W/m2)

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



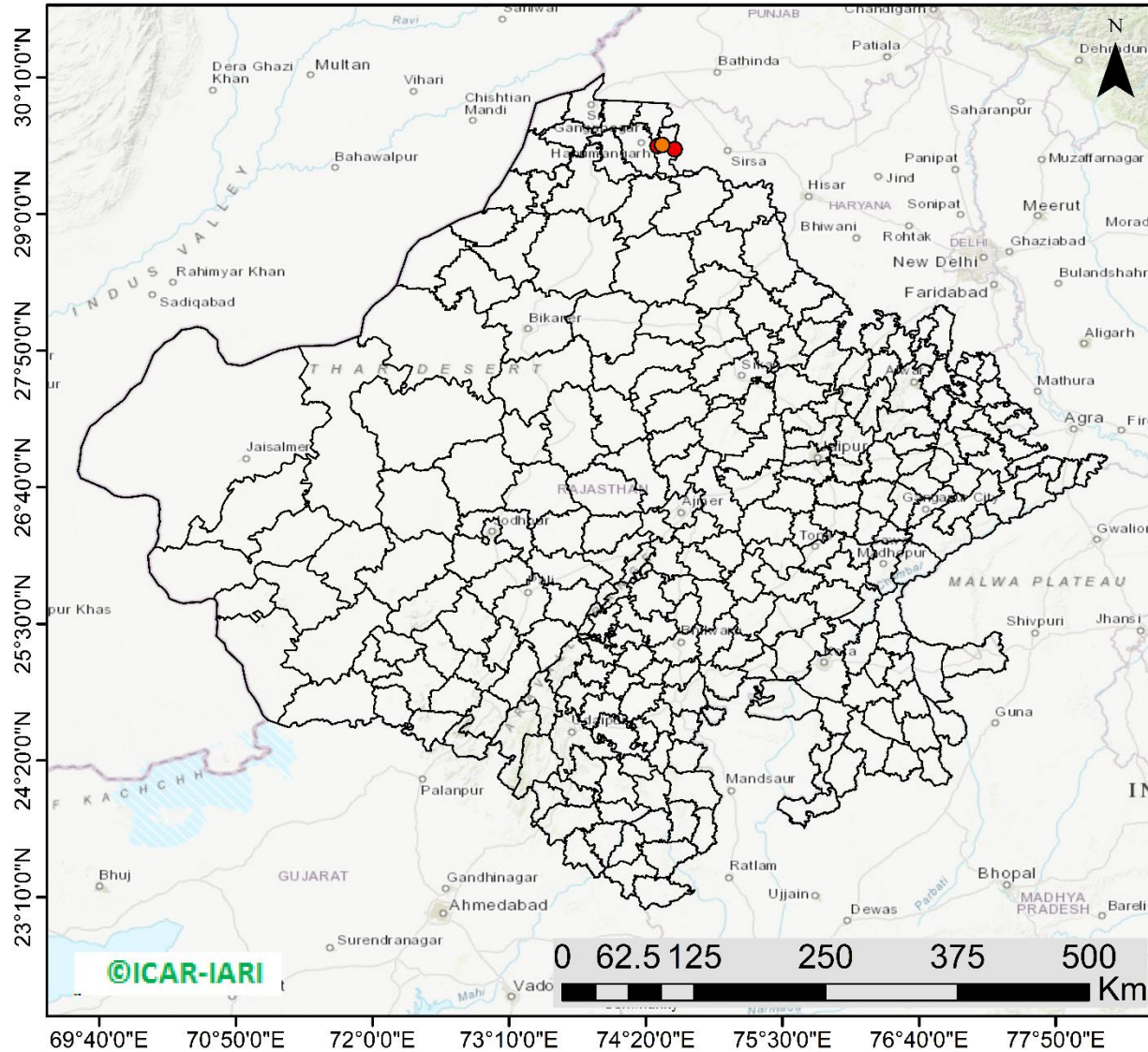
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Uttar Pradesh (15Sep- 22Nov-2022)



Rajasthan

RICE RESIDUE BURNING IN RAJASTHAN



04 burning events
detected in Rajasthan on
(22nd Nov 2022)

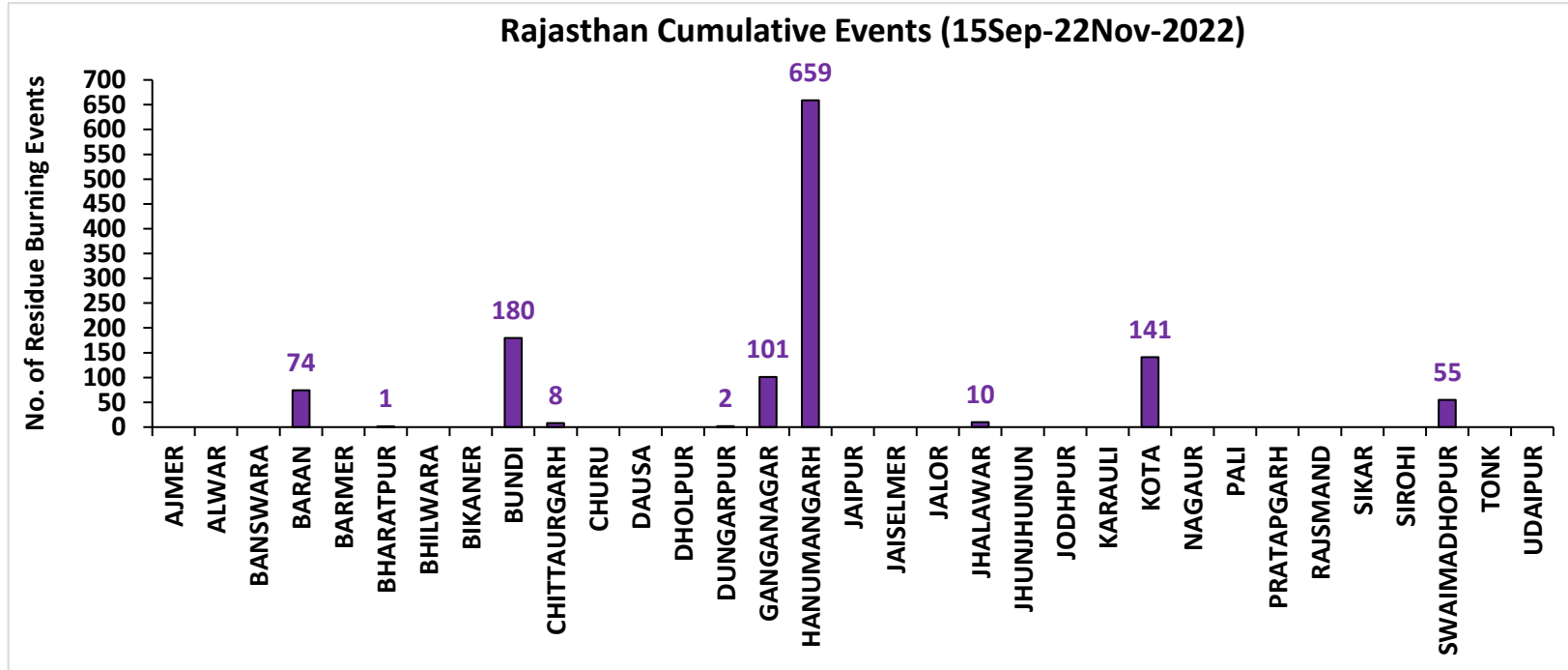
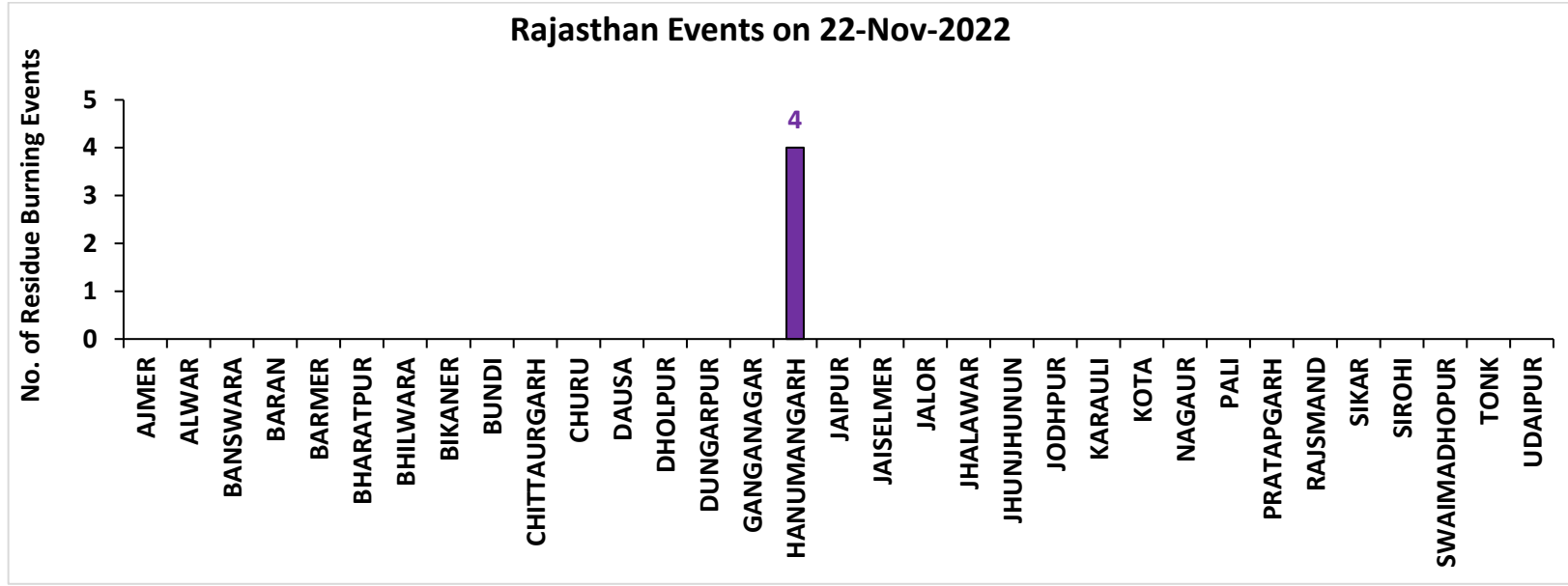
Fire Intensity (W/m²)

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



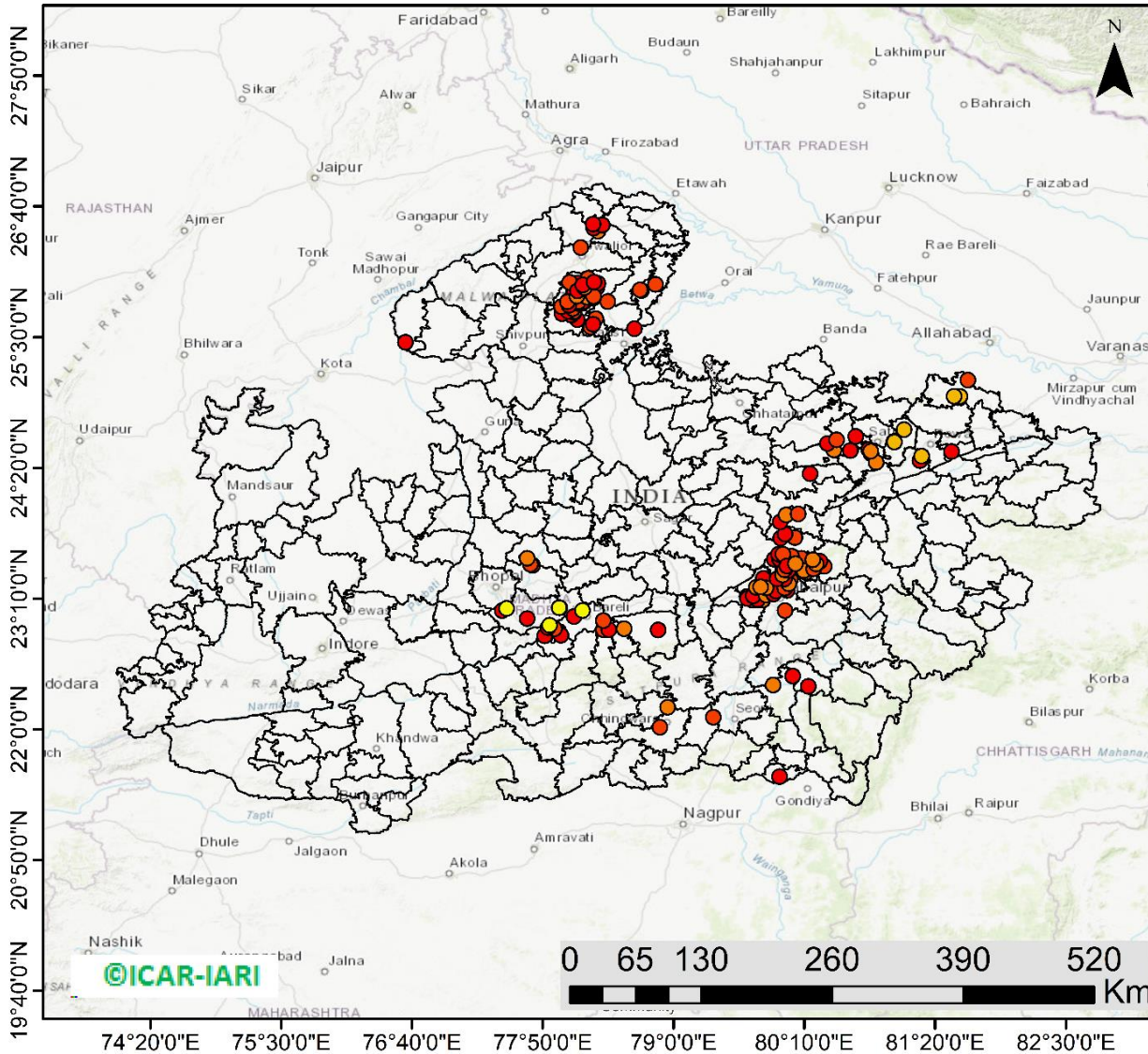
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Rajasthan (15Sep- 22Nov-2022)



Madhya Pradesh

RICE RESIDUE BURNING IN MADHYA PRADESH



170 burning events detected in MP on (22nd Nov 2022)

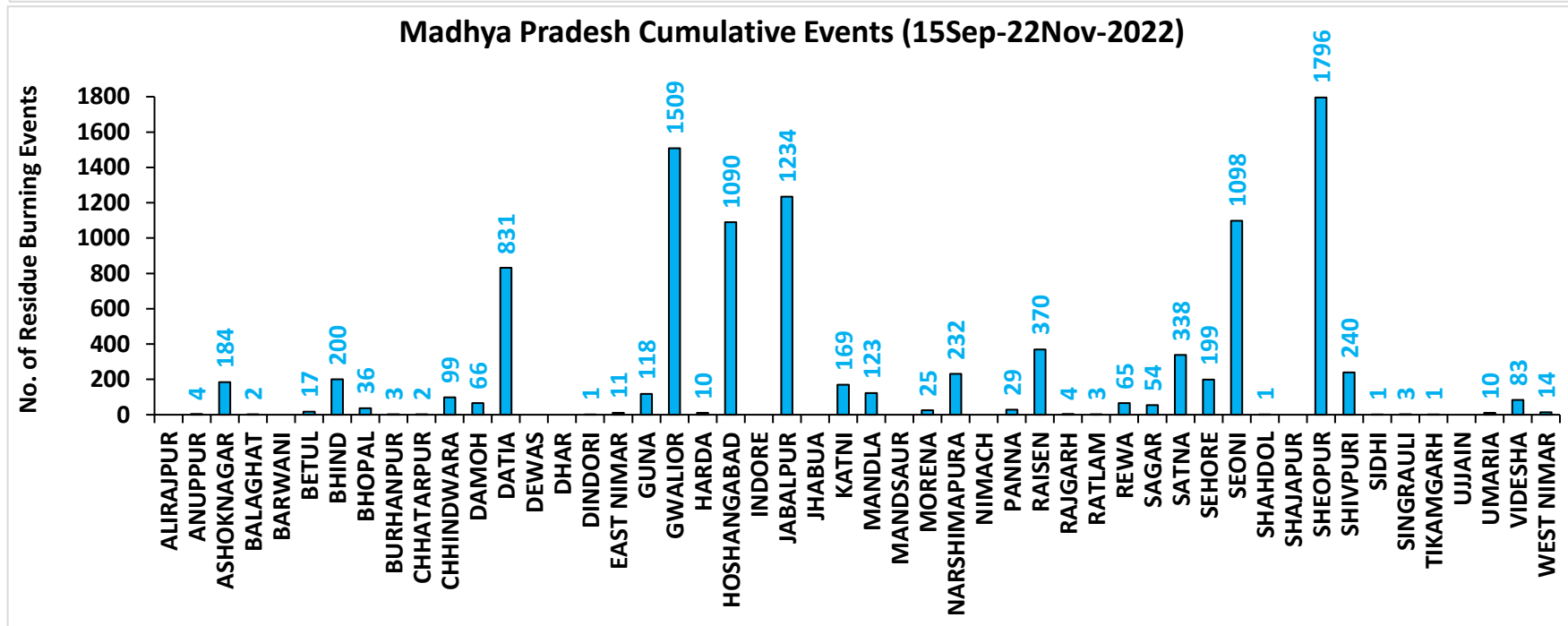
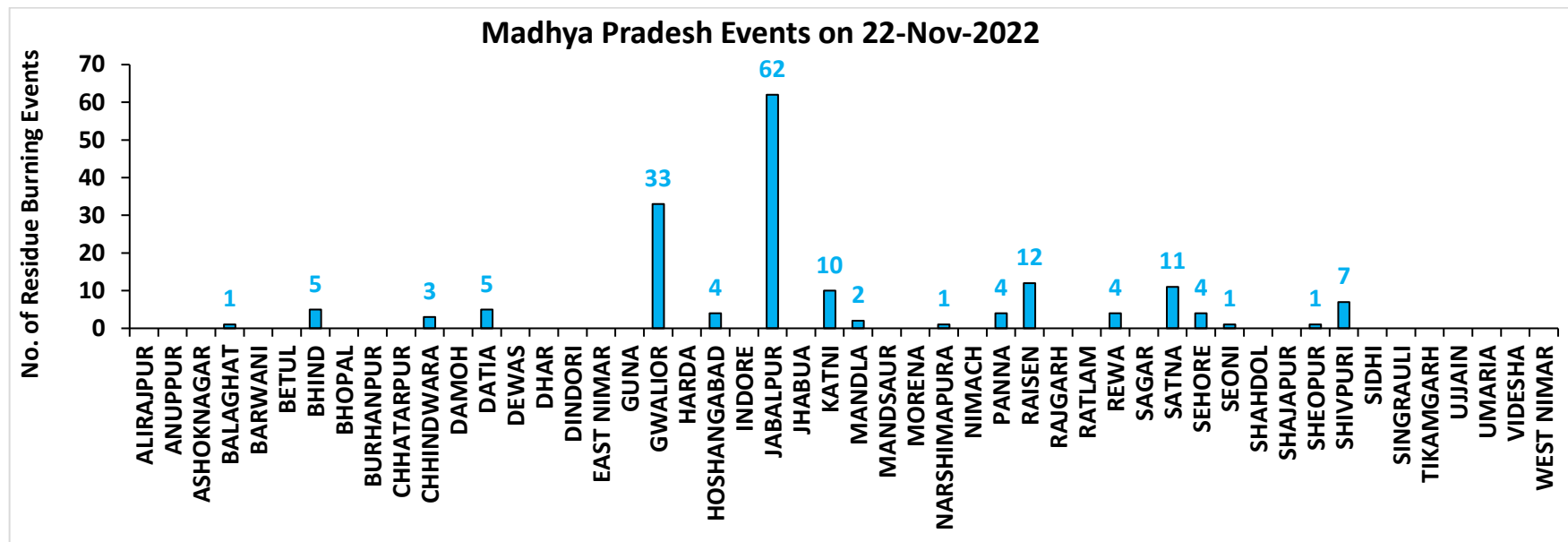
Fire Intensity (W/m²)

- 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 Madhya Pradesh (15Sep- 22Nov-2022)



District-wise cumulative number of residues burning events detected in 2020 ,2021 and 2022
(Period: 15 September-22 November)

(a) Punjab

District	15 Sep-22 Nov 2022		
	2020	2021	2022
Amritsar	3059	2170	1539
Barnala	5325	4323	2905
Bathinda	5224	4466	4561
Faridkot	4726	3947	2683
Fatehgarh Sahib	1535	1718	1145
Fazilka	2517	2354	2534
Firozpur	8507	6277	4540
Gurdaspur	2122	1391	841
Hoshiarpur	386	328	256
Jalandhar	1938	2543	1378
Kapurthala	1882	1796	1275
Ludhiana	5052	5807	2668
Mansa	3774	3197	2801
Moga	7383	6504	3592
Muktsar	4986	4543	3781
Pathankot	13	6	1
Patiala	6431	5415	3392
Rupnagar	205	307	245
Sangrur	11724	9381	5914
SAS NAGAR (Mohali)	127	147	103
SBS Nagar	131	353	270
Tarn Taran	5603	4117	3180
Total	82650	71090	49604

(b) Haryana

District	15 Sep-22 Nov 2022		
	2020	2021	2022
AMBALA	346	301	222
BHIWANI	4	10	7
CHARKHI DADRI	0	0	1
FARIDABAD	1	3	1
FATEHABAD	819	1445	749
GURGAON	0	0	0
HISAR	51	208	104
JHAJJAR	6	7	6
JIND	340	884	517
KAITHAL	835	1151	637
KARNAL	581	952	297
KURUKSHETRA	406	538	299
MAHENDRAGARH	0	0	0
MEWAT	0	0	0
PALWAL	46	114	51
PANCHKULA	0	0	0
PANIPAT	49	234	79
REWARI	0	0	0
ROHTAK	48	59	47
SIRSA	221	484	278
SONIPAT	69	197	82
YAMUNANAGAR	142	146	145
Total	3964	6733	3522

(c) Uttar Pradesh

District	15 Sep-22 Nov 2022										
	2020	2021	2022	GAUTAMBUDHNAGAR	14	19	10	MUZAFARNAGAR	40	16	12
AGRA	7	0	0	GAZIPUR	15	18	15	PILHIBHIT	17	209	140
ALIGARH	112	39	42	GHAZIABAD	25	12	6	PRATAPGARH	37	32	19
ALLAHABAD	28	15	11	GONDA	12	9	1	RAIBEARELI	29	58	29
AMBEDKARNAGAR	20	18	20	GORAKHPUR	41	21	24	RAMPUR	159	186	102
AMETHI	3	15	12	HAMIRPUR	5	0	0	SAMBHAL	18	16	12
AMROHA	11	7	4	HAPUR	26	11	4	SANTKABIRNAGAR	28	19	8
AURAIYA	78	61	39	HARDOI	95	99	66	SANTRAVIDASNAGAR	4	1	4
AZAMGARH	45	13	12	HATHRAS	0	0	1	SHAHJAHANPUR	135	400	297
BADAUN	13	16	4	JALAUN	41	0	0	SHAMLI	46	37	9
BAGHPAT	16	12	9	JAUNPUR	40	22	17	SAHARANPUR	93	69	17
BAHRAICH	105	56	21	JHANSI	296	96	96	SHRAWASTI	45	42	17
BALLIA	90	36	31	KANNAUJ	33	6	3	SIDDHARTHANAGAR	73	122	32
BALRAMPUR	67	20	11	KANPUR	29	31	23	SITAPUR	54	46	24
BANDA	22	6	10	KANPUR DEHAT	76	43	45	SONBHADRA	0	0	0
BARABANKI	35	64	55	KASGANJ	2	2	1	SULTANPUR	5	18	20
BAREILLY	74	60	47	KAUSHAMBI	61	71	32	UNNAO	42	27	31
BASTI	54	46	9	KHERI	150	158	131	VARANASI	2	5	0
BIJNOR	39	37	8	KUSHINAGAR	72	22	27	Total	3523	3190	2027
BULANDSAHAR	53	8	15	LALITPUR	3	6	3				
CHANDAULI	3	4	0	LUCKNOW	35	33	14				
CHITRAKOOT	12	9	9	MAHARAJGANJ	51	99	88				
DEORIA	81	20	29	MAHOBA	27	0	0				
ETAH	17	10	5	MAINPURI	63	49	33				
ETAWAH	69	81	47	MATHURA	160	239	30				
FAIZABAD	9	7	4	MAU	24	13	6				
FARRUKHABAD	6	4	1	MEERUT	59	22	26				
FATEHPUR	113	85	80	MIRZAPUR	7	10	2				
FIROZABAD	26	17	9	MORADABAD	26	10	6				

(d) Delhi

District	15 Sep-22 Nov 2022		
	2020	2021	2022
CENTRAL	0	0	0
EAST	0	0	0
NEW DELHI	0	0	0
NORTH	3	3	8
NORTH EAST	0	0	0
NORTH WEST DELHI	3	1	0
SHAHADRA	0	0	0
SOUTH	1	0	0
SOUTH EAST	0	0	0
SOUTH WEST DELHI	0	0	0
WEST DELHI	2	0	1
Total	9	4	9

(e) Rajasthan

District	15 Sep-22 Nov 2022		
	2020	2021	2022
AJMER	3	0	0
ALWAR	9	0	0
BANSWARA	0	0	0
BARAN	167	11	74
BARMER	4	0	0
BHARATPUR	2	3	1
BHILWARA	11	0	0
BIKANER	1	0	0
BUNDI	128	84	180
CHITTAURGARH	1	13	8
CHURU	0	0	0
DAUSA	1	0	0
DHOLPUR	0	0	0
DUNGARPUR	0	0	2
GANGANAGAR	182	129	101
HANUMANGARH	838	829	659
JAIPUR	4	0	0
JAISELMER	5	0	0
JALOR	2	0	0
JHALAWAR	9	1	10
JHUNJHUNUN	1	0	0
JODHPUR	5	0	0
KARAULI	1	0	0
KOTA	116	56	141
NAGAUR	3	0	0
PALI	9	0	0
PRATAPGARH	8	0	0
RAJSMAND	1	0	0
SIKAR	0	0	0
SIROHI	2	0	0
SWAIMADHOPUR	65	34	55
TONK	5	0	0
UDAIPUR	2	1	0
Total	1585	1161	1231

(f) Madhya Pradesh

District	15 Sep-22 Nov 2022						
	2020	2021	2022	PANNA	49	20	29
ALIRAJPUR	0	0	0	RAISEN	590	294	370
ANUPPUR	0	2	4	RAJGARH	10	3	5
ASHOKNAGAR	153	89	184	RATLAM	10	5	3
BALAGHAT	5	4	2	REWA	127	71	65
BARWANI	3	0	0	SAGAR	28	30	54
BETUL	36	14	17	SATNA	548	367	338
BHIND	253	139	200	SEHORE	151	138	199
BHOPAL	49	35	36	SEONI	1228	882	1098
BURHANPUR	15	1	3	SHAHDOL	3	0	1
CHHATARPUR	7	0	2	SHAJAPUR	18	0	0
CHHINDWARA	127	54	99	SHEOPUR	1832	938	1796
DAMOH	75	51	66	SHIVPURI	357	53	240
DATIA	1183	458	831	SIDHI	4	2	1
DEWAS	8	0	0	SINGRAULI	0	6	3
DHAR	43	0	0	TIKAMGARH	4	0	1
DINDORI	0	0	1	UJJAIN	12	0	0
EAST NIMAR	22	7	11	UMARIA	7	5	10
GUNA	67	10	118	VIDESHA	135	92	83
GWALIOR	1985	395	1509	WEST NIMAR	65	10	14
HARDA	14	21	10	Total	13385	6325	10275
HOSHANGABAD	1057	1061	1090				
INDORE	4	0	0				
JABALPUR	2302	712	1233				
JHABUA	0	0	0				
KATNI	308	84	169				
MANDLA	141	95	123				
MANDSAUR	13	0	0				
MORENA	62	37	25				
NARSHIMAPURA	273	140	232				
NIMACH	2	0	0				

State-wise and date-wise number of paddy residue burning events detected in 2020, 2021 and 2022
(Period: 15 September - 22 November 2022)

Number of Paddy Residue Burning Events Detected

	Punjab			Haryana			Uttar Pradesh			Delhi			Rajasthan			Madhya Pradesh		
	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
15-Sep	5	0	14	2	0	0	1	0	0	0	0	0	1	0	0	2	0	0
16-Sep	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17-Sep	5	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18-Sep	17	9	7	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
19-Sep	30	5	18	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0
20-Sep	67	8	10	6	0	0	2	0	0	0	0	0	0	0	0	0	0	0
21-Sep	54	0	56	2	0	0	1	0	0	0	0	0	1	0	1	2	0	0
22-Sep	34	0	30	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
23-Sep	49	0	3	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
24-Sep	78	5	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
25-Sep	184	11	0	11	0	0	5	0	0	0	0	0	1	0	0	0	0	0
26-Sep	190	19	0	5	0	0	8	0	0	0	0	0	1	0	0	2	0	0
27-Sep	78	37	0	8	0	0	4	1	0	0	0	0	0	0	0	1	0	0
28-Sep	55	28	0	6	1	0	1	6	0	0	0	0	0	0	0	1	1	0
29-Sep	63	64	0	9	4	0	6	10	0	0	0	0	3	0	0	0	4	0
30-Sep	116	27	8	22	2	0	13	13	10	1	0	0	1	0	0	5	0	0
01-Oct	165	13	45	15	4	1	7	13	3	0	0	0	4	1	1	13	0	1
02-Oct	141	0	83	30	2	7	12	0	36	1	0	0	7	0	3	12	0	1
03-Oct	110	9	75	8	6	8	4	3	29	0	0	0	9	0	2	5	1	5
04-Oct	162	23	65	29	2	7	8	0	2	0	0	0	15	0	0	4	2	0
05-Oct	161	18	130	17	3	24	14	2	0	0	0	2	14	0	1	13	1	0
06-Oct	171	42	85	30	0	26	12	1	0	1	0	0	16	0	0	37	1	0
07-Oct	197	72	62	32	11	6	41	13	0	0	0	0	14	1	1	31	1	0
08-Oct	95	108	19	29	27	0	25	11	0	0	0	0	11	0	0	17	2	0

09-Oct	121	114	3	20	39	1	15	20	0	0	0	0	12	0	0	15	4	0
10-Oct	232	150	4	33	95	2	9	54	0	0	0	0	14	1	0	18	10	0
11-Oct	377	64	45	90	51	0	23	28	0	0	0	0	21	7	1	32	2	0
12-Oct	388	97	104	69	51	4	46	23	0	0	0	0	24	1	2	44	1	1
13-Oct	266	132	120	47	91	15	36	42	0	0	0	0	7	5	2	21	2	7
14-Oct	605	229	82	69	98	30	9	68	5	0	0	0	16	1	1	15	11	1
15-Oct	449	660	169	106	363	36	15	149	0	0	0	0	9	8	2	8	27	2
16-Oct	654	429	206	80	176	76	21	121	6	1	0	0	12	2	4	23	13	2
17-Oct	1172	14	403	143	0	86	38	39	7	0	0	0	26	0	4	63	1	11
18-Oct	938	57	342	166	1	134	76	0	30	0	0	1	37	2	12	88	0	15
19-Oct	1080	496	436	72	55	122	43	5	36	0	0	0	27	5	12	49	1	12
20-Oct	890	788	96	62	155	78	31	1	17	0	0	0	26	4	4	9	21	7
21-Oct	1392	597	393	101	131	107	25	5	23	2	0	0	32	2	6	112	30	18
22-Oct	1665	1111	582	128	140	122	32	3	18	0	0	0	29	5	12	183	29	31
23-Oct	1438	620	902	106	218	217	84	8	109	1	0	0	23	7	20	204	32	70
24-Oct	911	0	1019	57	38	250	63	11	212	0	0	2	20	4	7	150	34	26
25-Oct	1416	76	181	155	71	12	50	18	9	1	0	0	18	2	4	144	60	0
26-Oct	2126	329	1238	77	175	123	33	41	23	0	0	0	34	3	21	178	55	57
27-Oct	2563	279	1111	96	93	83	40	58	23	0	0	0	42	1	21	294	62	38
28-Oct	3232	906	2067	139	149	123	87	35	34	0	0	0	45	4	46	537	110	143
29-Oct	1624	1353	1898	52	161	112	139	32	73	0	0	0	29	23	37	349	97	151
30-Oct	3946	1373	1761	100	148	112	50	53	43	0	0	0	17	20	55	428	168	119
31-Oct	3531	2895	2131	108	353	70	49	170	20	0	0	0	37	15	36	455	299	112
01-Nov	3835	1796	1842	151	124	88	74	157	9	0	0	1	51	5	27	709	198	142
02-Nov	4098	3001	3634	111	203	166	82	87	25	0	0	0	55	19	63	820	214	284
03-Nov	2818	2512	2666	93	197	128	197	66	40	1	0	1	34	20	54	771	148	323
04-Nov	4584	3032	2437	72	228	63	152	123	61	0	0	2	46	19	34	618	123	348
05-Nov	4529	5327	2817	66	331	90	52	70	24	0	0	0	46	45	91	474	320	319
06-Nov	5382	3942	599	151	219	46	43	208	28	0	0	0	40	32	27	678	248	392
07-Nov	5491	5199	2487	150	182	37	86	46	8	0	0	0	57	38	80	848	199	383
08-Nov	3674	4397	604	115	138	11	169	21	44	0	0	0	33	44	5	981	170	783

09-Nov	1718	5079	1778	21	217	69	115	51	58	0	1	0	34	48	22	495	330	570
10-Nov	3127	4008	1893	80	184	35	101	77	33	0	0	0	48	40	34	346	380	282
11-Nov	2822	4156	3916	93	126	152	71	151	36	0	1	0	75	55	95	418	506	482
12-Nov	1989	3403	2467	83	127	99	108	120	36	0	0	0	31	40	84	422	185	421
13-Nov	2441	3742	2175	105	210	132	172	95	102	0	2	0	54	78	63	670	171	773
14-Nov	307	2541	4	35	195	17	258	49	101	0	0	0	16	88	1	294	346	633
15-Nov	32	1761	141	31	129	21	29	67	84	0	0	0	6	51	2	35	353	507
16-Nov	8	1757	1358	0	269	84	15	138	48	0	0	0	16	81	78	145	660	316
17-Nov	248	523	966	9	101	39	38	177	50	0	0	0	60	38	48	191	261	416
18-Nov	670	680	701	60	111	108	62	14	66	0	0	0	75	77	55	352	126	524
19-Nov	454	448	426	37	132	79	129	11	116	0	0	0	27	73	19	124	16	625
20-Nov	677	283	368	77	127	32	134	20	168	0	0	0	59	53	15	106	6	556
21-Nov	457	168	243	65	178	11	135	106	46	0	0	0	57	72	12	159	95	196
22-Nov	46	66	78	15	91	20	120	276	76	0	0	0	9	21	4	165	188	170
Total	82650	71090	49604	3964	6733	3522	3523	3190	2027	9	4	9	1585	1161	1231	13385	6325	10275

Details of residue burning events in Punjab on 22-Nov-2022

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	AMRITSAR	AJNALA	S-NPP	31.95181	74.80327	15:04:00	D	19.00
2	BARNALA	MAHAL KALAN	S-NPP	30.49653	75.57003	15:04:00	D	14.00
3	BATHINDA	BHAGTA BHAI KA	S-NPP	30.49653	75.20120	12:24:00	D	31.00
4	BATHINDA	MAUR	AQUA	29.97551	75.22062	13:18:00	D	30.01
5	BATHINDA	MAUR	AQUA	30.07732	75.19473	13:18:00	D	39.42
6	BATHINDA	NATHANA	S-NPP	30.19111	75.14782	15:04:00	D	42.00
7	BATHINDA	NATHANA	S-NPP	30.37975	75.11385	12:24:00	D	71.00
8	BATHINDA	PHUL	S-NPP	30.33484	75.17209	15:04:00	D	21.00
9	BATHINDA	RAMPURA	S-NPP	30.17314	75.24003	15:04:00	D	15.00
10	BATHINDA	SANGAT	S-NPP	30.01594	74.87121	12:24:00	D	29.00
11	BATHINDA	TALWANDI SABO	S-NPP	29.84975	75.13326	15:04:00	D	37.00
12	BATHINDA	TALWANDI SABO	S-NPP	30.02043	74.93915	15:04:00	D	48.00
13	BATHINDA	TALWANDI SABO	S-NPP	30.06534	75.04591	15:04:00	D	19.00
14	FARIDKOT	FARIDKOT	S-NPP	30.59535	74.68680	15:04:00	D	17.00
15	FARIDKOT	FARIDKOT	AQUA	30.65374	74.68194	13:18:00	D	22.46
16	FARIDKOT	JAITON	S-NPP	30.46060	74.88091	15:04:00	D	41.00
17	FATEHGARH SAHIB	SIRHIND	S-NPP	30.49653	76.36591	12:24:00	D	18.00
18	FAZILKA	ABOHAR	S-NPP	30.06534	74.15783	15:04:00	D	30.00
19	FAZILKA	ABOHAR	S-NPP	30.23602	74.31797	15:04:00	D	17.00
20	FAZILKA	ARNIWALA SHEIKH SUBANPUR	S-NPP	30.28992	74.25003	15:04:00	D	50.00
21	FAZILKA	ARNIWALA SHEIKH SUBANPUR	S-NPP	30.32585	74.26944	15:04:00	D	29.00
22	FAZILKA	ARNIWALA SHEIKH SUBANPUR	S-NPP	30.37077	74.13356	15:04:00	D	36.00
23	FAZILKA	ARNIWALA SHEIKH SUBANPUR	S-NPP	30.40670	74.30827	15:04:00	D	44.00
24	FAZILKA	ARNIWALA SHEIKH SUBANPUR	S-NPP	30.42467	74.15297	15:04:00	D	70.00
25	FAZILKA	FAZILKA	S-NPP	30.46060	74.15297	15:04:00	D	15.00
26	FAZILKA	FAZILKA	AQUA	30.44488	74.03408	13:18:00	D	26.14
27	FAZILKA	JALALABAD	S-NPP	30.44264	74.22091	15:04:00	D	29.00
28	FAZILKA	JALALABAD	S-NPP	30.52798	74.37621	15:04:00	D	35.00
29	FAZILKA	KHUIAN SARWAR	S-NPP	30.27196	74.04621	15:04:00	D	43.00

30	FAZILKA	KHUIAN SARWAR	S-NPP	30.30789	74.07533	15:04:00	D	32.00
31	FAZILKA	KHUIAN SARWAR	S-NPP	30.33484	74.03650	15:04:00	D	20.00
32	FIROZPUR	GHALL KHURD	S-NPP	30.82891	74.81297	15:04:00	D	38.00
33	FIROZPUR	GHALL KHURD	AQUA	30.84239	74.79356	13:18:00	D	31.45
34	FIROZPUR	GURUHAR SAHAI	S-NPP	30.56391	74.37136	15:04:00	D	25.00
35	FIROZPUR	GURUHAR SAHAI	S-NPP	30.58637	74.32768	15:04:00	D	45.00
36	FIROZPUR	GURUHAR SAHAI	S-NPP	30.60433	74.31797	15:04:00	D	16.00
37	FIROZPUR	GURUHAR SAHAI	S-NPP	30.63128	74.28886	15:04:00	D	18.00
38	FIROZPUR	GURUHAR SAHAI	S-NPP	30.64476	74.41503	15:04:00	D	24.50
39	FIROZPUR	GURUHAR SAHAI	S-NPP	30.67620	74.28400	15:04:00	D	26.00
40	FIROZPUR	GURUHAR SAHAI	TERRA	30.66208	74.41780	11:18:00	D	14.54
41	FIROZPUR	MAKHU	S-NPP	31.04451	75.09444	15:04:00	D	54.00
42	FIROZPUR	MAMDOT	S-NPP	30.84688	74.47327	15:04:00	D	13.00
43	LUDHIANA	DORAHA	S-NPP	30.75705	76.04561	15:04:00	D	16.00
44	MANSA	BUDHLADA	S-NPP	29.86771	75.44385	15:04:00	D	14.00
45	MANSA	BUDHLADA	S-NPP	29.98450	75.56032	15:04:00	D	45.00
46	MANSA	JHUNIR	S-NPP	29.84526	75.33709	15:04:00	D	28.00
47	MANSA	MANSA	S-NPP	29.90365	75.38562	15:04:00	D	15.00
48	MANSA	MANSA	S-NPP	29.94856	75.37591	15:04:00	D	42.00
49	MANSA	MANSA	AQUA	30.06085	75.37106	13:18:00	D	23.26
50	MANSA	SARDULGARH	S-NPP	29.56229	75.25459	15:04:00	D	16.00
51	MANSA	SARDULGARH	S-NPP	29.58474	75.31282	12:24:00	D	40.50
52	MANSA	SARDULGARH	S-NPP	29.67907	75.20120	15:04:00	D	32.00
53	MANSA	SARDULGARH	AQUA	29.56428	75.27993	13:18:00	D	29.14
54	MOGA	KOT ISE KHAN AT DHARAMKOT	S-NPP	30.90078	75.13326	15:04:00	D	20.00
55	MOGA	KOT ISE KHAN AT DHARAMKOT	S-NPP	30.91874	75.31768	12:24:00	D	23.00
56	MOGA	KOT ISE KHAN AT DHARAMKOT	S-NPP	30.94569	75.25459	15:04:00	D	21.00
57	MOGA	KOT ISE KHAN AT DHARAMKOT	S-NPP	30.96366	75.31768	15:04:00	D	16.00
58	MOGA	KOT ISE KHAN AT DHARAMKOT	S-NPP	30.99061	75.24973	15:04:00	D	16.00
59	MOGA	MOGA-1	S-NPP	30.80196	75.15268	12:24:00	D	23.00
60	MOGA	MOGA-2	S-NPP	30.74806	75.04591	15:04:00	D	54.00
61	MOGA	MOGA-2	AQUA	30.74507	75.00385	13:18:00	D	47.34
62	MOGA	NIHAL SINGH	S-NPP	30.51450	75.20120	15:04:00	D	25.00
63	MUKTSAR	KOT BHAI AT GIDDERBAHA	S-NPP	30.39772	74.57032	15:04:00	D	31.00

64	MUKTSAR	KOT BHAI AT GIDDERBAHA	S-NPP	30.40071	74.70297	12:24:00	D	13.67
65	MUKTSAR	KOT BHAI AT GIDDERBAHA	AQUA	30.21581	74.69650	13:18:00	D	32.48
66	MUKTSAR	LAMBI	S-NPP	30.00246	74.52180	15:04:00	D	19.00
67	MUKTSAR	LAMBI	S-NPP	30.12823	74.58974	15:04:00	D	13.00
68	MUKTSAR	MALOUT	S-NPP	30.21806	74.42474	15:04:00	D	12.00
69	MUKTSAR	MALOUT	S-NPP	30.37975	74.33738	15:04:00	D	19.00
70	MUKTSAR	MALOUT	S-NPP	30.39772	74.44415	15:04:00	D	47.00
71	MUKTSAR	MUKTSAR	S-NPP	30.47857	74.42474	15:04:00	D	49.00
72	MUKTSAR	MUKTSAR	S-NPP	30.49653	74.56062	15:04:00	D	13.00
73	MUKTSAR	MUKTSAR	S-NPP	30.57139	74.39886	15:04:00	D	40.67
74	MUKTSAR	MUKTSAR	AQUA	30.37975	74.44091	13:18:00	D	24.74
75	MUKTSAR	MUKTSAR	TERRA	30.49204	74.69165	11:18:00	D	13.72
76	MUKTSAR	MUKTSAR	AQUA	30.50776	74.47327	13:18:00	D	22.69
77	SANGRUR	SANGRUR	S-NPP	30.18212	75.62826	12:24:00	D	20.00
78	SANGRUR	SHER PUR	TERRA	30.42916	75.77385	11:18:00	D	18.07

Details of residue burning events in Haryana on 22-Nov-2022

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	AMBALA	NARAINGARH	S-NPP	30.51550	77.19870	01:17:14	N	0.40
2	BHIWANI	BHIWANI	S-NPP	28.84363	76.04561	15:04:00	D	33.00
3	CHARKHI DADRI	DADRI-I	S-NPP	28.79872	76.33679	15:04:00	D	20.00
4	FATEHABAD	BHUNA	S-NPP	29.48144	75.73503	15:04:00	D	55.00
5	FATEHABAD	FATEHABAD	S-NPP	29.58025	75.33709	15:04:00	D	42.00
6	FATEHABAD	FATEHABAD	S-NPP	29.58924	75.56032	15:04:00	D	45.00
7	HISAR	HANSI-I	S-NPP	29.12211	76.01650	15:04:00	D	27.00
8	JIND	JULANA	S-NPP	29.21194	76.33679	15:04:00	D	42.00
9	JIND	JULANA	AQUA	29.10714	76.46944	13:18:00	D	15.47
10	JIND	PILLUKHERA	S-NPP	29.33771	76.55032	15:04:00	D	28.00
11	KURUKSHETRA	ISMAILABAD	S-NPP	30.04880	76.64700	02:56:06	N	0.30
12	ROHTAK	MEHAM	S-NPP	28.90652	76.37561	15:04:00	D	18.00
13	ROHTAK	MEHAM	S-NPP	28.91550	76.37561	12:24:00	D	31.00
14	ROHTAK	MEHAM	AQUA	28.99994	76.24750	13:18:00	D	18.41
15	SIRSA	ODHAN	S-NPP	29.90365	74.94885	15:04:00	D	16.00
16	SIRSA	RANIA	S-NPP	29.57127	74.60430	15:04:00	D	42.00
17	SIRSA	SIRSA	S-NPP	29.45449	74.93915	15:04:00	D	22.00
18	SIRSA	SIRSA	S-NPP	29.54990	75.09280	02:56:06	N	0.50
19	SONIPAT	KATHURA	S-NPP	29.19398	76.52120	15:04:00	D	22.00
20	YAMUNANAGAR	CHHACHHRAULI	S-NPP	30.25399	77.50149	15:04:00	D	27.00

Details of residue burning events in Uttar Pradesh on 22-Nov-2022

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	ALLAHABAD	BARA	S-NPP	25.08868	81.69442	12:24:00	D	19.00
2	ALLAHABAD	SORAWN	S-NPP	25.74445	81.98559	15:04:00	D	20.00
3	AMBEDKARNAGAR	AKBARPUR	AQUA	26.46759	82.51941	13:18:00	D	7.84
4	AURAIYA	AURAIYA	S-NPP	26.51700	79.36501	12:24:00	D	18.00
5	AZAMGARH	LALGANJ	S-NPP	25.73546	83.17941	12:24:00	D	17.00
6	BALLIA	BALLIA	AQUA	25.61569	83.94294	13:18:00	D	8.44
7	BALLIA	BALLIA	AQUA	25.79535	84.02705	13:18:00	D	6.02
8	BALLIA	BELTHARA ROAD	AQUA	26.00047	83.92676	13:18:00	D	7.85
9	BALLIA	RASRA	S-NPP	25.84326	83.94617	12:24:00	D	19.00
10	BALLIA	RASRA	AQUA	25.83877	83.88308	13:18:00	D	8.51
11	BANDA	BABERU	S-NPP	25.60970	80.79177	12:24:00	D	24.00
12	BANDA	BABERU	S-NPP	25.64563	80.81118	15:04:00	D	18.00
13	BARABANKI	HAI DARGARH	S-NPP	26.57090	81.52942	15:04:00	D	17.00
14	CHITRAKOOT	MAU	S-NPP	25.26834	81.29648	15:04:00	D	21.00
15	DEORIA	DEORIA	S-NPP	26.56191	83.95588	12:24:00	D	21.00
16	DEORIA	DEORIA	S-NPP	26.59785	83.70353	12:24:00	D	18.00
17	DEORIA	DEORIA	AQUA	26.59335	83.70353	13:18:00	D	7.51
18	DEORIA	DEORIA	AQUA	26.61282	83.94941	13:18:00	D	10.31
19	DEORIA	DEORIA	AQUA	26.68408	83.76953	13:18:00	D	15.37
20	ETAWAH	CHAKARNAGAR	S-NPP	26.60683	79.22913	15:04:00	D	62.00
21	ETAWAH	ETAWAH	S-NPP	26.72361	79.08354	15:04:00	D	15.00
22	FATEHPUR	FATEHPUR	S-NPP	25.90614	80.69471	12:24:00	D	38.00
23	FATEHPUR	FATEHPUR	S-NPP	26.00496	80.85971	15:04:00	D	16.00
24	GAZIPUR	JAKHANIA	S-NPP	25.79835	83.32500	12:24:00	D	25.00
25	GAZIPUR	MUHAMMADBAD	S-NPP	25.75343	83.87823	12:24:00	D	17.00
26	GAZIPUR	MUHAMMADBAD	AQUA	25.75792	83.67926	13:18:00	D	15.43
27	GORAKHPUR	BANSGAON	AQUA	26.45711	83.40588	13:18:00	D	7.68
28	GORAKHPUR	GORAKHPUR	AQUA	26.66612	83.51717	13:18:00	D	8.62
29	HARDOI	BILGRAM	S-NPP	27.02904	80.18030	12:24:00	D	19.00

30	JAUNPUR	MACHHALI SAHAR	AQUA	25.75343	82.19427	13:18:00	D	7.51
31	JAUNPUR	MARIAHU	AQUA	25.57077	82.45794	13:18:00	D	6.64
32	JHANSI	JHANSI	AQUA	25.56254	78.63707	13:18:00	D	18.82
33	JHANSI	MOTH	S-NPP	25.81631	78.87001	15:04:00	D	61.00
34	KANPUR	GHATAMPUR	S-NPP	26.30140	80.14148	12:24:00	D	17.00
35	KANPUR	KANPUR NAGAR	S-NPP	26.32835	80.19972	12:24:00	D	22.00
36	KANPUR DEHAT	RASULABAD	S-NPP	26.69666	79.72413	12:24:00	D	16.00
37	KANPUR DEHAT	SIKANDRA	S-NPP	26.42717	79.59795	15:04:00	D	48.00
38	KANPUR DEHAT	SIKANDRA	S-NPP	26.50801	79.71442	15:04:00	D	52.00
39	KAUSHAMBI	MANJHANPUR	AQUA	25.43004	81.30133	13:18:00	D	15.23
40	KHERI	GOLA	S-NPP	27.94590	80.36500	01:17:14	N	1.10
41	KHERI	GOLA	S-NPP	27.94960	80.36820	01:17:14	N	1.00
42	KUSHINAGAR	HATA	AQUA	26.84488	83.59676	13:18:00	D	9.34
43	KUSHINAGAR	HATA	AQUA	26.88830	83.56441	13:18:00	D	10.82
44	KUSHINAGAR	PADRAUNA	AQUA	27.11587	83.81676	13:18:00	D	9.80
45	LUCKNOW	MOHANLAL GANJ	S-NPP	26.66073	81.17030	15:04:00	D	34.00
46	MAHARAJGANJ	MAHARAJGANJ	S-NPP	27.02904	83.53853	12:24:00	D	30.00
47	MAHARAJGANJ	MAHARAJGANJ	S-NPP	27.10090	83.51911	12:24:00	D	22.00
48	MAHARAJGANJ	MAHARAJGANJ	S-NPP	27.20870	83.53367	12:24:00	D	21.00
49	MAHARAJGANJ	MAHARAJGANJ	S-NPP	27.00730	83.59560	01:17:14	N	1.20
50	MAHARAJGANJ	MAHARAJGANJ	AQUA	27.01556	83.45117	13:18:00	D	8.11
51	MAHARAJGANJ	MAHARAJGANJ	AQUA	27.12486	83.63235	13:18:00	D	8.01
52	MAHARAJGANJ	MAHARAJGANJ	AQUA	27.16678	83.52558	13:18:00	D	10.05
53	MAHARAJGANJ	MAHARAJGANJ	AQUA	27.17726	83.54823	13:18:00	D	11.40
54	MAHARAJGANJ	NICHLAUL	AQUA	27.25362	83.62103	13:18:00	D	6.64
55	MAHARAJGANJ	NICHLAUL	AQUA	27.36441	83.73588	13:18:00	D	5.76
56	MAHARAJGANJ	PHARENDA	S-NPP	27.13684	83.34926	12:24:00	D	19.00
57	MAINPURI	MAINPURI	S-NPP	27.19972	78.91854	15:04:00	D	16.00
58	MAU	MADHUBAN	AQUA	26.17115	83.78602	13:18:00	D	8.35
59	MUZAFARNAGAR	BUDHANA	S-NPP	29.30178	77.37531	12:24:00	D	16.00
60	RAIBEARELI	RAEBARELI	S-NPP	26.27445	81.01501	12:24:00	D	19.00
61	RAIBEARELI	RAEBARELI	S-NPP	26.31039	81.21883	12:24:00	D	17.00
62	RAIBEARELI	RAEBARELI	S-NPP	26.35530	81.15574	15:04:00	D	21.00
63	RAIBEARELI	RAEBARELI	S-NPP	26.32500	81.24790	01:17:14	N	0.50

64	RAIBEARELI	TILOI	S-NPP	26.32835	81.43236	15:04:00	D	42.00
65	SHAHJAHANPUR	PUWANYA	S-NPP	27.95570	80.00770	02:56:06	N	0.90
66	SHAHJAHANPUR	PUWANYA	S-NPP	27.95740	80.00700	02:56:06	N	1.10
67	SHAHJAHANPUR	PUWANYA	S-NPP	28.09560	80.24800	02:56:06	N	1.00
68	SHAHJAHANPUR	SHAHJAHANPUR	S-NPP	27.91837	79.83089	15:04:00	D	22.00
69	SHAHJAHANPUR	TILHAR	AQUA	28.05012	79.63354	13:18:00	D	17.14
70	SHRAWASTI	IKAUNA	AQUA	27.66085	81.73971	13:18:00	D	7.35
71	SIDDHARTHANAGAR	NAUGARH	AQUA	27.28506	83.22309	13:18:00	D	10.08
72	SITAPUR	MISRIK	AQUA	27.72074	80.54427	13:18:00	D	9.67
73	SITAPUR	SITAPUR	S-NPP	27.67582	80.63648	15:04:00	D	27.00
74	SULTANPUR	JAISINGHPUR	S-NPP	26.29242	82.38353	15:04:00	D	36.00
75	SULTANPUR	KADIRPUR	AQUA	26.21756	82.50647	13:18:00	D	7.47
76	UNNAO	PURWA	S-NPP	26.57090	80.82089	12:24:00	D	30.00

Details of residue burning events in Rajasthan on 22-Nov-2022

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	HANUMANGARH	HANUMANGARH	AQUA	29.61169	74.40047	13:18:00	D	66.68
2	HANUMANGARH	TIBI	S-NPP	29.55330	74.58003	15:04:00	D	42.00
3	HANUMANGARH	TIBI	S-NPP	29.58025	74.43444	15:04:00	D	35.00
4	HANUMANGARH	TIBI	S-NPP	29.58924	74.47327	15:04:00	D	12.00

Details of residue burning events in Madhya Pradesh on 22-Nov-2022

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	BALAGHAT	KHAIRLANJI	S-NPP	21.57626	79.94736	12:24:00	D	27.00
2	BHIND	GOHAD	S-NPP	26.44513	78.32649	15:04:00	D	14.00
3	BHIND	GOHAD	S-NPP	26.47208	78.28766	15:04:00	D	30.00
4	BHIND	GOHAD	S-NPP	26.49903	78.36531	12:24:00	D	39.00
5	BHIND	GOHAD	S-NPP	26.50801	78.28281	15:04:00	D	33.00
6	BHIND	LAHAR	S-NPP	25.96903	78.84090	15:04:00	D	16.00
7	CHHINDWARA	AMARWARA	S-NPP	22.19610	78.94766	15:04:00	D	14.00
8	CHHINDWARA	CHAURAI	S-NPP	22.10627	79.35531	12:24:00	D	17.00
9	CHHINDWARA	CHHINDWARA	S-NPP	22.01644	78.87972	15:04:00	D	20.00
10	DATIA	BHANDER	S-NPP	25.57377	78.65163	15:04:00	D	24.00
11	DATIA	BHANDER	S-NPP	25.91513	78.71472	15:04:00	D	22.00
12	DATIA	BHANDER	AQUA	25.92112	78.70178	13:18:00	D	16.27
13	DATIA	DATIA	S-NPP	25.66360	78.30708	15:04:00	D	16.00
14	DATIA	DATIA	S-NPP	25.81631	78.41384	15:04:00	D	18.00
15	GWALIOR	BHITARWAR	S-NPP	25.72648	78.11296	15:04:00	D	18.00
16	GWALIOR	BHITARWAR	S-NPP	25.72948	78.06119	12:24:00	D	22.67
17	GWALIOR	BHITARWAR	S-NPP	25.75343	78.10325	15:04:00	D	17.00
18	GWALIOR	BHITARWAR	S-NPP	25.78936	78.06443	15:04:00	D	17.00
19	GWALIOR	BHITARWAR	S-NPP	25.79835	78.15178	12:24:00	D	37.00
20	GWALIOR	BHITARWAR	S-NPP	25.81631	78.15178	15:04:00	D	17.00
21	GWALIOR	BHITARWAR	S-NPP	25.81931	78.06119	12:24:00	D	28.67
22	GWALIOR	BHITARWAR	S-NPP	25.82530	78.05472	15:04:00	D	107.00
23	GWALIOR	BHITARWAR	S-NPP	25.86123	78.11781	15:04:00	D	15.00
24	GWALIOR	BHITARWAR	S-NPP	25.90614	78.11296	15:04:00	D	30.00
25	GWALIOR	BHITARWAR	S-NPP	25.92411	78.15178	15:04:00	D	15.00
26	GWALIOR	BHITARWAR	S-NPP	25.94208	78.21972	12:24:00	D	29.00
27	GWALIOR	BHITARWAR	S-NPP	25.94657	78.20031	15:04:00	D	28.50
28	GWALIOR	BHITARWAR	S-NPP	25.98250	78.14693	12:24:00	D	21.50
29	GWALIOR	BHITARWAR	S-NPP	25.98699	78.07414	15:04:00	D	20.00

30	GWALIOR	BHITARWAR	AQUA	25.77140	78.00134	13:18:00	D	16.44
31	GWALIOR	BHITARWAR	AQUA	25.78337	78.06766	13:18:00	D	21.77
32	GWALIOR	BHITARWAR	AQUA	25.81407	78.05472	13:18:00	D	15.09
33	GWALIOR	BHITARWAR	AQUA	25.86422	78.13884	13:18:00	D	13.94
34	GWALIOR	BHITARWAR	AQUA	25.91153	78.14402	13:18:00	D	47.62
35	GWALIOR	BHITARWAR	AQUA	25.94208	78.20516	13:18:00	D	11.39
36	GWALIOR	BHITARWAR	AQUA	25.96453	78.19061	13:18:00	D	22.00
37	GWALIOR	DABRA	S-NPP	25.81182	78.19061	15:04:00	D	21.00
38	GWALIOR	DABRA	S-NPP	25.90614	78.25855	15:04:00	D	23.00
39	GWALIOR	DABRA	S-NPP	25.91513	78.21972	12:24:00	D	15.00
40	GWALIOR	DABRA	S-NPP	25.94208	78.31678	15:04:00	D	23.00
41	GWALIOR	DABRA	S-NPP	25.96004	78.23913	12:24:00	D	27.00
42	GWALIOR	DABRA	S-NPP	25.97801	78.32649	15:04:00	D	27.00
43	GWALIOR	DABRA	S-NPP	26.02292	78.23913	15:04:00	D	19.00
44	GWALIOR	DABRA	AQUA	25.85524	78.22619	13:18:00	D	14.02
45	GWALIOR	DABRA	AQUA	25.86347	78.28766	13:18:00	D	15.85
46	GWALIOR	DABRA	AQUA	25.98999	78.29090	13:18:00	D	24.98
47	GWALIOR	GWALIOR	AQUA	26.29781	78.17313	13:18:00	D	15.00
48	HOSHANGABAD	BABAI	S-NPP	22.83391	77.85090	15:04:00	D	34.00
49	HOSHANGABAD	BANKHERI	S-NPP	22.89679	78.55943	15:04:00	D	15.00
50	HOSHANGABAD	PIPARIYA	S-NPP	22.88780	78.37502	15:04:00	D	17.00
51	HOSHANGABAD	PIPARIYA	S-NPP	22.88780	78.42355	15:04:00	D	26.00
52	JABALPUR	JABALPUR	S-NPP	23.05848	79.99589	12:24:00	D	17.00
53	JABALPUR	JABALPUR	S-NPP	23.22916	79.87942	12:24:00	D	110.00
54	JABALPUR	JABALPUR	S-NPP	23.23366	79.91825	12:24:00	D	53.50
55	JABALPUR	JABALPUR	S-NPP	23.23815	80.01530	12:24:00	D	35.00
56	JABALPUR	JABALPUR	S-NPP	23.26510	79.90854	12:24:00	D	53.00
57	JABALPUR	JABALPUR	S-NPP	23.26510	79.92795	12:24:00	D	31.00
58	JABALPUR	JABALPUR	S-NPP	23.31001	79.89883	15:04:00	D	70.00
59	JABALPUR	JABALPUR	S-NPP	23.31001	79.89883	12:24:00	D	32.00
60	JABALPUR	JABALPUR	S-NPP	23.31001	79.97648	15:04:00	D	110.00
61	JABALPUR	JABALPUR	S-NPP	23.31900	79.93766	12:24:00	D	19.00
62	JABALPUR	JABALPUR	S-NPP	23.31900	79.95707	15:04:00	D	27.00

63	JABALPUR	JABALPUR	S-NPP	23.32349	79.93038	15:04:00	D	36.50
64	JABALPUR	JABALPUR	S-NPP	23.32798	79.98619	15:04:00	D	25.00
65	JABALPUR	JABALPUR	S-NPP	23.32798	80.00560	15:04:00	D	16.00
66	JABALPUR	JABALPUR	S-NPP	23.33696	80.04442	12:24:00	D	16.00
67	JABALPUR	JABALPUR	AQUA	23.20671	79.89398	13:18:00	D	21.11
68	JABALPUR	JABALPUR	AQUA	23.23366	79.91339	13:18:00	D	29.10
69	JABALPUR	JABALPUR	AQUA	23.25911	79.99266	13:18:00	D	17.31
70	JABALPUR	JABALPUR	AQUA	23.29803	80.02825	13:18:00	D	14.19
71	JABALPUR	JABALPUR	AQUA	23.33996	79.98942	13:18:00	D	25.64
72	JABALPUR	JABALPUR	AQUA	23.34081	79.92518	13:18:00	D	35.20
73	JABALPUR	MAJHOULI	S-NPP	23.37289	79.99589	15:04:00	D	24.00
74	JABALPUR	MAJHOULI	S-NPP	23.43578	79.97648	15:04:00	D	50.00
75	JABALPUR	MAJHOULI	S-NPP	23.43578	80.02501	15:04:00	D	18.00
76	JABALPUR	MAJHOULI	S-NPP	23.50764	80.02501	12:24:00	D	72.00
77	JABALPUR	MAJHOULI	S-NPP	23.51663	79.89883	15:04:00	D	29.00
78	JABALPUR	MAJHOULI	S-NPP	23.51663	79.94736	12:24:00	D	28.00
79	JABALPUR	MAJHOULI	S-NPP	23.52561	80.14148	15:04:00	D	16.00
80	JABALPUR	MAJHOULI	S-NPP	23.54357	80.05413	15:04:00	D	16.00
81	JABALPUR	MAJHOULI	S-NPP	23.56154	79.93766	15:04:00	D	34.00
82	JABALPUR	MAJHOULI	S-NPP	23.56154	79.97648	15:04:00	D	16.00
83	JABALPUR	MAJHOULI	AQUA	23.37589	79.97325	13:18:00	D	12.10
84	JABALPUR	MAJHOULI	AQUA	23.41631	80.02501	13:18:00	D	22.93
85	JABALPUR	MAJHOULI	AQUA	23.42230	79.99104	13:18:00	D	17.24
86	JABALPUR	MAJHOULI	AQUA	23.45674	80.01207	13:18:00	D	36.60
87	JABALPUR	PATAN	S-NPP	23.20221	79.80663	15:04:00	D	28.50
88	JABALPUR	PATAN	S-NPP	23.20221	79.84060	15:04:00	D	51.00
89	JABALPUR	PATAN	S-NPP	23.26510	79.82119	15:04:00	D	18.00
90	JABALPUR	PATAN	S-NPP	23.27408	79.78236	15:04:00	D	20.00
91	JABALPUR	PATAN	S-NPP	23.29205	79.81148	12:24:00	D	17.00
92	JABALPUR	PATAN	S-NPP	23.34595	79.80178	15:04:00	D	50.00
93	JABALPUR	PATAN	AQUA	23.19772	79.82604	13:18:00	D	11.82
94	JABALPUR	PATAN	AQUA	23.26061	79.82604	13:18:00	D	12.63
95	JABALPUR	PATAN	AQUA	23.26510	79.73869	13:18:00	D	13.50

96	JABALPUR	PATAN	AQUA	23.26959	79.77751	13:18:00	D	10.35
97	JABALPUR	SAHPURA	S-NPP	23.15281	79.70472	15:04:00	D	16.50
98	JABALPUR	SAHPURA	S-NPP	23.17077	79.76295	12:24:00	D	29.50
99	JABALPUR	SAHPURA	S-NPP	23.18425	79.65619	15:04:00	D	44.00
100	JABALPUR	SAHPURA	S-NPP	23.18425	79.78236	15:04:00	D	78.00
101	JABALPUR	SAHPURA	AQUA	23.15281	79.79692	13:18:00	D	12.04
102	JABALPUR	SAHPURA	AQUA	23.15580	79.75163	13:18:00	D	25.07
103	JABALPUR	SAHPURA	AQUA	23.16628	79.66104	13:18:00	D	21.39
104	JABALPUR	SAHPURA	AQUA	23.19024	79.71119	13:18:00	D	24.31
105	JABALPUR	SIHORA	S-NPP	23.39984	80.18030	15:04:00	D	13.00
106	JABALPUR	SIHORA	S-NPP	23.43578	80.21913	15:04:00	D	51.00
107	JABALPUR	SIHORA	S-NPP	23.44476	80.19972	15:04:00	D	49.00
108	JABALPUR	SIHORA	S-NPP	23.46273	80.06383	12:24:00	D	24.00
109	JABALPUR	SIHORA	S-NPP	23.46273	80.19001	15:04:00	D	108.00
110	JABALPUR	SIHORA	S-NPP	23.47171	80.09295	15:04:00	D	26.00
111	JABALPUR	SIHORA	AQUA	23.41482	80.16413	13:18:00	D	12.53
112	JABALPUR	SIHORA	AQUA	23.43039	80.25019	13:18:00	D	19.90
113	JABALPUR	SIHORA	AQUA	23.47620	80.08810	13:18:00	D	10.19
114	KATNI	BAHURIBAND	S-NPP	23.70527	79.95707	12:24:00	D	24.00
115	KATNI	BAHURIBAND	S-NPP	23.70976	80.08325	15:04:00	D	16.50
116	KATNI	BAHURIBAND	S-NPP	23.74120	79.99589	12:24:00	D	22.00
117	KATNI	DHIMERKHEDA	S-NPP	23.45374	80.34530	12:24:00	D	16.00
118	KATNI	DHIMERKHEDA	S-NPP	23.49866	80.30648	12:24:00	D	26.00
119	KATNI	DHIMERKHEDA	AQUA	23.47470	80.27413	13:18:00	D	12.96
120	KATNI	DHIMERKHEDA	AQUA	23.51213	80.24339	13:18:00	D	13.68
121	KATNI	RITHI	S-NPP	23.84900	79.95222	15:04:00	D	25.00
122	KATNI	RITHI	S-NPP	23.91188	80.00560	15:04:00	D	15.00
123	KATNI	RITHI	S-NPP	23.92087	80.11236	12:24:00	D	19.00
124	MANDLA	NAINPUR	S-NPP	22.47458	80.06383	12:24:00	D	21.00
125	MANDLA	NAINPUR	AQUA	22.38175	80.20295	13:18:00	D	22.52
126	NARSHIMAPURA	GADARWARA	AQUA	22.88481	78.86354	13:18:00	D	30.23
127	PANNA	PANNA	S-NPP	24.49130	80.43266	15:04:00	D	13.00
128	PANNA	PANNA	S-NPP	24.54969	80.37442	12:24:00	D	47.00

129	PANNA	PANNA	AQUA	24.58263	80.45530	13:18:00	D	16.51
130	PANNA	PAWAI	S-NPP	24.28019	80.21913	15:04:00	D	21.00
131	RAISEN	BARELI	S-NPP	22.96865	78.37502	15:04:00	D	19.00
132	RAISEN	BARELI	S-NPP	23.00459	78.11296	15:04:00	D	21.00
133	RAISEN	BARELI	S-NPP	23.05950	78.18800	01:17:14	N	0.50
134	RAISEN	GOHARGANJ	S-NPP	22.98662	77.69561	15:04:00	D	22.00
135	RAISEN	GOHARGANJ	S-NPP	23.05848	77.47237	15:04:00	D	33.00
136	RAISEN	GOHARGANJ	S-NPP	23.07710	77.51140	01:17:14	N	1.20
137	RAISEN	GOHARGANJ	S-NPP	23.08320	77.98250	01:17:14	N	1.80
138	RAISEN	GOHARGANJ	S-NPP	23.08360	77.98500	01:17:14	N	1.40
139	RAISEN	GOHARGANJ	S-NPP	23.08400	77.98060	01:17:14	N	1.50
140	RAISEN	RAISEN	S-NPP	23.46273	77.74414	15:04:00	D	22.00
141	RAISEN	RAISEN	S-NPP	23.47171	77.72472	15:04:00	D	16.00
142	RAISEN	RAISEN	S-NPP	23.52561	77.69561	15:04:00	D	15.00
143	REWA	GURH	S-NPP	24.47782	81.48089	12:24:00	D	32.00
144	REWA	TEONTHAR	S-NPP	25.11563	81.62647	15:04:00	D	20.00
145	REWA	TEONTHAR	AQUA	24.96890	81.55530	13:18:00	D	6.69
146	REWA	TEONTHAR	AQUA	24.97061	81.50307	13:18:00	D	8.53
147	SATNA	AMARPATAN	S-NPP	24.39697	81.19942	12:24:00	D	30.00
148	SATNA	AMARPATAN	AQUA	24.43740	81.21398	13:18:00	D	7.56
149	SATNA	NAGOD	S-NPP	24.48681	80.57824	12:24:00	D	49.00
150	SATNA	NAGOD	S-NPP	24.61257	80.62677	12:24:00	D	29.00
151	SATNA	RAMPURBAGHLEAN	S-NPP	24.56765	80.96648	12:24:00	D	28.00
152	SATNA	RAMPURBAGHLEAN	AQUA	24.56316	80.97133	13:18:00	D	8.00
153	SATNA	RAMPURBAGHLEAN	AQUA	24.67246	81.05706	13:18:00	D	8.20
154	SATNA	UCHAHAR	S-NPP	24.45986	80.76265	12:24:00	D	34.00
155	SATNA	UCHAHAR	S-NPP	24.49579	80.74324	15:04:00	D	21.00
156	SATNA	UCHAHAR	AQUA	24.38200	80.80795	13:18:00	D	10.98
157	SATNA	UCHAHAR	AQUA	24.48082	80.75942	13:18:00	D	11.05
158	SEHORE	BUDHNI	S-NPP	22.83840	77.99649	15:04:00	D	21.50
159	SEHORE	BUDHNI	S-NPP	22.89679	77.93825	15:04:00	D	17.00
160	SEHORE	BUDHNI	S-NPP	22.90577	77.88002	15:04:00	D	21.00
161	SEHORE	BUDHNI	S-NPP	22.92800	77.89510	01:17:14	N	0.70

162	SEONI	KEWLARI	S-NPP	22.39373	79.88913	15:04:00	D	15.00
163	SHEOPUR	SHEOPUR	S-NPP	25.45249	76.60855	15:04:00	D	31.00
164	SHIVPURI	NARWAR	S-NPP	25.59173	78.25855	12:24:00	D	34.00
165	SHIVPURI	NARWAR	S-NPP	25.65462	78.14208	12:24:00	D	28.00
166	SHIVPURI	NARWAR	S-NPP	25.69504	78.08869	15:04:00	D	48.00
167	SHIVPURI	NARWAR	S-NPP	25.70851	78.00619	12:24:00	D	41.00
168	SHIVPURI	NARWAR	S-NPP	25.71750	78.11296	12:24:00	D	19.00
169	SHIVPURI	NARWAR	AQUA	25.58788	78.26132	13:18:00	D	19.11
170	SHIVPURI	NARWAR	AQUA	25.61419	78.28281	13:18:00	D	25.23

The study used data received from following Satellites at NRSC 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

**The rice mask for the Punjab and Haryana were provided by MNCFC, MoA&FW, Govt of India
The kharif crop mask for Delhi, Uttar Pradesh, Rajasthan and Madhya Pradesh were provided by NRSC**

Study Team

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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)

and on IARI CREAMS website (<http://creams.iari.res.in/cms2/index.php>)
