



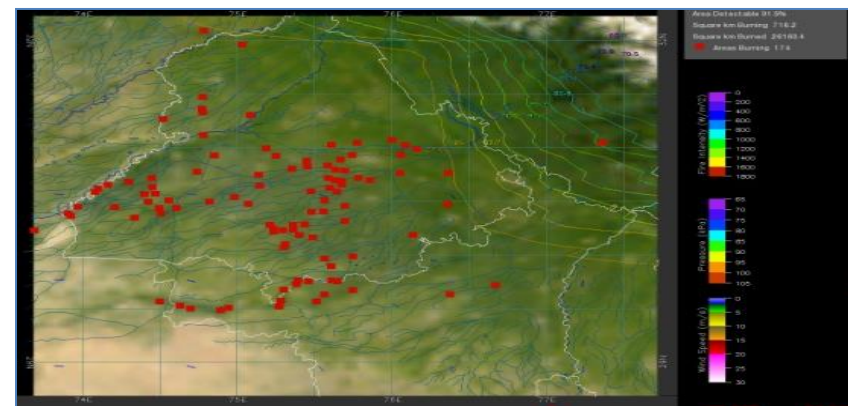
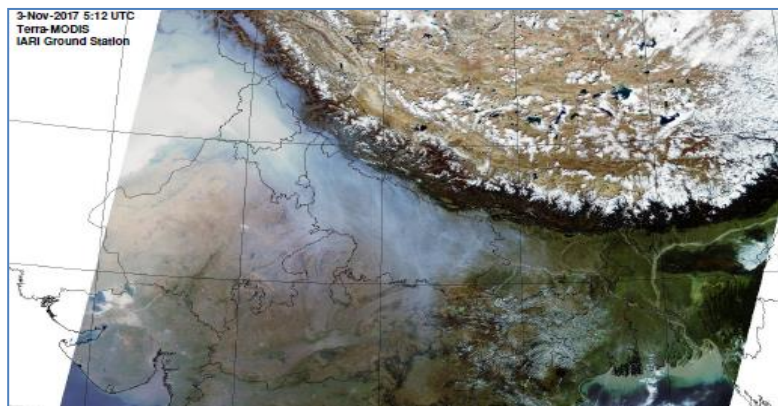
**Bulletin
No. 39**

**Events Date:
23-Oct-2023**

**Issued on:
23-Oct-2023**



MONITORING PADDY RESIDUE BURNING IN INDIA USING SATELLITE REMOTE SENSING DURING 2023



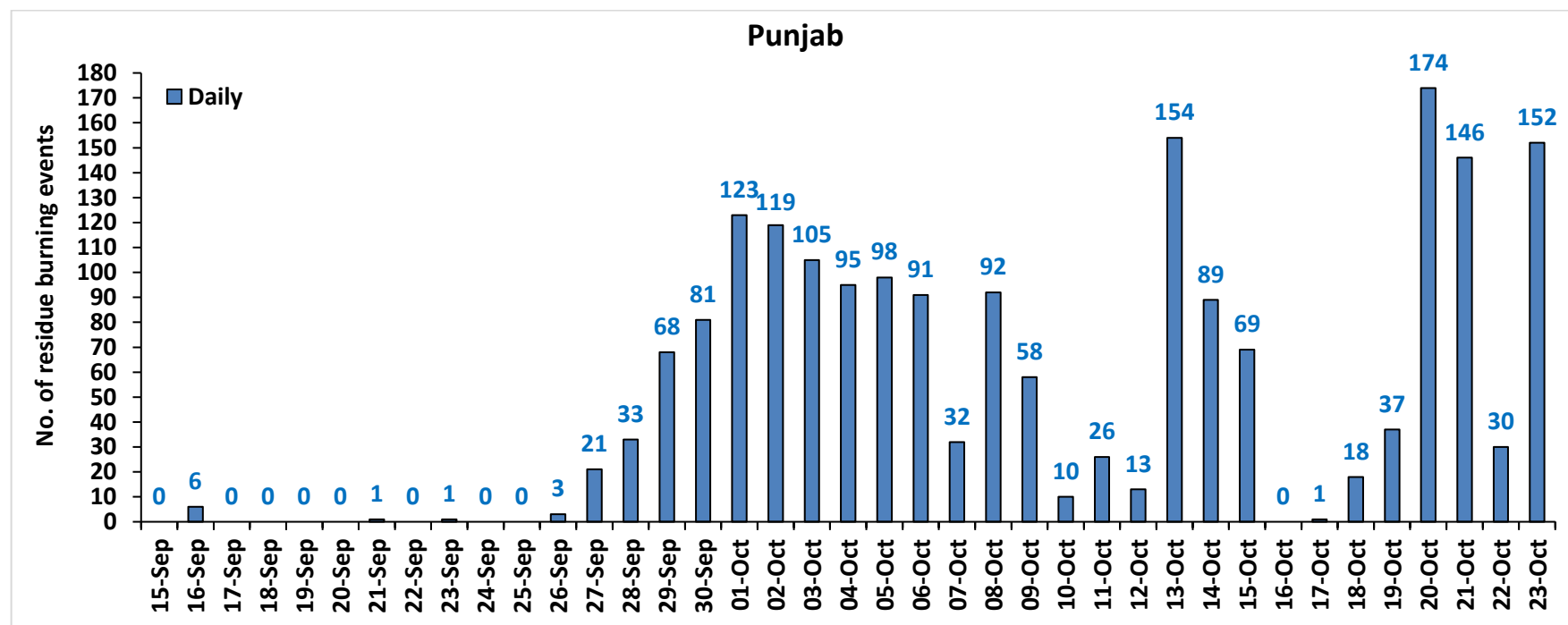
**Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory,
Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012**

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

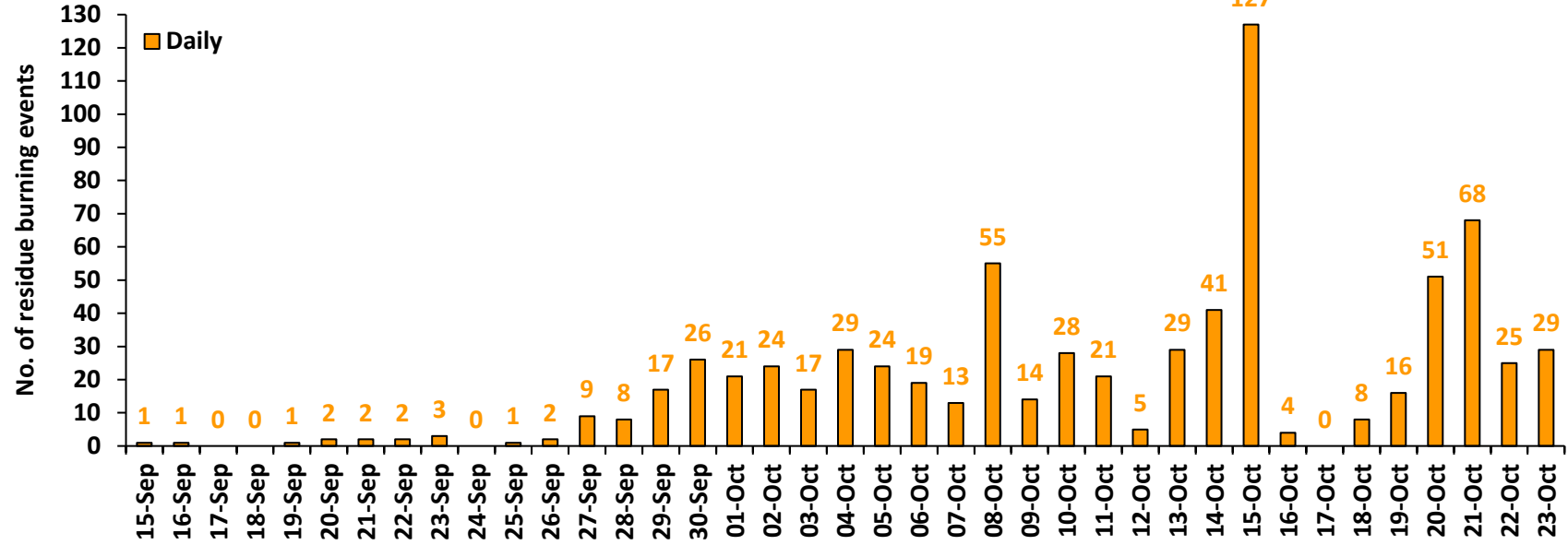
Highlights for 23-Oct-2023

- 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 **319** residue burning events in the six study States on 23-Oct-2023.
- The state wise events detected on 23-Oct-2023 were **152** in Punjab, **29** in Haryana, **20** in UP, **00** in Delhi, **29** in Rajasthan and **89** in MP.
- Total **4693** burning events were detected in the six states between 15-Sept-2023 and 23-Oct-2023, which are distributed as **1946**, **743**, **560**, **02**, **472** and **970** in Punjab, Haryana, UP, Delhi, Rajasthan and MP, respectively.

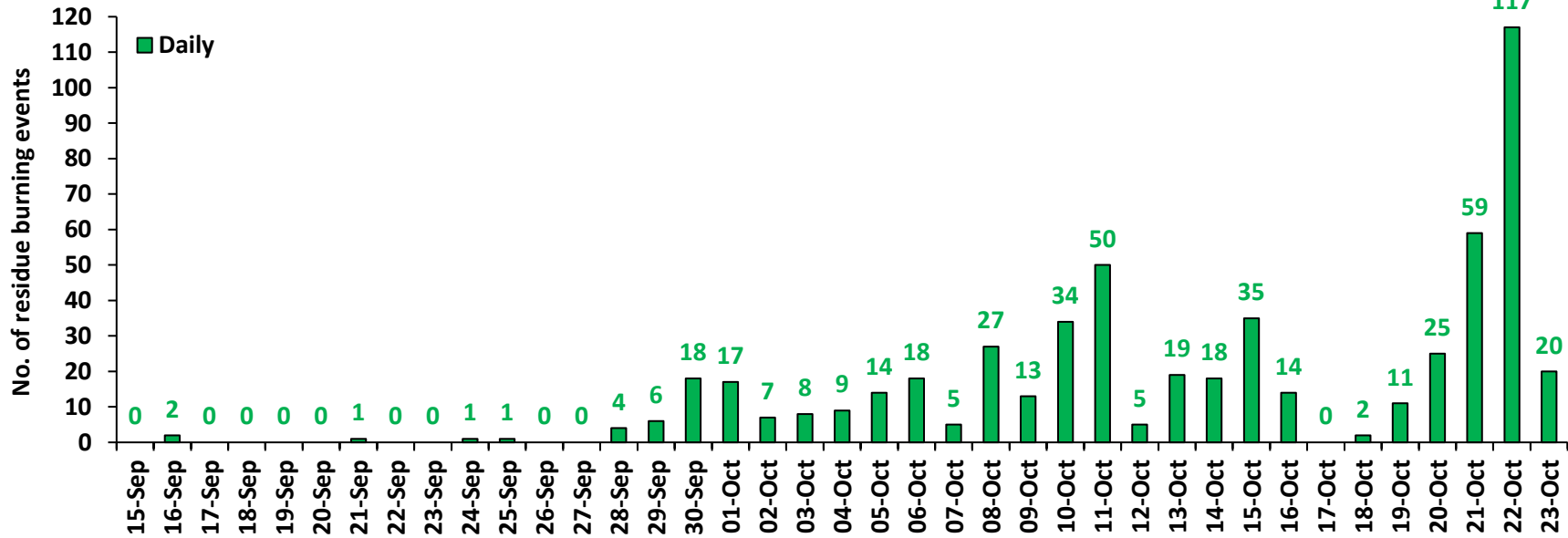
Temporal distribution of rice residue burning events for the study States in 2023



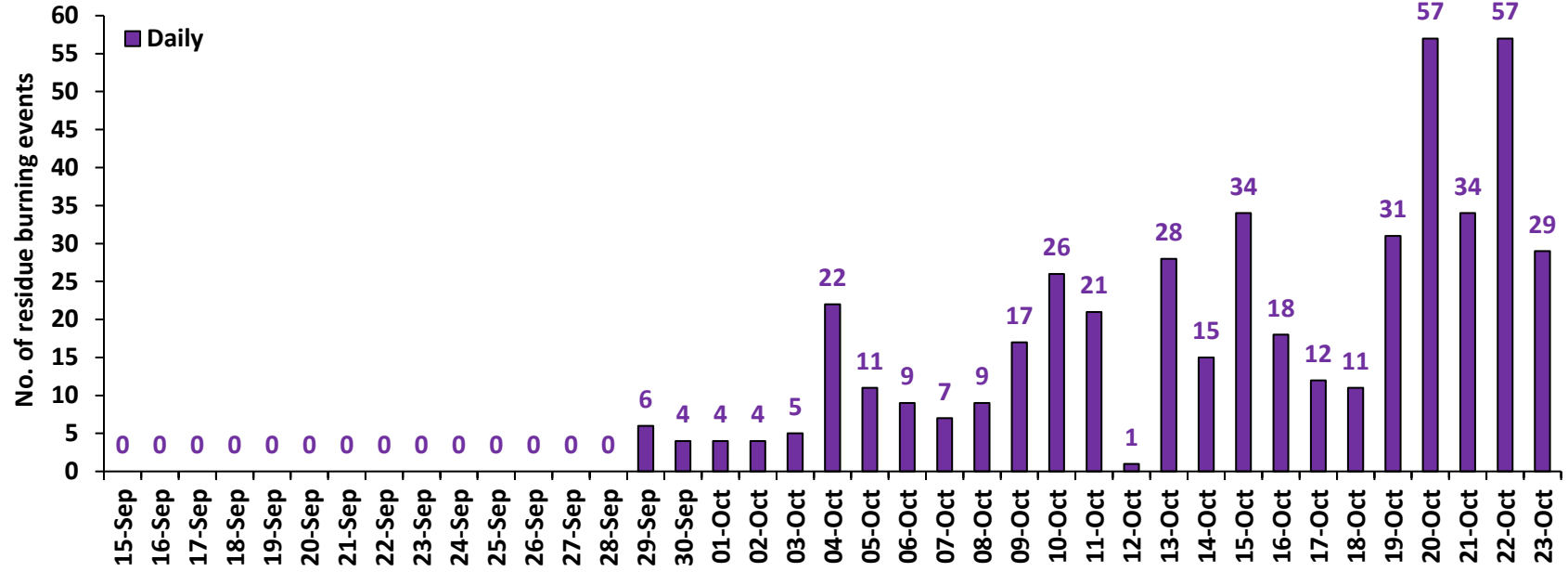
Haryana



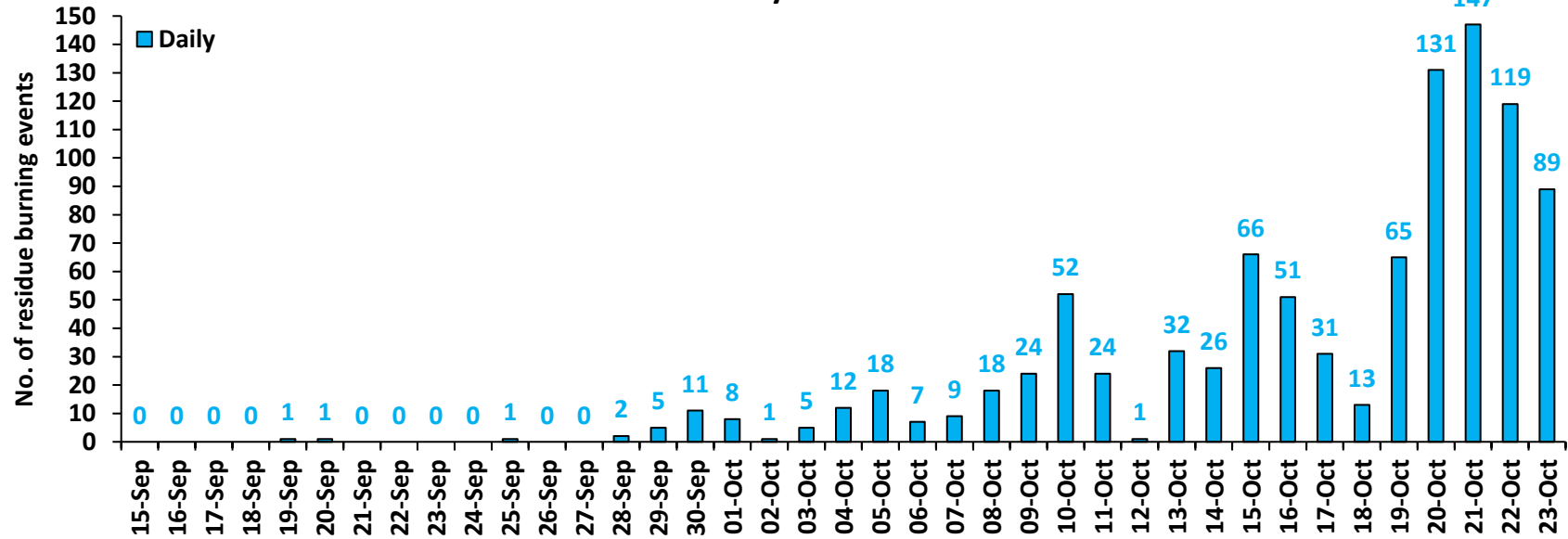
Uttar Pradesh



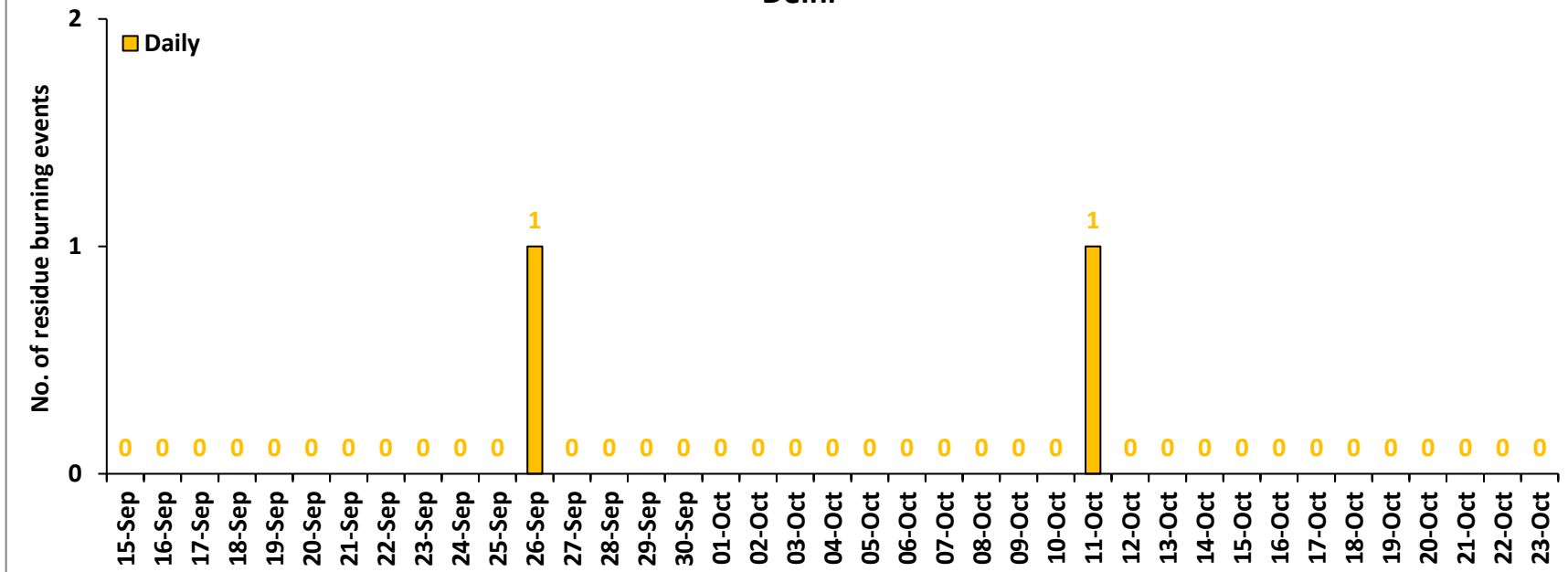
Rajasthan



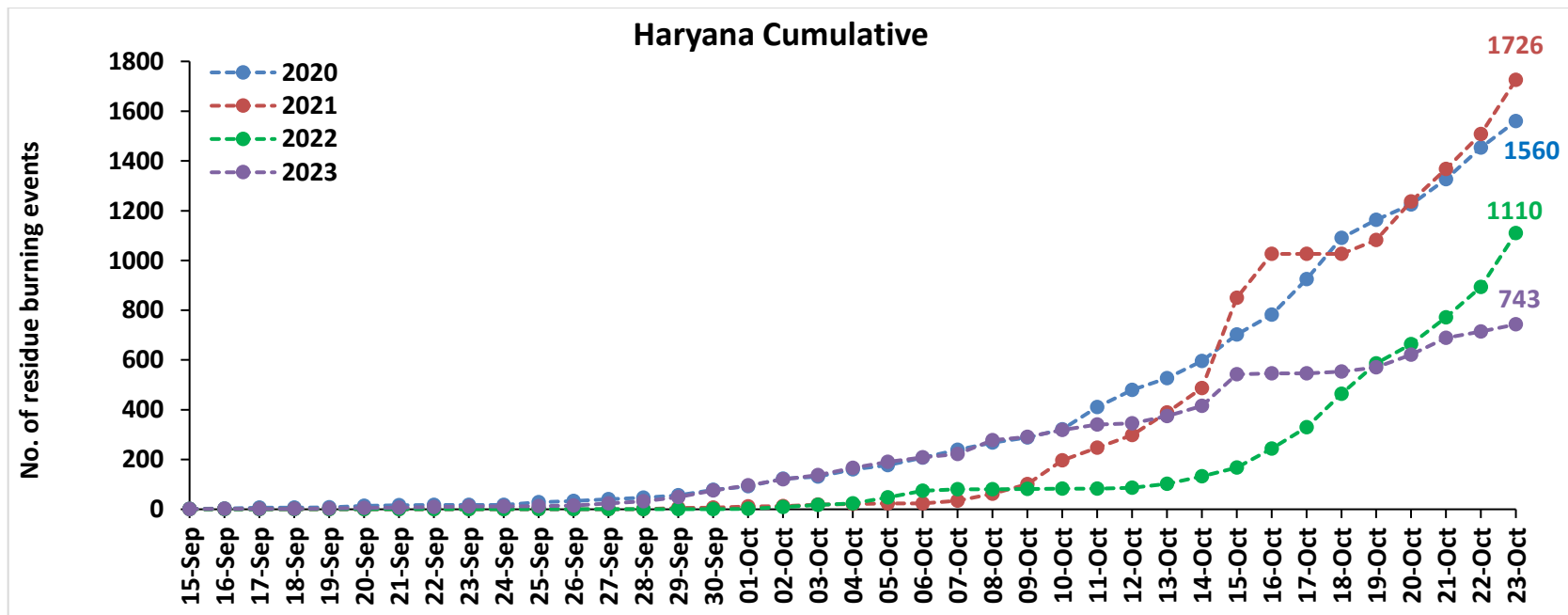
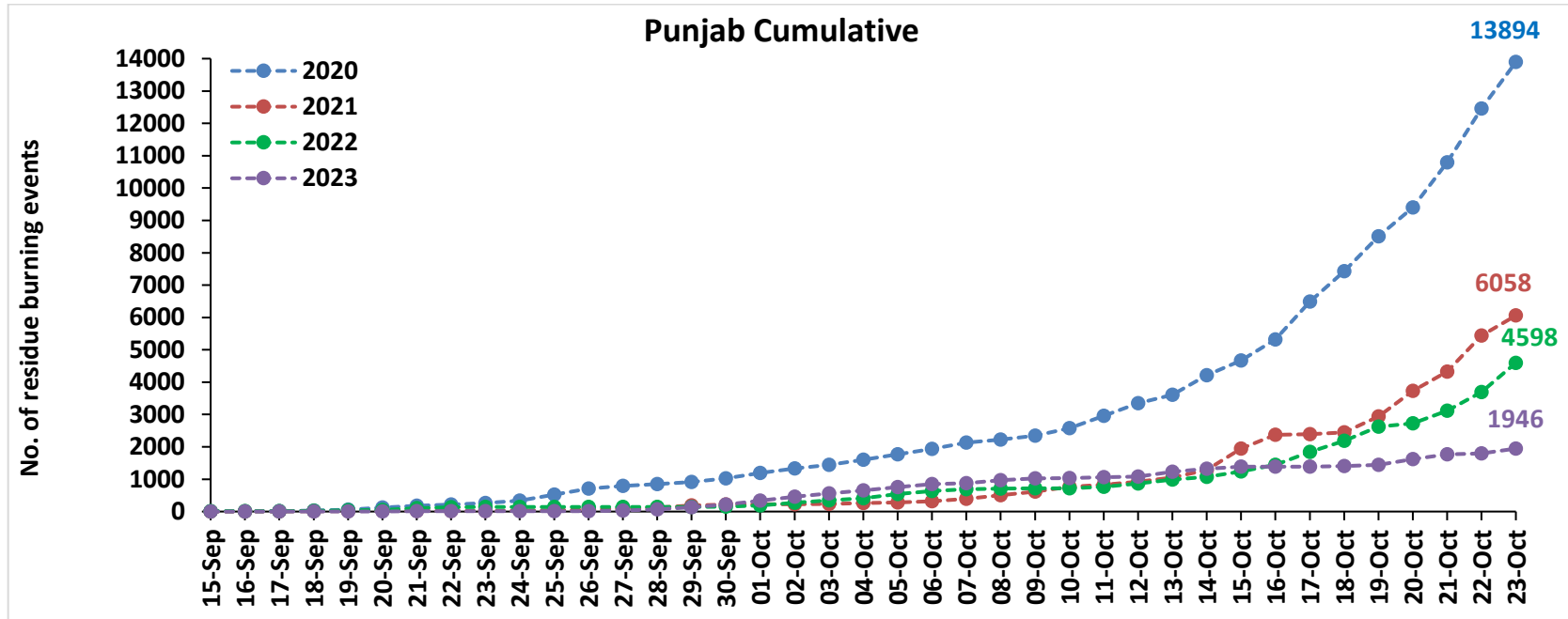
Madhya Pradesh

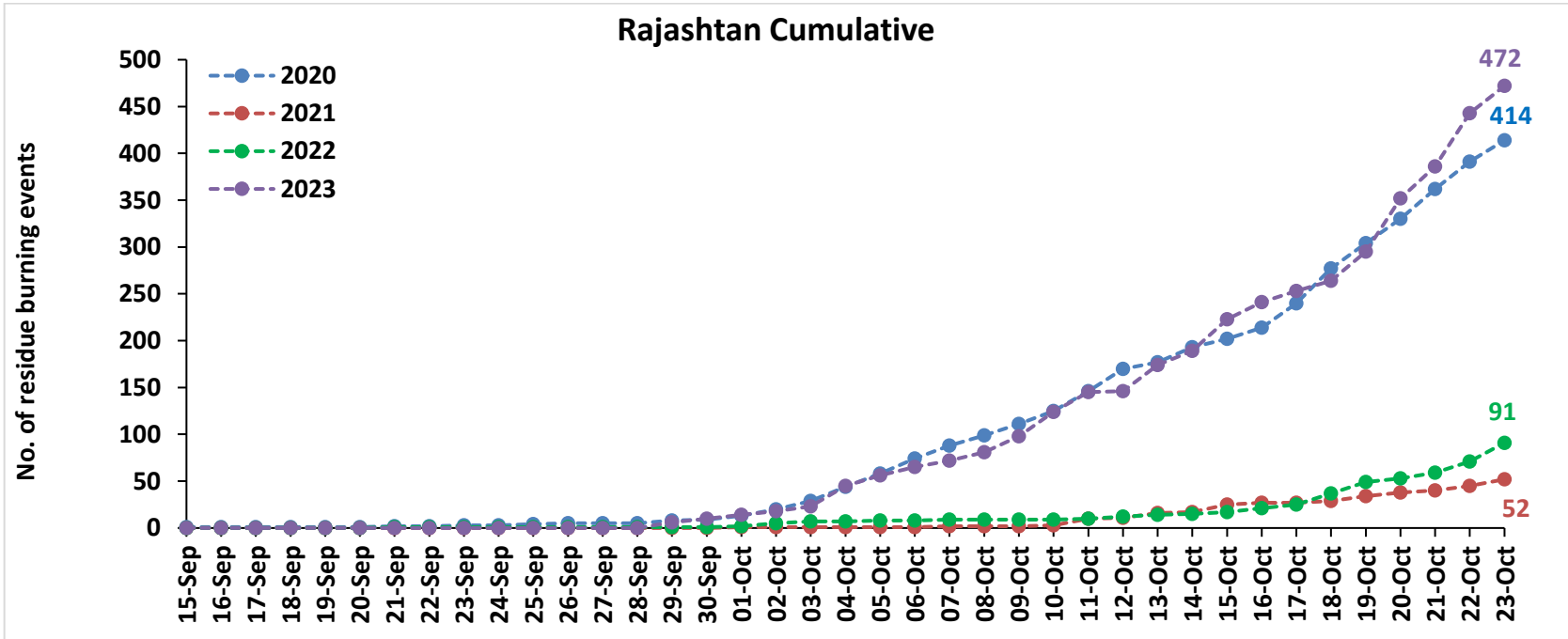
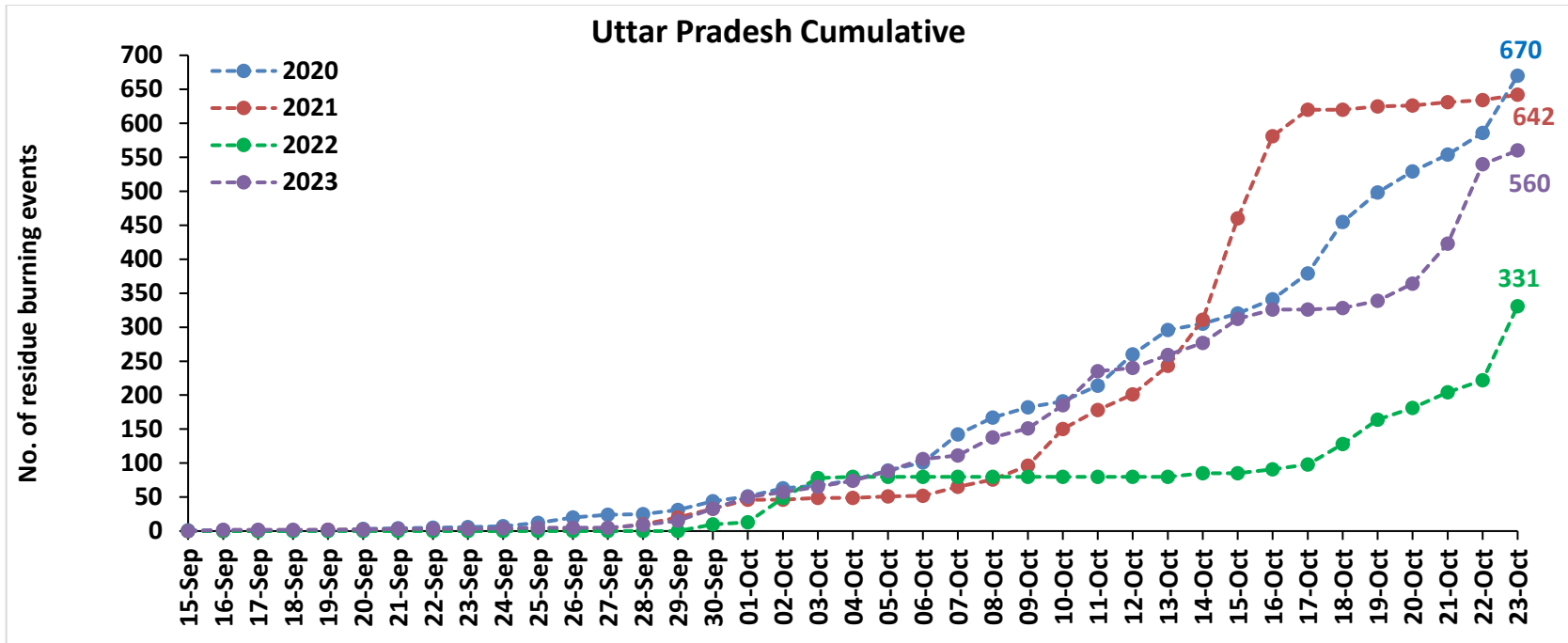


Delhi

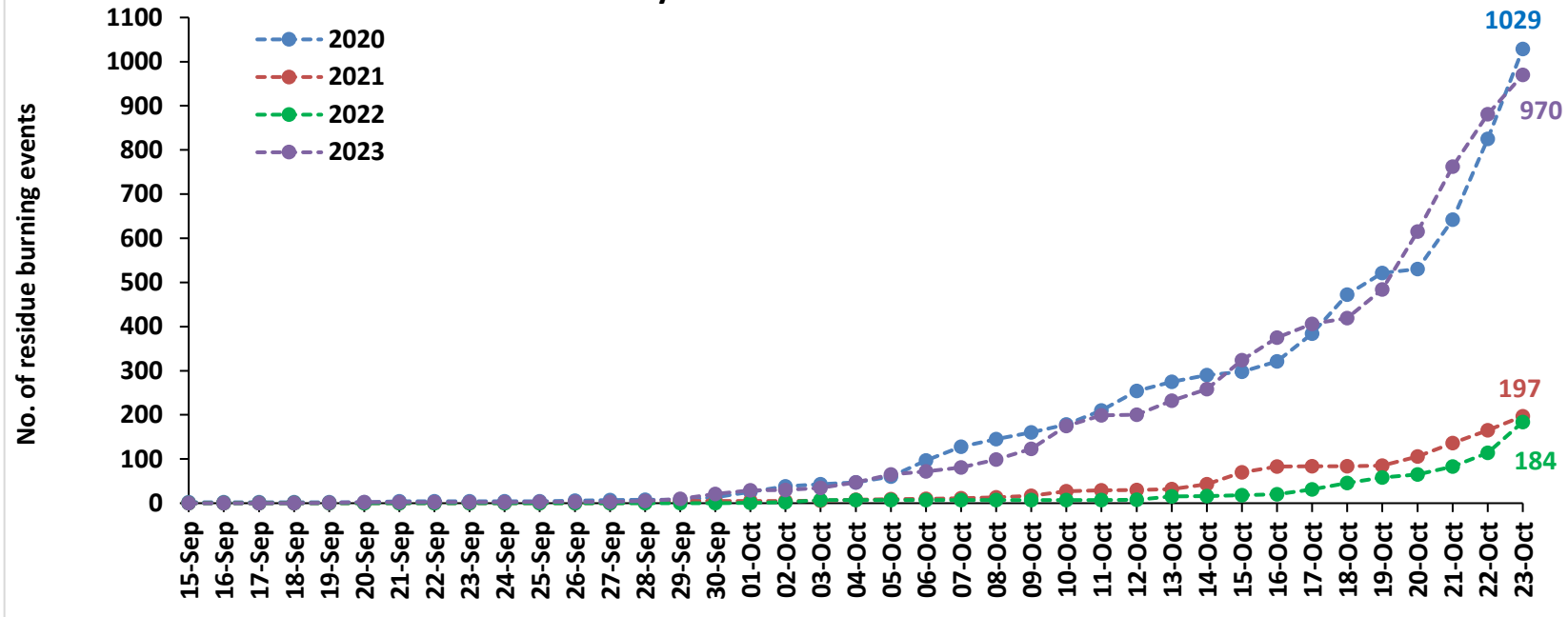


Comparison of residue burning events in current year (2023) with previous years (2020, 2021 and 2022) for the study State

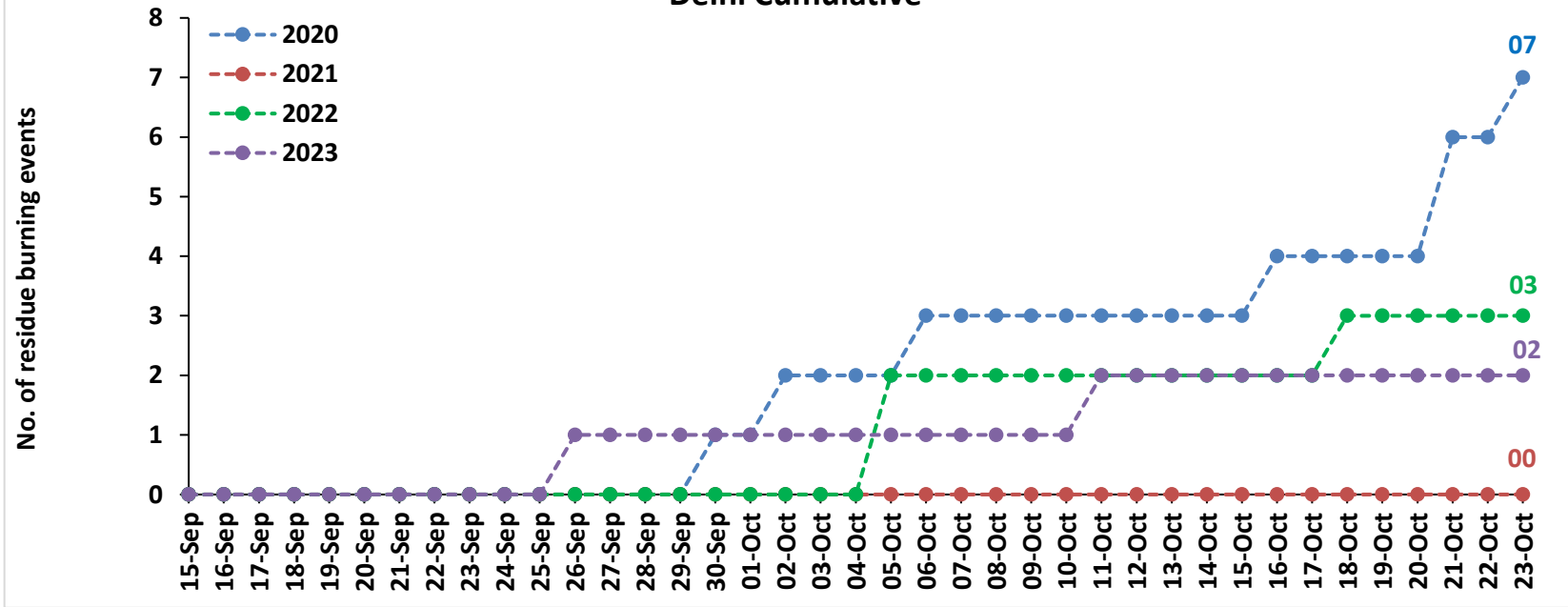




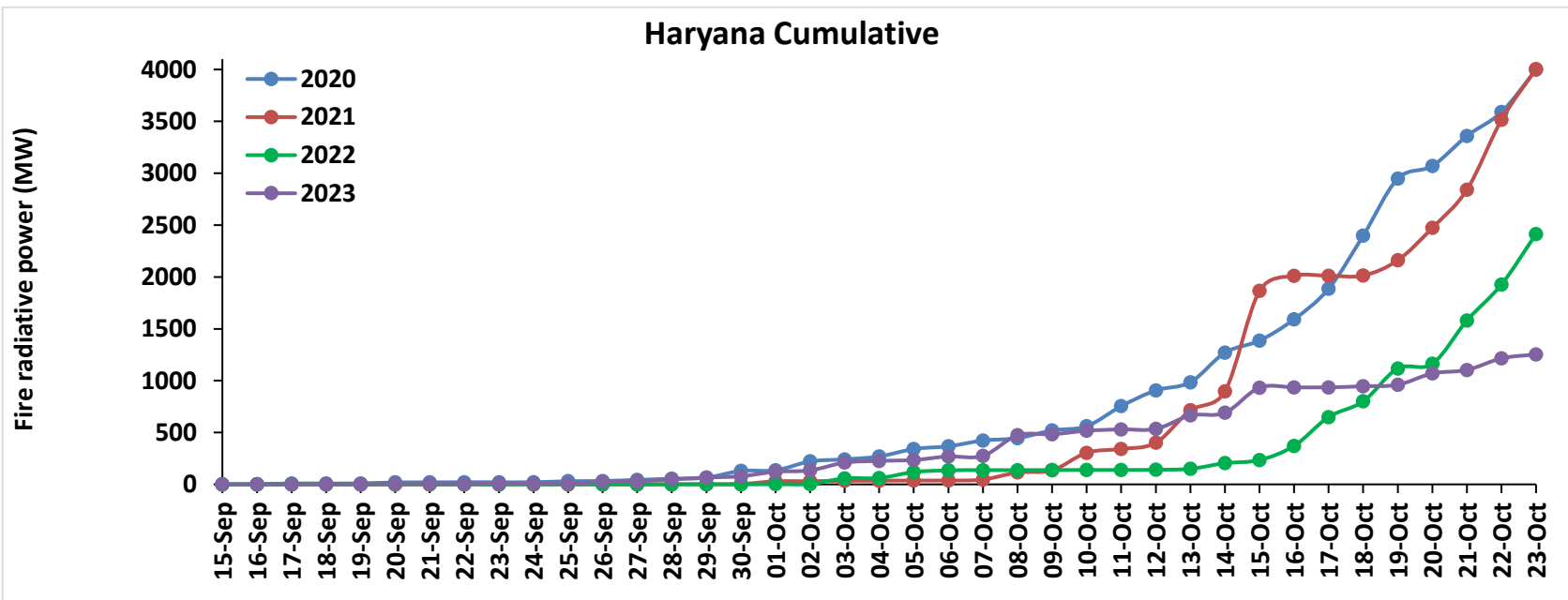
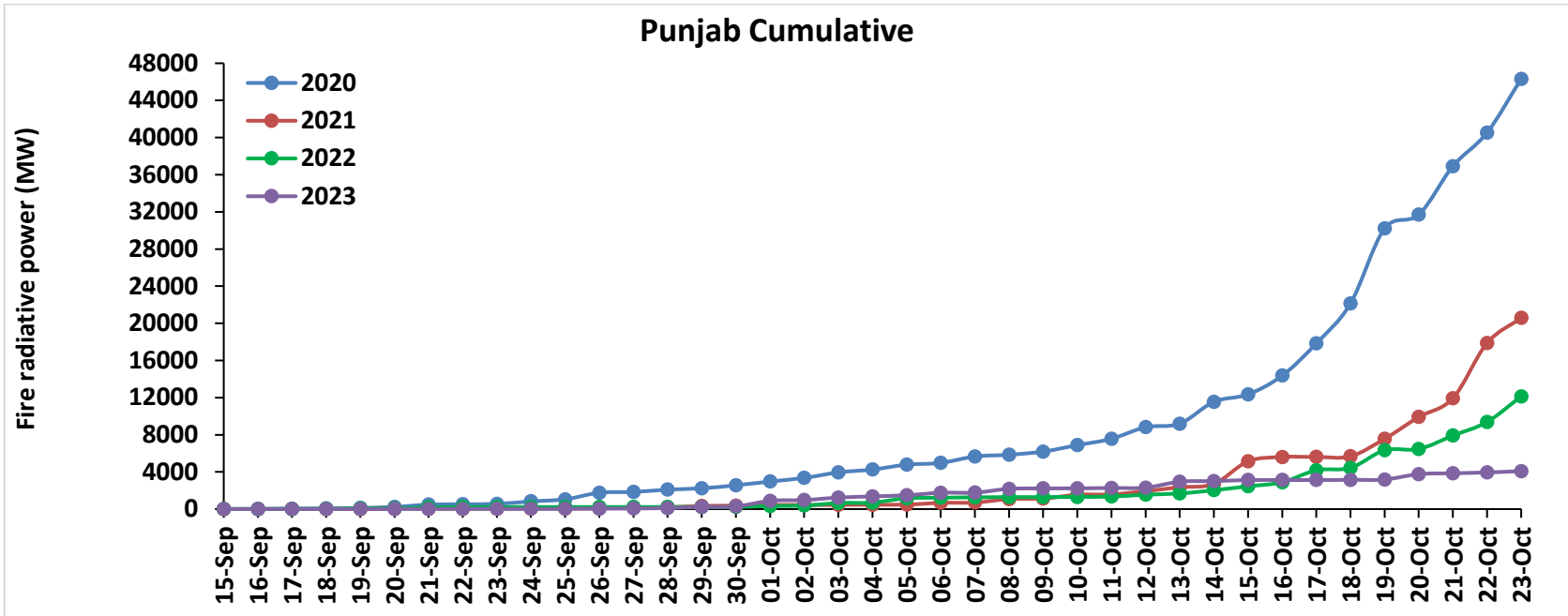
Madhya Pradesh Cumulative

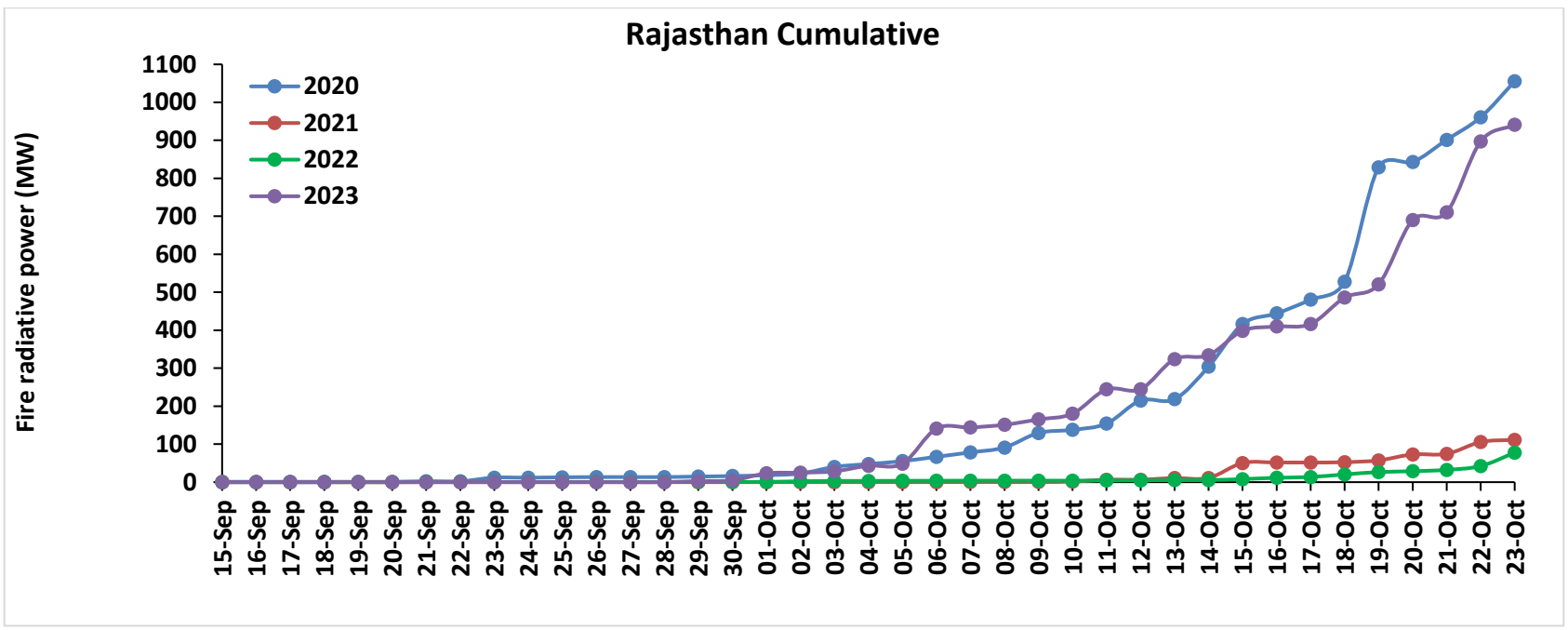
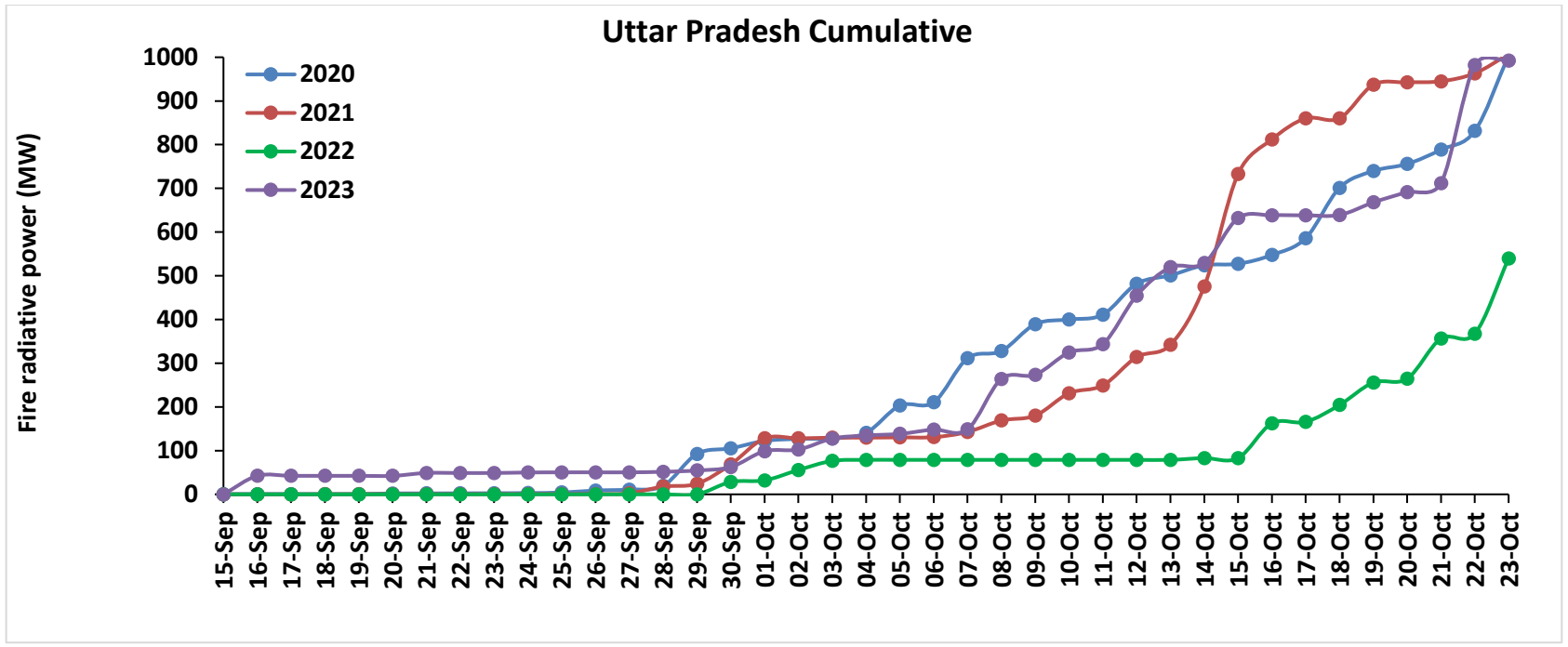


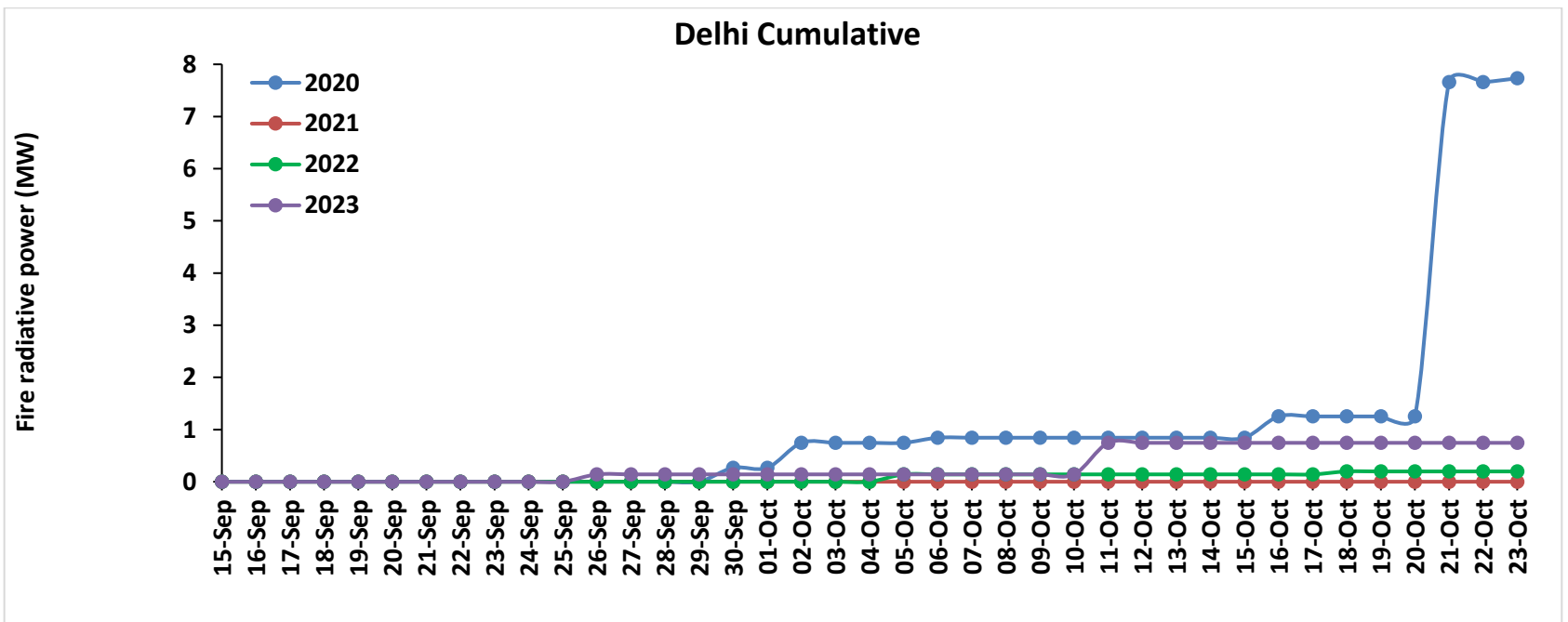
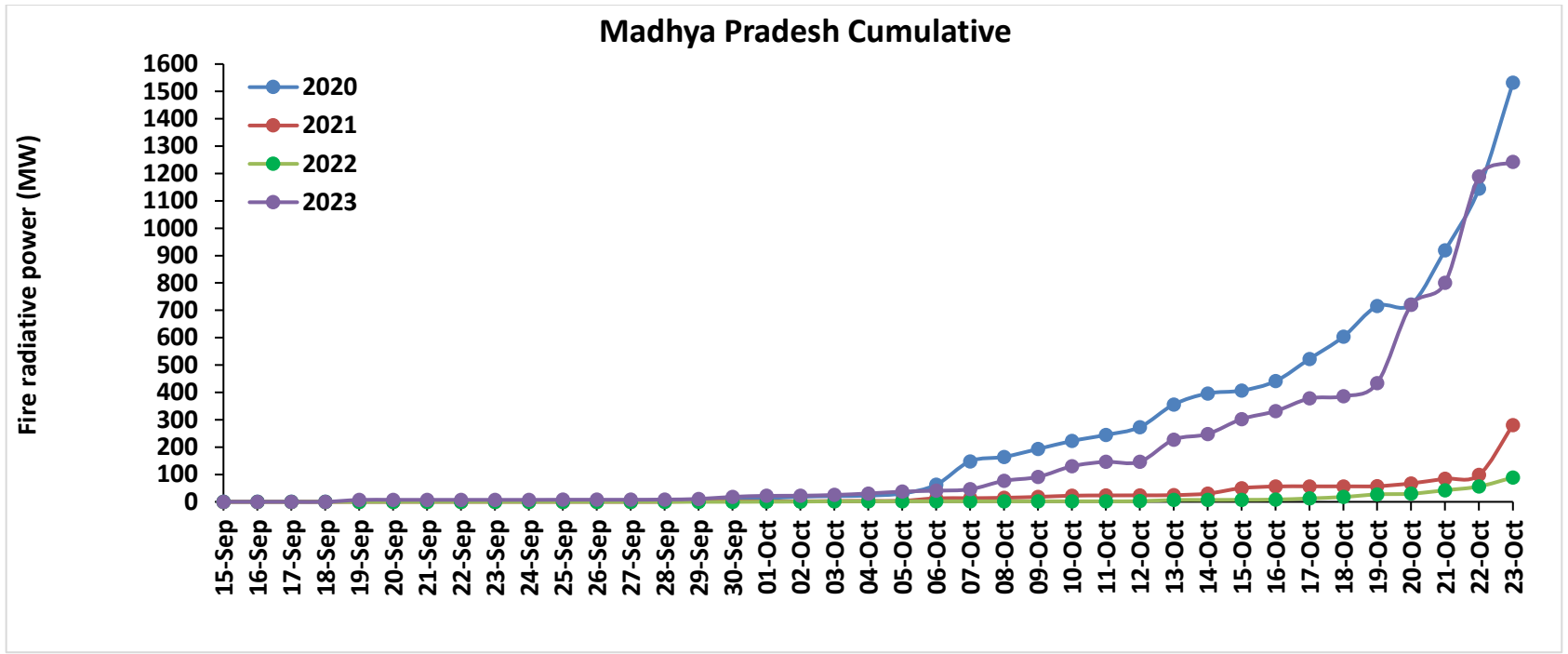
Delhi Cumulative



Comparison of residue burning fire power in current year (2023) with previous years (2020, 2021 and 2022) for the study States

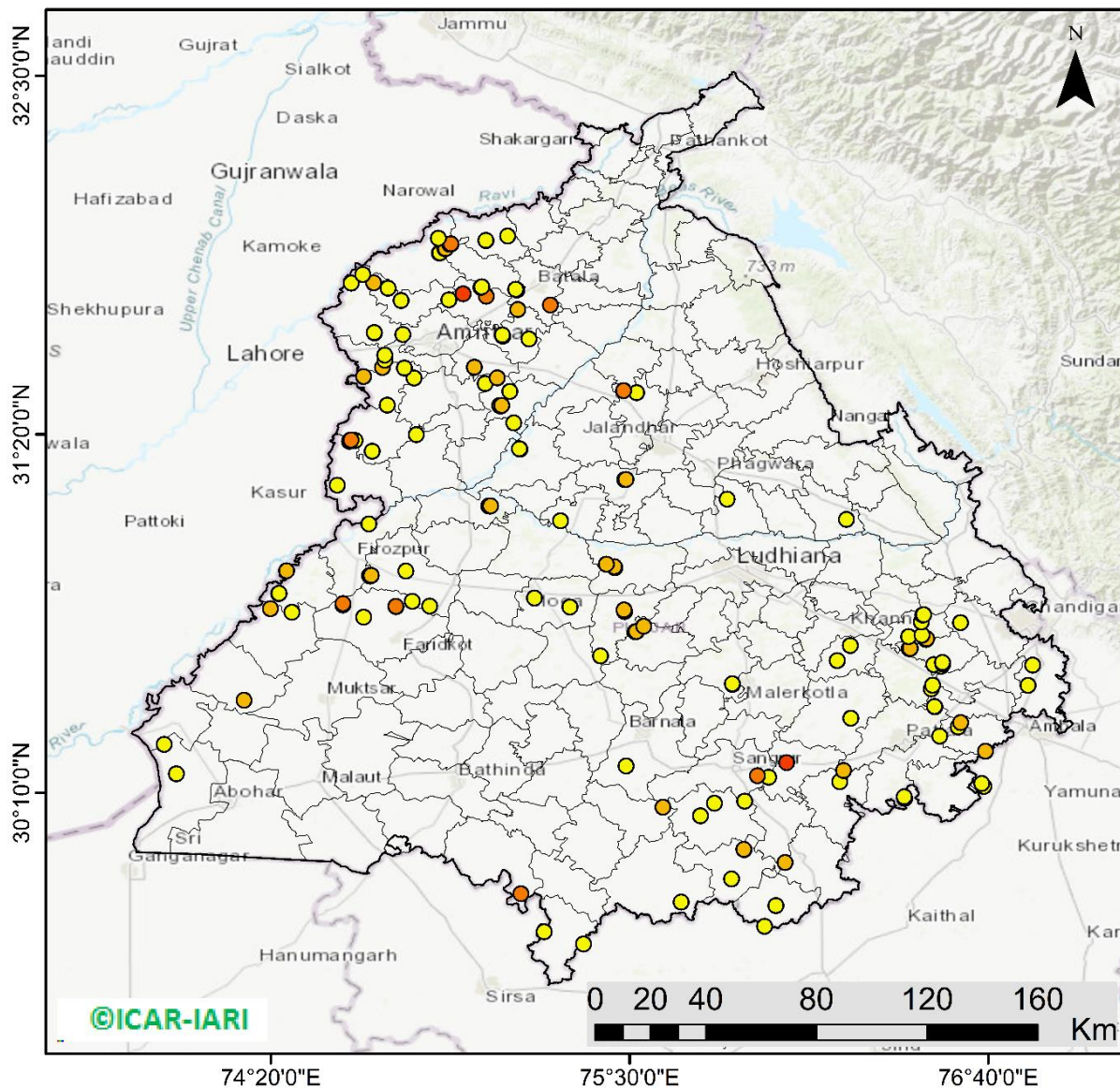






Punjab

RICE RESIDUE BURNING IN PUNJAB



152 burning events detected in Punjab during (23rd Oct 2023)

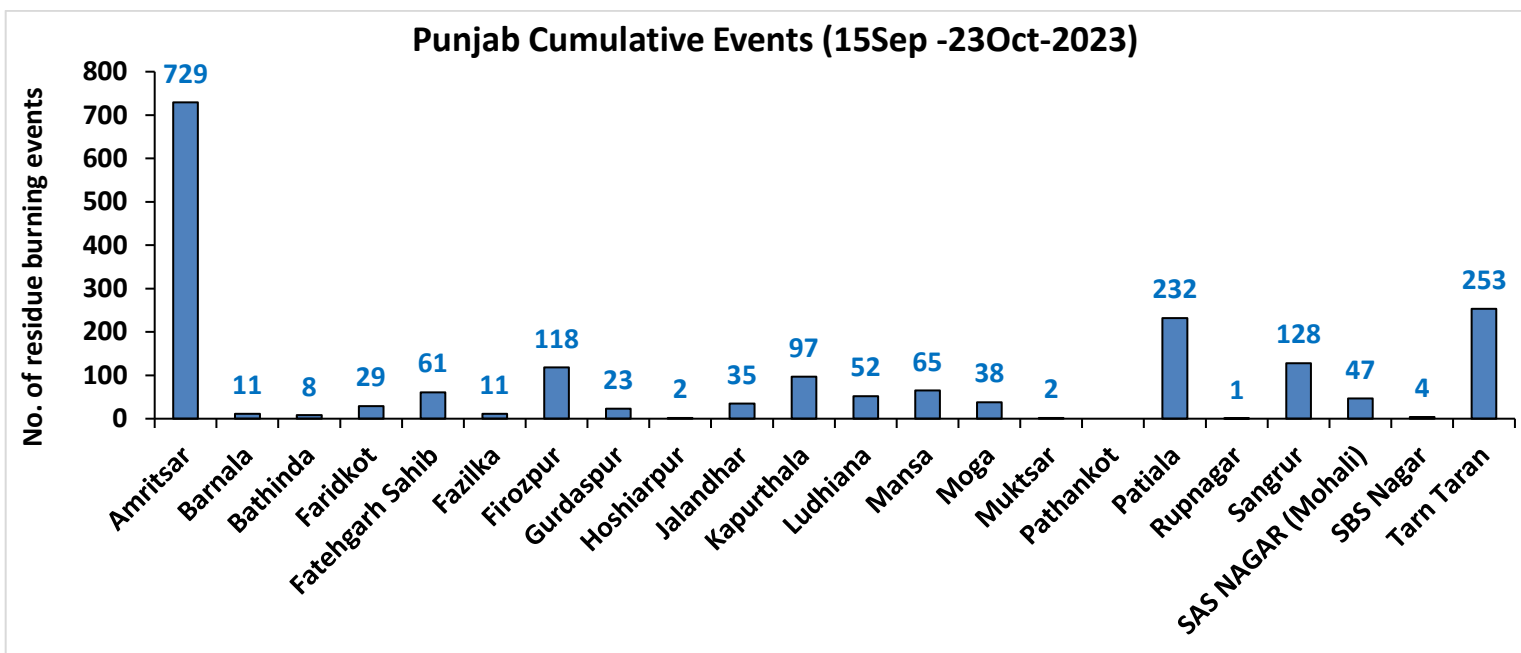
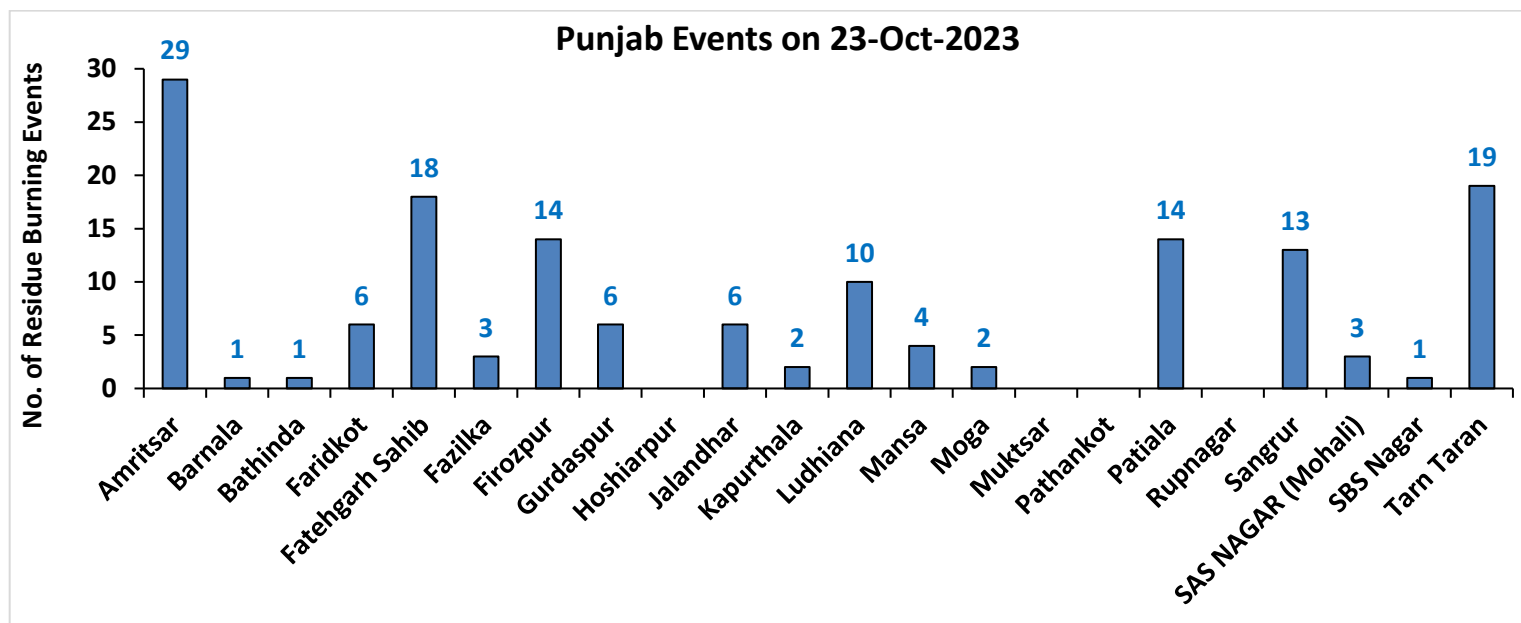
Fire Intensity (W/m²)

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



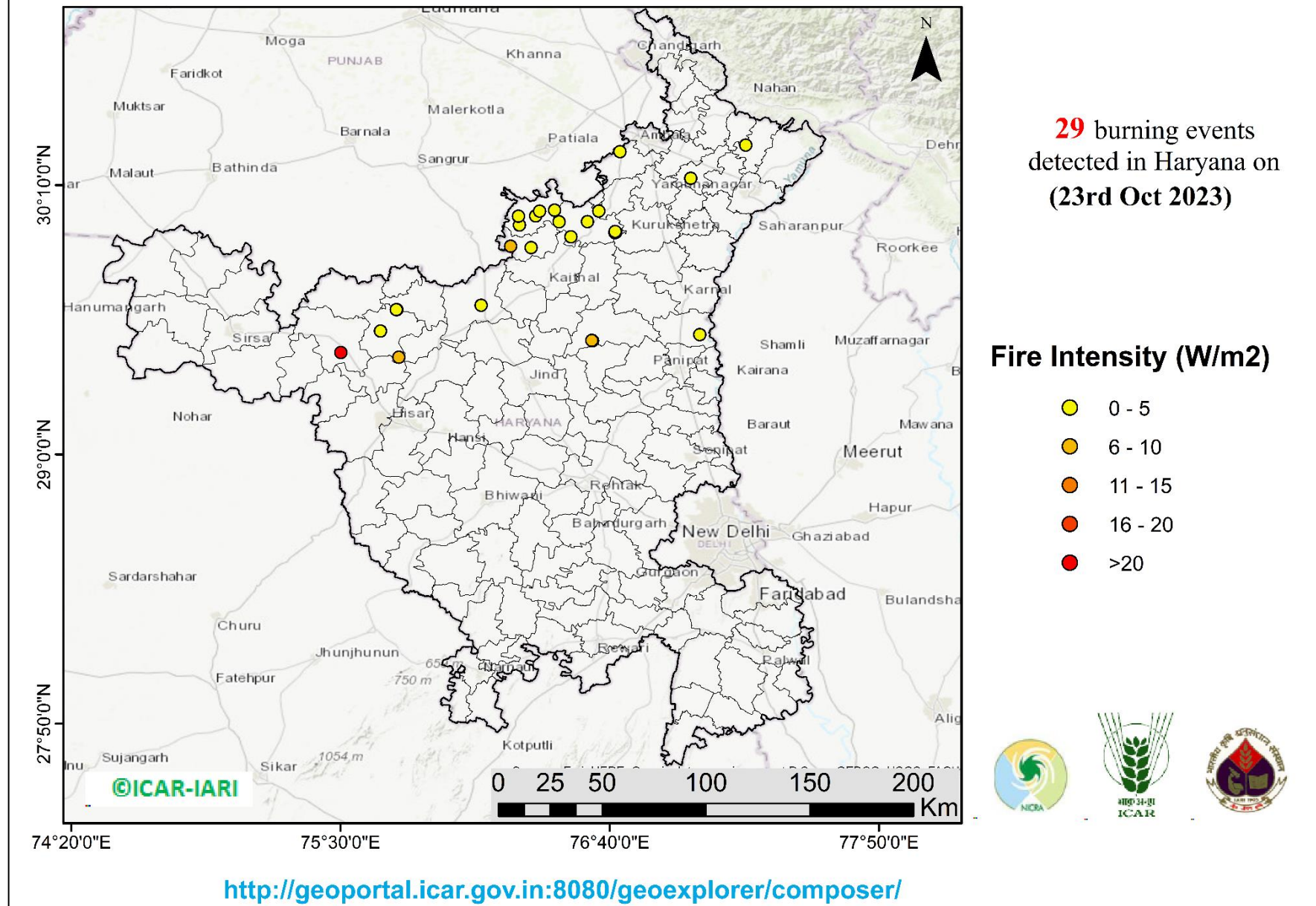
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Punjab (15Sep- 23Oct-2023)

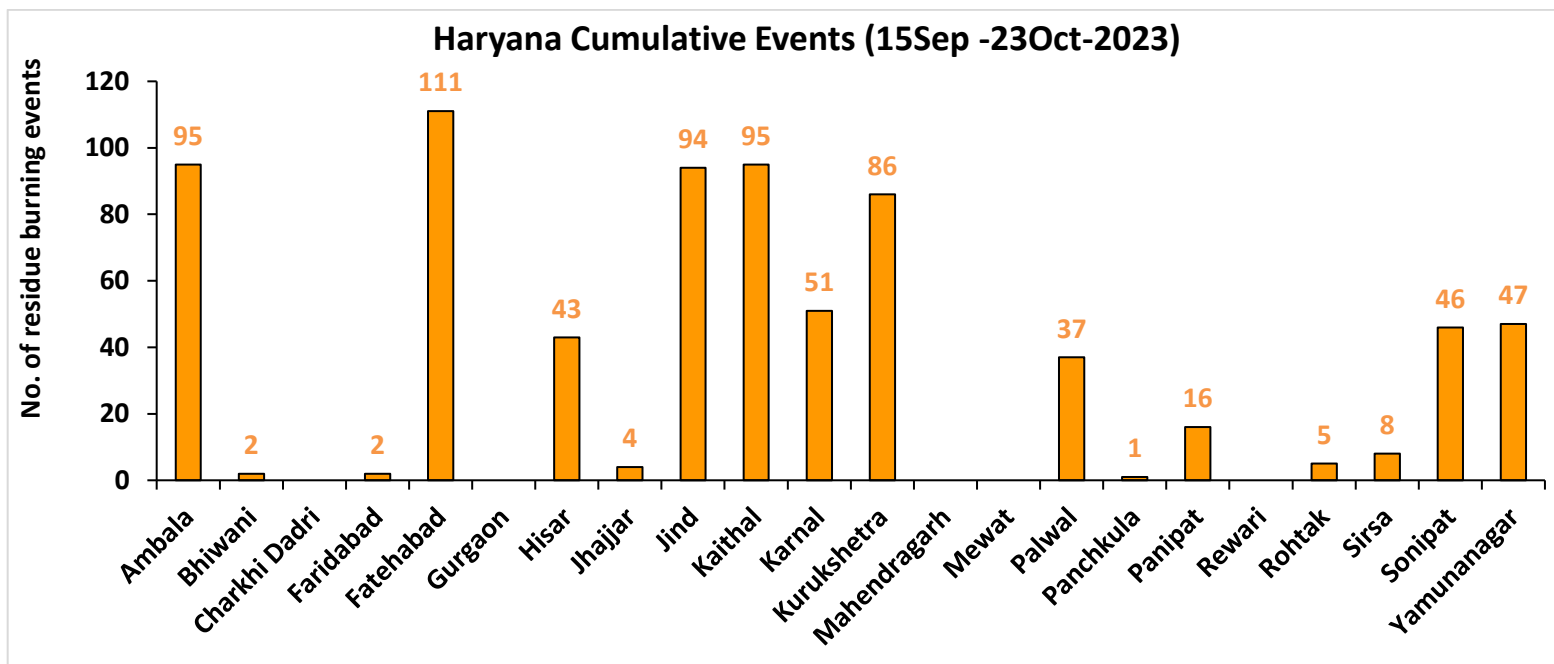
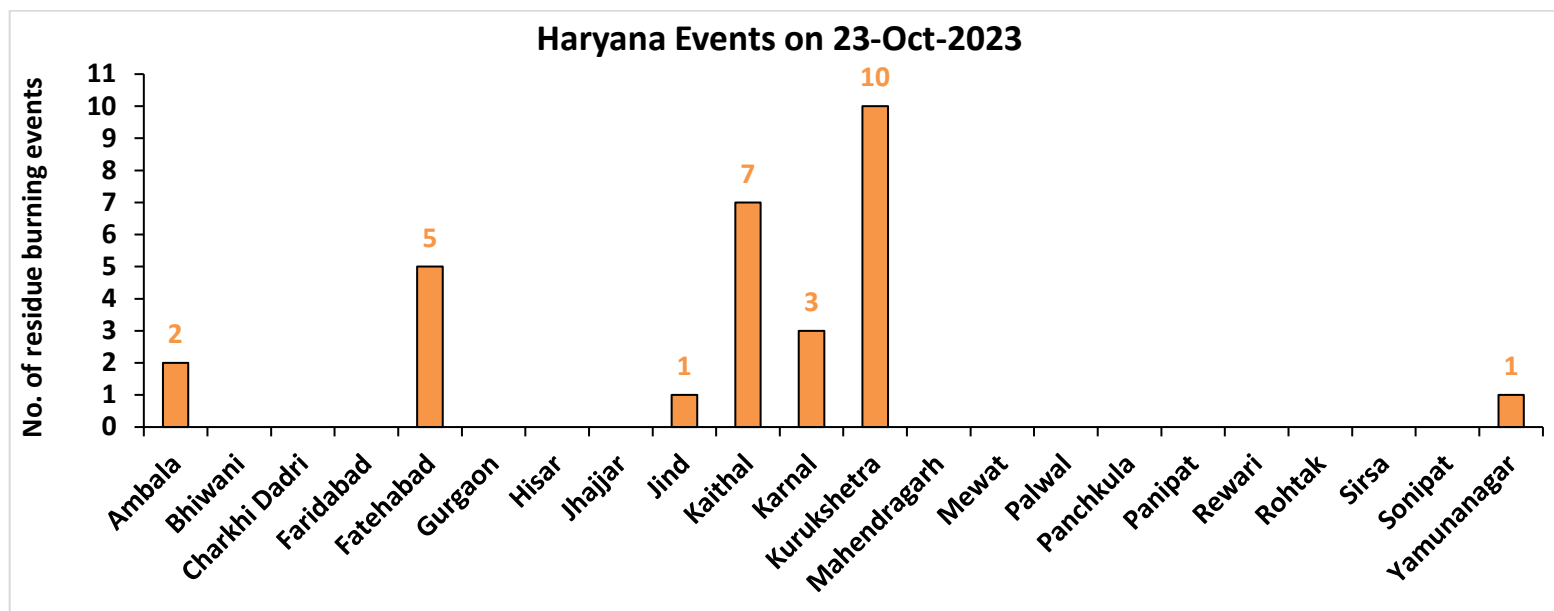


Haryana

RICE RESIDUE BURNING IN HARYANA

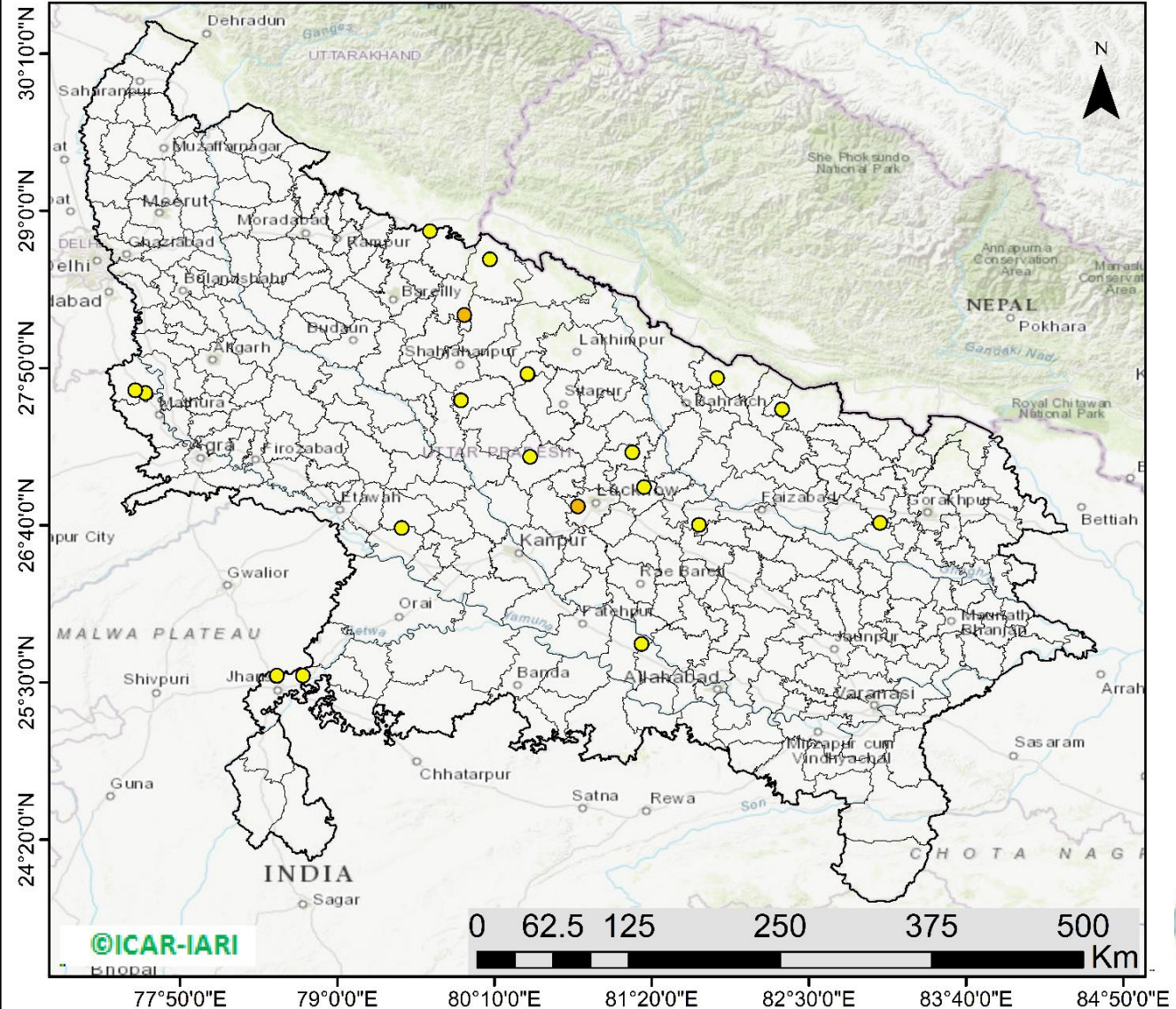


District-wise cumulative number of residues burning events in Haryana (15Sep-23Oct -2023)



Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



20 burning events detected in Uttar Pradesh on (23rd Oct 2023)

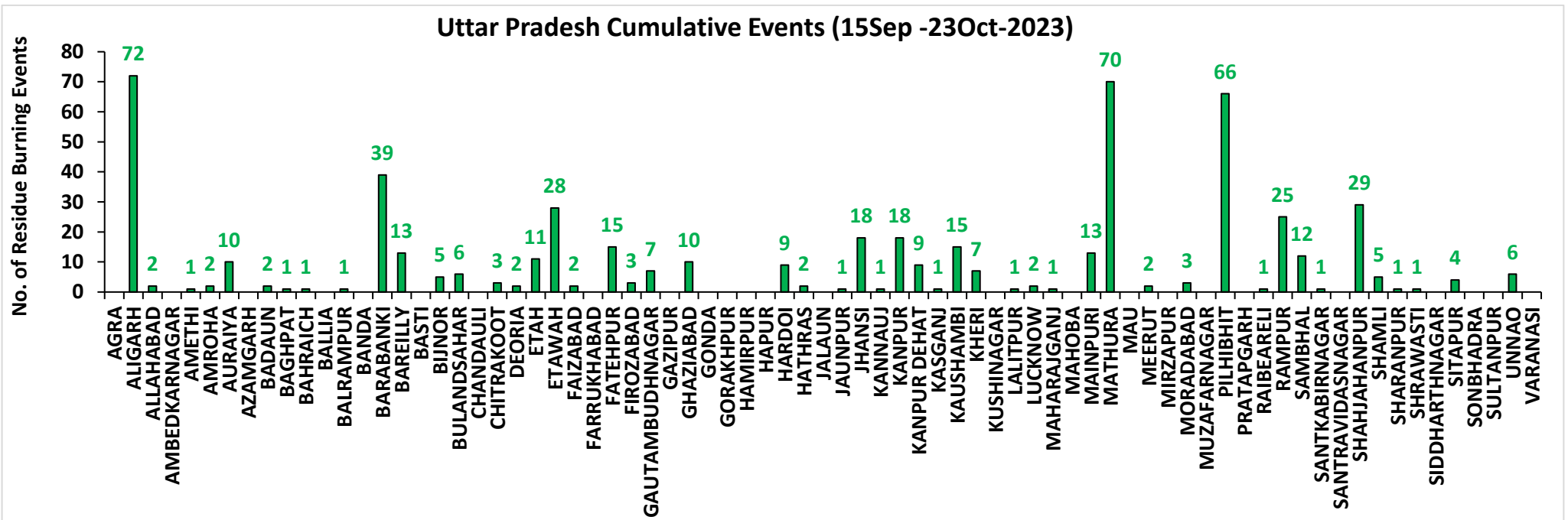
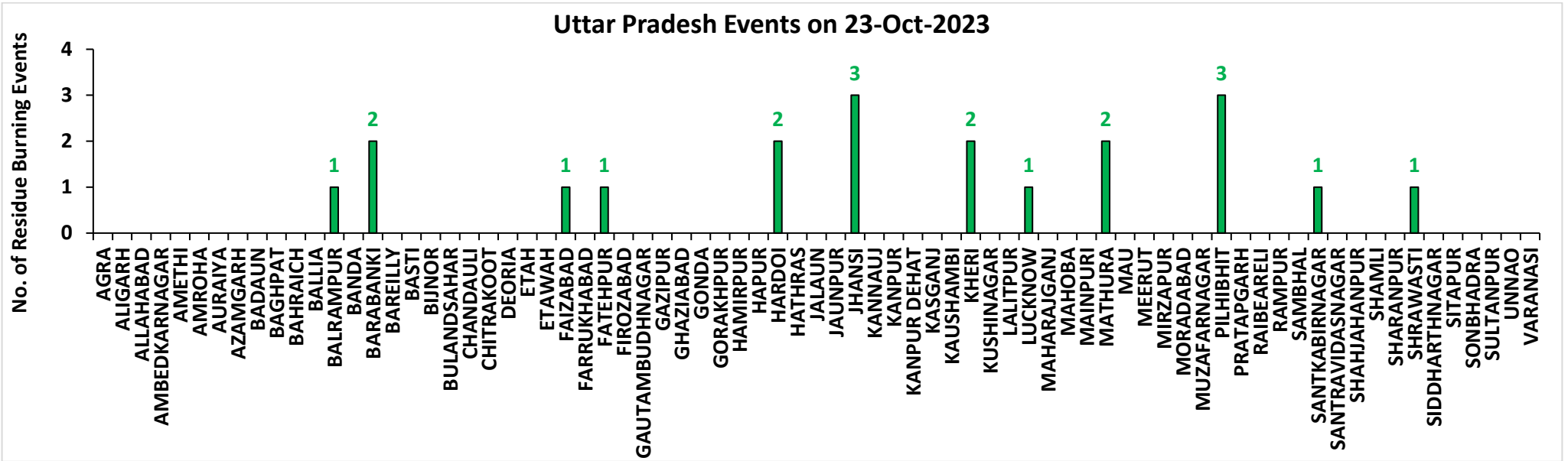
Fire Intensity (W/m²)

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



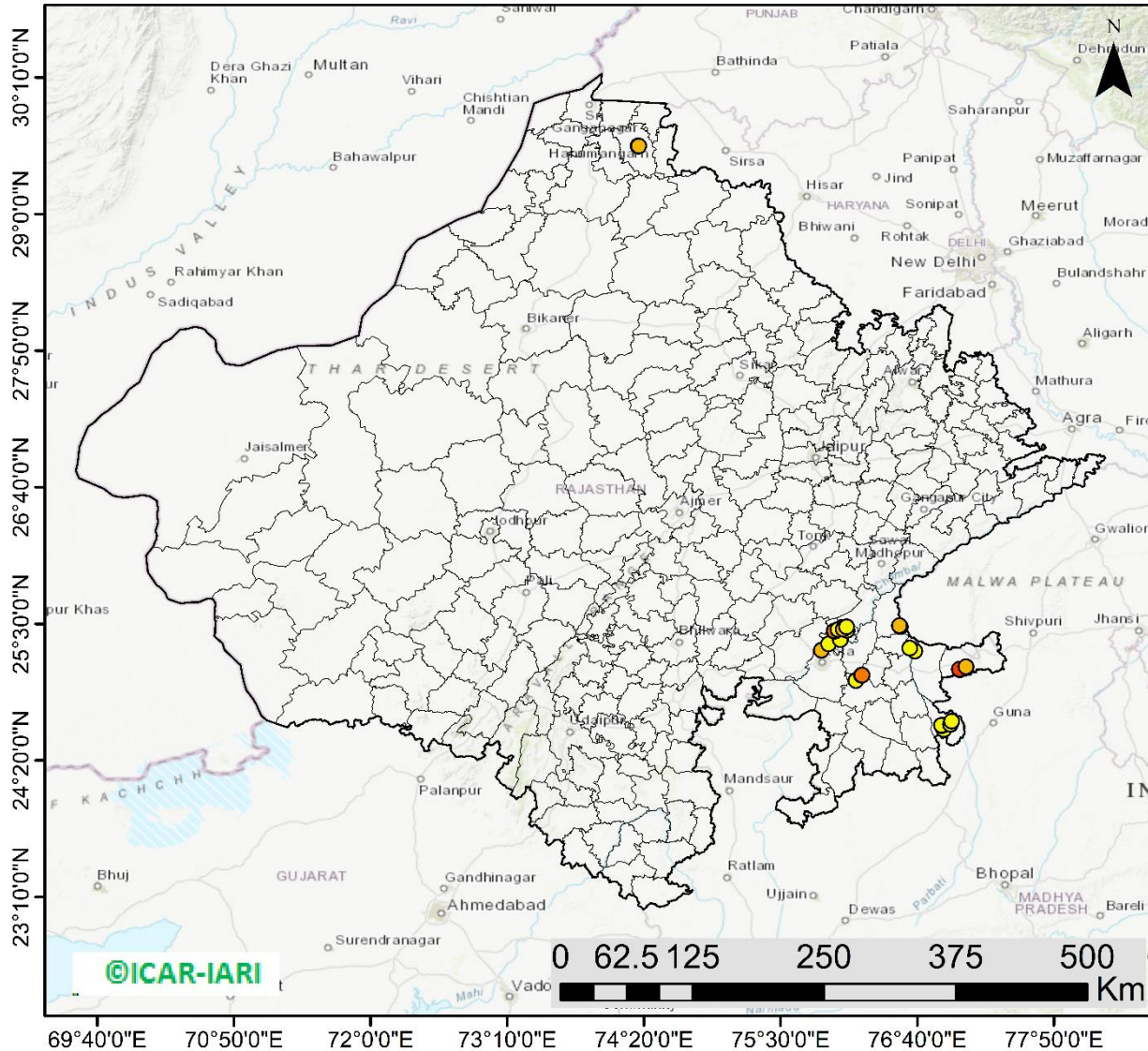
<http://geoportal.icar.gov.in:8080/geoplorer/composer/>

District-wise cumulative number of residues burning events in Uttar Pradesh (15Sep-23Oct -2023)



Rajasthan

RICE RESIDUE BURNING IN RAJASTHAN



29 burning events
detected in Rajasthan on
(23rd Oct 2023)

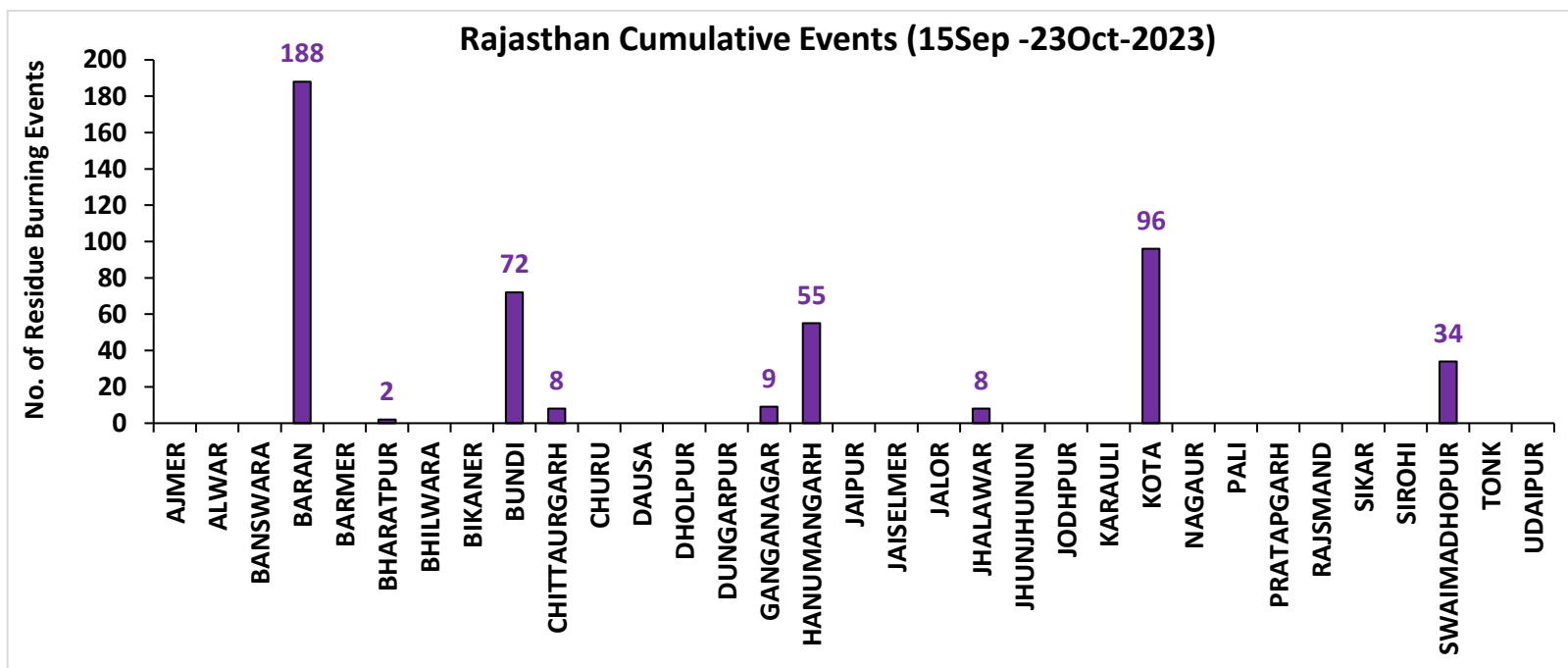
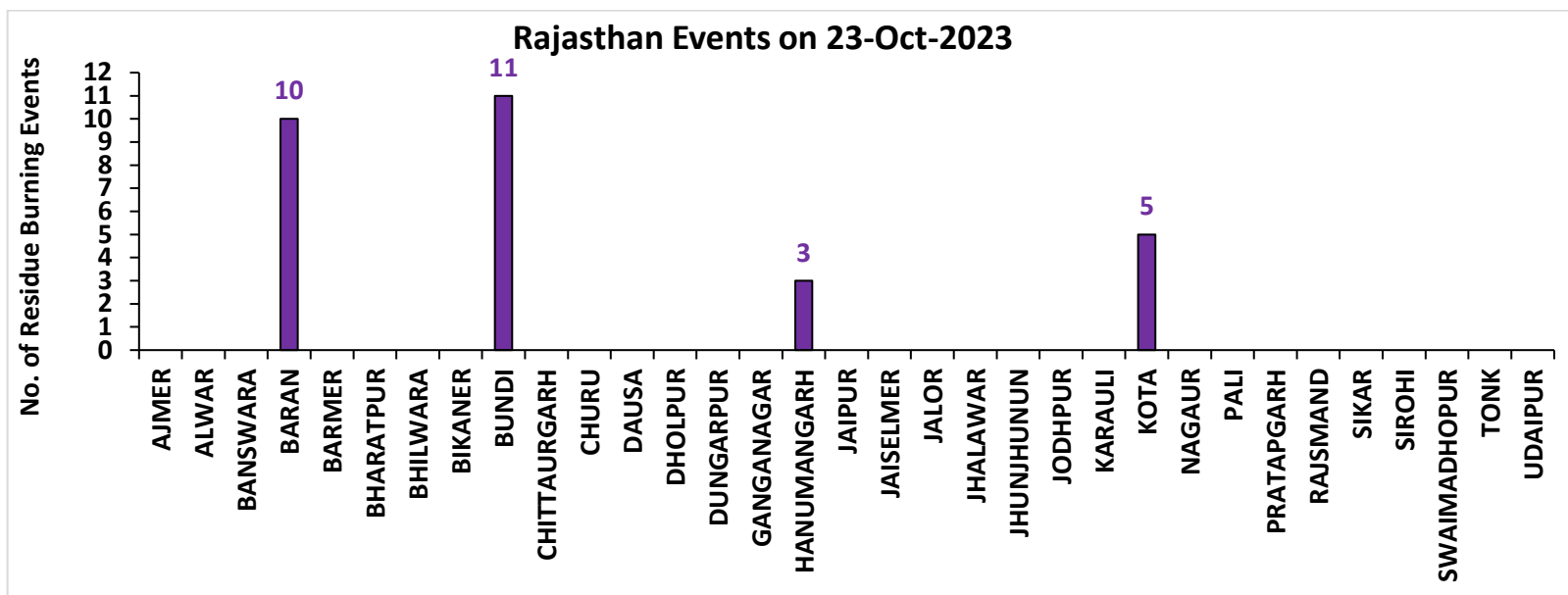
Fire Intensity (W/m²)

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



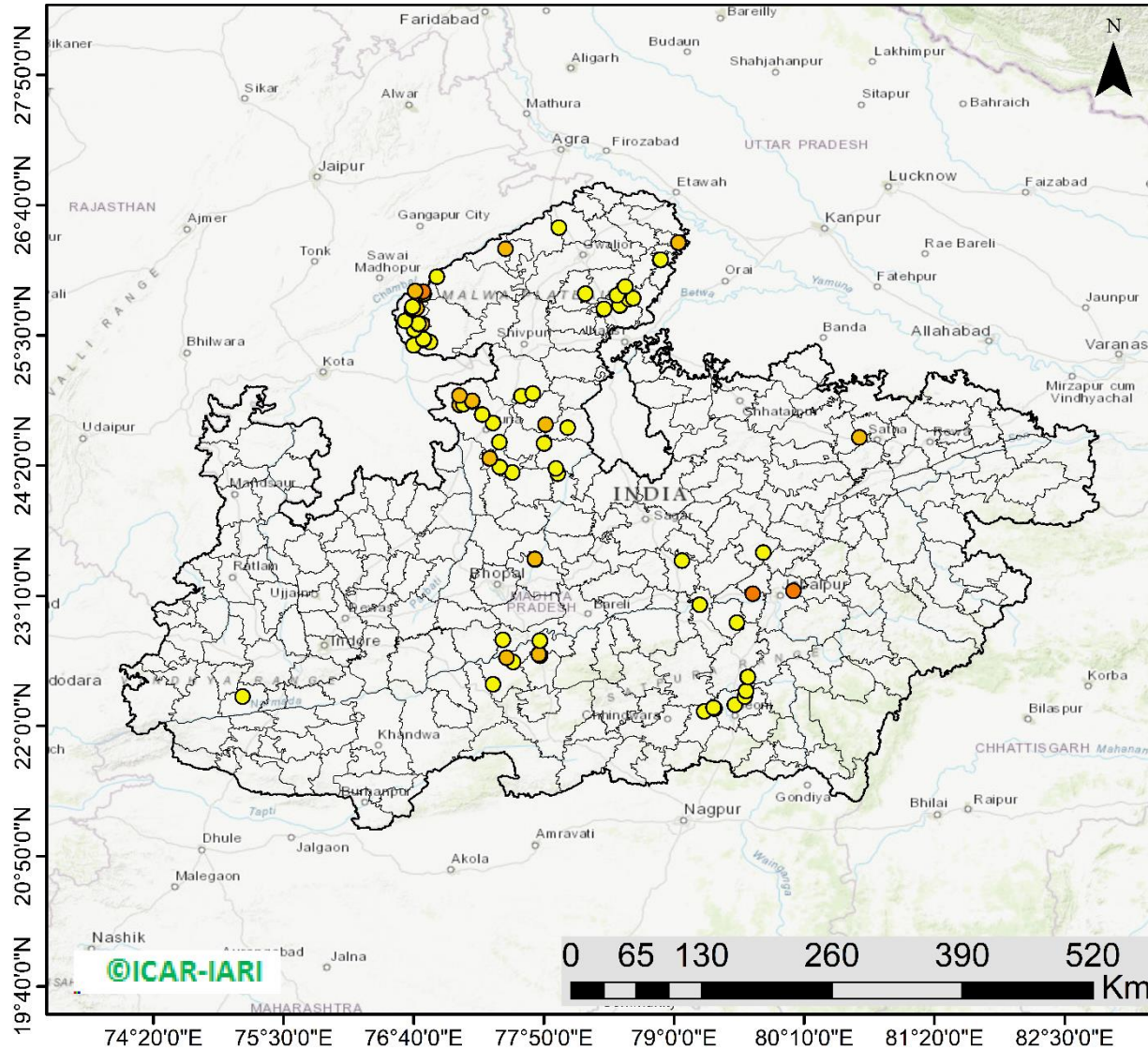
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Rajasthan (15Sep-23Oct -2023)



Madhya Pradesh

RICE RESIDUE BURNING IN MADHYA PRADESH



89 burning events detected in MP on (23rd Oct 2023)

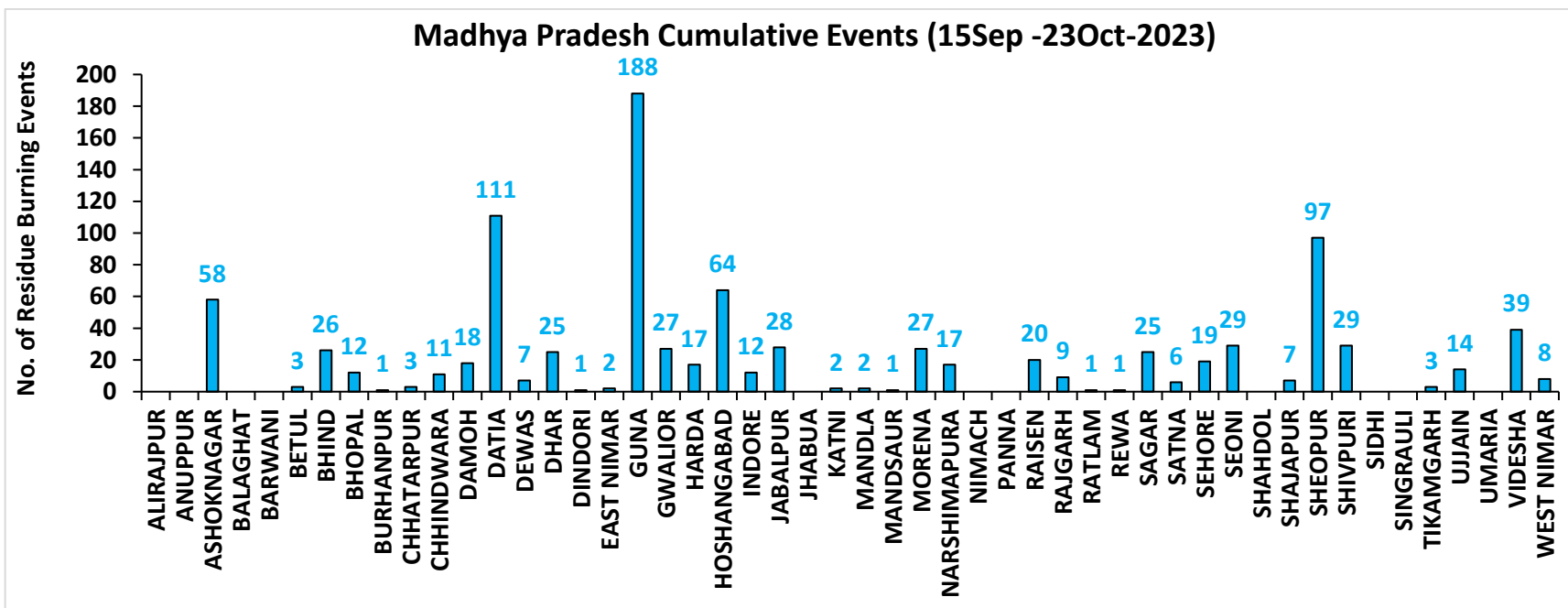
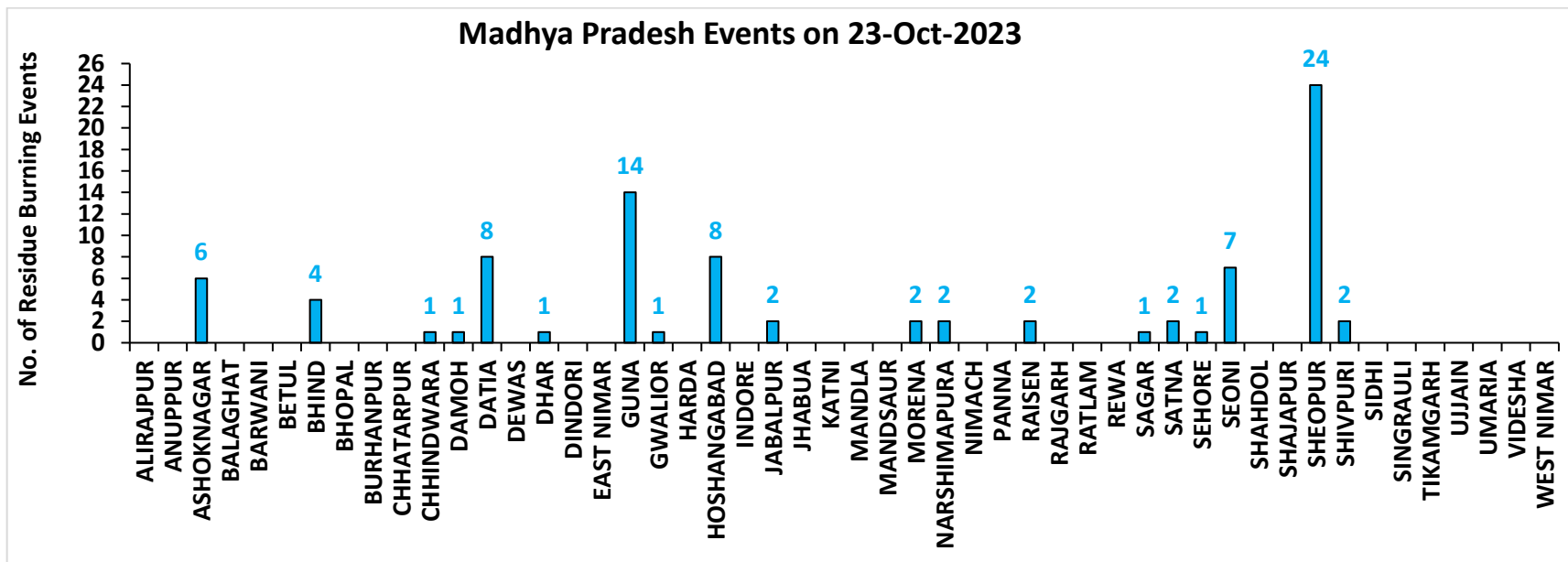
Fire Intensity (W/m²)

- 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-23Oct -2023)



District-wise cumulative number of residues burning events detected in 2020, 2021, 2022 and 2023
(Period: 15 September-23 October)

(a) Punjab

District	15 Sep-23 Oct			
	2020	2021	2022	2023
Amritsar	2311	945	992	729
Barnala	66	47	26	11
Bathinda	185	71	56	8
Faridkot	738	285	34	29
Fatehgarh Sahib	390	286	137	61
Fazilka	218	82	39	11
Firozpur	1738	394	231	118
Gurdaspur	1145	394	459	23
Hoshiarpur	177	58	30	2
Jalandhar	326	273	218	35
Kapurthala	728	391	288	97
Ludhiana	350	389	161	52
Mansa	122	32	33	65
Moga	251	131	100	38
Muktsar	218	85	15	2
Pathankot	7	0	0	0
Patiala	1220	500	358	232
Rupnagar	60	46	28	1
Sangrur	393	146	163	128
SAS NAGAR (Mohali)	70	54	33	47
SBS Nagar	26	34	3	4
Tarn Taran	3155	1415	1194	253
Total	13894	6058	4598	1946

(b) Haryana

District	15 Sep-23 Oct			
	2020	2021	2022	2023
AMBALA	182	85	76	95
BHIWANI	0	0	0	2
CHARKHI DADRI	0	0	0	0
FARIDABAD	1	1	1	2
FATEHABAD	94	109	99	111
GURGAON	0	0	0	0
HISAR	10	8	19	43
JHAJJAR	1	0	0	4
JIND	51	71	93	94
KAITHAL	317	476	303	95
KARNAL	409	531	171	51
KURUKSHETRA	332	316	224	86
MAHENDRAGARH	0	0	0	0
MEWAT	0	0	0	0
PALWAL	24	25	15	37
PANCHKULA	0	0	0	1
PANIPAT	12	20	17	16
REWARI	0	0	0	0
ROHTAK	2	0	0	5
SIRSA	27	17	18	8
SONIPAT	15	7	8	46
YAMUNANAGAR	83	60	66	47
Total	1560	1726	1110	743

(c) Uttar Pradesh

District	15 Sep-23 Oct													
	2020	2021	2022	2023	GAUTAMBUDHNAGAR	5	7	3	7	MUZAFARNAGAR	3	2	1	0
AGRA	2	0	0	0	GAZIPUR	0	0	0	0	PILHIBHIT	9	108	47	66
ALIGARH	48	21	17	72	GHAZIABAD	3	2	2	10	PRATAPGARH	3	0	0	0
ALLAHABAD	0	1	1	2	GONDA	0	0	0	0	RAIBEARELI	1	0	0	1
AMBEDKARNAGAR	0	0	0	0	GORAKHPUR	1	0	0	0	RAMPUR	48	50	19	25
AMETHI	0	1	4	1	HAMIRPUR	1	0	0	0	SAMBHAL	7	7	5	12
AMROHA	2	0	0	2	HAPUR	7	1	0	0	SANTKABIRNAGAR	0	0	0	1
AURAIYA	19	6	6	10	HARDOI	16	6	2	9	SANTRAVIDASNAGAR	0	0	0	0
AZAMGARH	0	0	0	0	HATHRAS	0	0	0	2	SHAHJAHANPUR	50	181	114	29
BADAUN	1	6	0	2	JALAUN	0	0	0	0	SHAMLI	20	15	5	5
BAGHPAT	4	1	1	1	JAUNPUR	0	0	0	1	SHARANPUR	44	20	4	1
BAHRAICH	14	2	4	1	JHANSI	21	6	0	18	SHRAWASTI	7	0	0	1
BALLIA	0	0	0	0	KANNAUJ	5	1	0	1	SIDDHARTHANAGAR	0	0	0	0
BALRAMPUR	2	1	1	1	KANPUR	5	7	10	18	SITAPUR	17	9	0	4
BANDA	0	0	0	0	KANPUR DEHAT	14	1	0	9	SONBHADRA	0	0	0	0
BARABANKI	19	20	11	39	KASGANJ	2	2	0	1	SULTANPUR	0	0	0	0
BAREILLY	24	15	2	13	KAUSHAMBI	14	3	2	15	UNNAO	6	1	0	6
BASTI	3	1	0	0	KHERI	48	54	29	7	VARANASI	1	0	0	0
BIJNOR	6	4	2	5	KUSHINAGAR	0	0	0	0	Total	670	642	331	560
BULANDSAHAR	16	2	3	6	LALITPUR	0	1	3	1					
CHANDAULI	0	0	0	0	LUCKNOW	2	0	1	2					
CHITRAKOOT	0	1	2	3	MAHARAJGANJ	0	0	0	1					
DEORIA	0	0	0	2	MAHOBA	11	0	0	0					
ETAH	12	6	1	11	MAINPURI	14	7	7	13					
ETAWAH	6	7	4	28	MATHURA	41	34	6	70					
FAIZABAD	1	0	0	2	MAU	0	0	0	0					
FARRUKHABAD	1	0	0	0	MEERUT	15	4	2	2					
FATEHPUR	23	6	8	15	MIRZAPUR	6	5	2	0					
FIROZABAD	12	4	0	3	MORADABAD	8	3	0	3					

(d) Delhi

District	15 Sep-23 Oct			
	2020	2021	2022	2023
CENTRAL	0	0	0	0
EAST	0	0	0	0
NEW DELHI	0	0	0	0
NORTH	2	0	3	2
NORTH EAST	0	0	0	0
NORTH WEST DELHI	3	0	0	0
SHAHADRA	0	0	0	0
SOUTH	1	0	0	0
SOUTH EAST	0	0	0	0
SOUTH WEST DELHI	0	0	0	0
WEST DELHI	1	0	0	0
Total	7	0	3	2

(e) Rajasthan

District	15 Sep-23 Oct			
	2020	2021	2022	2023
AJMER	2	0	0	0
ALWAR	1	0	0	0
BANSWARA	0	0	0	0
BARAN	103	0	7	188
BARMER	2	0	0	0
BHARATPUR	2	0	0	2
BHILWARA	3	0	0	0
BIKANER	1	0	0	0
BUNDI	23	2	34	72
CHITTAURGARH	0	2	2	8
CHURU	0	0	0	0
DAUSA	0	0	0	0
DHOLPUR	0	0	0	0
DUNGARPUR	0	0	0	0
GANGANAGAR	3	0	5	9
HANUMANGARH	210	47	15	55
JAIPUR	2	0	0	0
JAISELMER	2	0	0	0
JALOR	0	0	0	0
JHALAWAR	1	0	2	8
JHUNJHUNUN	1	0	0	0
JODHPUR	1	0	0	0
KARAULI	1	0	0	0
KOTA	37	1	23	96
NAGOUR	0	0	0	0
PALI	2	0	0	0
PRATAPGARH	4	0	0	0
RAJSMAND	0	0	0	0
SIKAR	0	0	0	0
SIROHI	1	0	0	0
SWAIMADHOPUR	10	0	3	34
TONK	2	0	0	0
UDAIPUR	0	0	0	0
Total	414	52	91	472

(f) Madhya Pradesh

District	15 Sep-23 Oct								
	2020	2021	2022	2023					
					PANNA	6	1	0	0
ALIRAJPUR	0	0	0	0	RAISEN	68	2	7	20
ANUPPUR	0	0	0	0	RAJGARH	7	1	3	9
ASHOKNAGAR	35	1	5	58	RATLAM	0	0	0	1
BALAGHAT	0	0	0	0	REWA	11	0	1	1
BARWANI	0	0	0	0	SAGAR	18	13	14	25
BETUL	4	1	1	3	SATNA	33	8	1	6
BHIND	11	1	5	26	SEHORE	15	7	22	19
BHOPAL	12	5	3	12	SEONI	106	56	23	29
BURHANPUR	0	0	0	1	SHAHDOL	0	0	0	0
CHHATARPUR	4	0	0	3	SHAJAPUR	5	0	0	7
CHHINDWARA	12	9	4	11	SHEOPUR	33	0	3	97
DAMOH	35	13	12	18	SHIVPURI	17	0	8	29
DATIA	116	8	6	111	SIDHI	0	0	0	0
DEWAS	3	0	0	7	SINGRAULI	0	0	0	0
DHAR	22	0	0	25	TIKAMGARH	1	0	0	3
DINDORI	0	0	0	1	UJJAIN	5	0	0	14
EAST NIMAR	3	5	4	2	UMARIA	0	0	0	0
GUNA	24	2	11	188	VIDESHA	71	9	12	39
GWALIOR	97	0	3	27	WEST NIMAR	15	1	0	8
HARDA	10	13	4	17	Total	1029	197	184	970
HOSHANGABAD	129	21	15	64					
INDORE	2	0	0	12					
JABALPUR	29	6	4	28					
JHABUA	0	0	0	0					
KATNI	19	0	0	2					
MANDLA	4	1	0	2					
MANDSAUR	3	0	0	1					
MORENA	23	5	3	27					
NARSHIMAPURA	21	8	10	17					
NIMACH	0	0	0	0					

State-wise and date-wise number of paddy residue burning events detected in 2020, 2021, 2022 and 2023
(Period: 15 September-23 October)

Number of Paddy Residue Burning Events Detected

Date	Punjab				Haryana				Uttar Pradesh			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
15-Sep	5	0	14	0	2	0	0	1	1	0	0	0
16-Sep	0	2	0	6	1	0	0	1	0	0	0	2
17-Sep	5	0	1	0	3	0	0	0	0	0	0	0
18-Sep	17	9	7	0	0	0	1	0	0	1	0	0
19-Sep	30	5	18	0	2	0	0	1	0	1	0	0
20-Sep	67	8	10	0	6	0	0	2	2	0	0	0
21-Sep	54	0	56	1	2	0	0	2	1	0	0	1
22-Sep	34	0	30	0	1	0	0	2	1	0	0	0
23-Sep	49	0	3	1	0	0	0	3	1	0	0	0
24-Sep	78	5	0	0	0	0	0	0	1	1	0	1
25-Sep	184	11	0	0	11	0	0	1	5	0	0	1
26-Sep	190	19	0	3	5	0	0	2	8	0	0	0
27-Sep	78	37	0	21	8	0	0	9	4	1	0	0
28-Sep	55	28	0	33	6	1	0	8	1	6	0	4
29-Sep	63	64	0	68	9	4	0	17	6	10	0	6
30-Sep	116	27	8	81	22	2	0	26	13	13	10	18
01-Oct	165	13	45	123	15	4	1	21	7	13	3	17
02-Oct	141	0	83	119	30	2	7	24	12	0	36	7
03-Oct	110	9	75	105	8	6	8	17	4	3	29	8
04-Oct	162	23	65	95	29	2	7	29	8	0	2	9
05-Oct	161	18	130	98	17	3	24	24	14	2	0	14
06-Oct	171	42	85	91	30	0	26	19	12	1	0	18
07-Oct	197	72	62	32	32	11	6	13	41	13	0	5
08-Oct	95	108	19	92	29	27	0	55	25	11	0	27
09-Oct	121	114	3	58	20	39	1	14	15	20	0	13
10-Oct	232	150	4	10	33	95	2	28	9	54	0	34
11-Oct	377	64	45	26	90	51	0	21	23	28	0	50

12-Oct	388	97	104	13	69	51	4	5	46	23	0	5
13-Oct	266	132	120	154	47	91	15	29	36	42	0	19
14-Oct	605	229	82	89	69	98	30	41	9	68	5	18
15-Oct	449	660	169	69	106	363	36	127	15	149	0	35
16-Oct	654	429	206	0	80	176	76	4	21	121	6	14
17-Oct	1172	14	403	1	143	0	86	0	38	39	7	0
18-Oct	938	57	342	18	166	1	134	8	76	0	30	2
19-Oct	1080	496	436	37	72	55	122	16	43	5	36	11
20-Oct	890	788	96	174	62	155	78	51	31	1	17	25
21-Oct	1392	597	393	146	101	131	107	68	25	5	23	59
22-Oct	1665	1111	582	30	128	140	122	25	32	3	18	117
23-Oct	1438	620	902	152	106	218	217	29	84	8	109	20
Total	13894	6058	4598	1946	1560	1726	1110	743	670	642	331	560

Number of Paddy Residue Burning Events Detected

Date	Delhi				Rajasthan				Madhya Pradesh			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
15-Sep	0	0	0	0	1	0	0	0	2	0	0	0
16-Sep	0	0	0	0	0	0	0	0	0	0	0	0
17-Sep	0	0	0	0	0	0	0	0	0	0	0	0
18-Sep	0	0	0	0	0	0	0	0	0	0	0	0
19-Sep	0	0	0	0	0	0	0	0	0	0	0	1
20-Sep	0	0	0	0	0	0	0	0	0	0	0	1
21-Sep	0	0	0	0	1	0	1	0	2	0	0	0
22-Sep	0	0	0	0	0	0	0	0	0	0	0	0
23-Sep	0	0	0	0	1	0	0	0	0	0	0	0
24-Sep	0	0	0	0	0	0	0	0	0	0	0	0
25-Sep	0	0	0	0	1	0	0	0	0	0	0	1
26-Sep	0	0	0	1	1	0	0	0	2	0	0	0
27-Sep	0	0	0	0	0	0	0	0	1	0	0	0
28-Sep	0	0	0	0	0	0	0	0	1	1	0	2
29-Sep	0	0	0	0	3	0	0	6	0	4	0	5
30-Sep	1	0	0	0	1	0	0	4	5	0	0	11

01-Oct	0	0	0	0	4	1	1	4	13	0	1	8
02-Oct	1	0	0	0	7	0	3	4	12	0	1	1
03-Oct	0	0	0	0	9	0	2	5	5	1	5	5
04-Oct	0	0	0	0	15	0	0	22	4	2	0	12
05-Oct	0	0	2	0	14	0	1	11	13	1	0	18
06-Oct	1	0	0	0	16	0	0	9	37	1	0	7
07-Oct	0	0	0	0	14	1	1	7	31	1	0	9
08-Oct	0	0	0	0	11	0	0	9	17	2	0	18
09-Oct	0	0	0	0	12	0	0	17	15	4	0	24
10-Oct	0	0	0	0	14	1	0	26	18	10	0	52
11-Oct	0	0	0	1	21	7	1	21	32	2	0	24
12-Oct	0	0	0	0	24	1	2	1	44	1	1	1
13-Oct	0	0	0	0	7	5	2	28	21	2	7	32
14-Oct	0	0	0	0	16	1	1	15	15	11	1	26
15-Oct	0	0	0	0	9	8	2	34	8	27	2	66
16-Oct	1	0	0	0	12	2	4	18	23	13	2	51
17-Oct	0	0	0	0	26	0	4	12	63	1	11	31
18-Oct	0	0	1	0	37	2	12	11	88	0	15	13
19-Oct	0	0	0	0	27	5	12	31	49	1	12	65
20-Oct	0	0	0	0	26	4	4	57	9	21	7	131
21-Oct	2	0	0	0	32	2	6	34	112	30	18	147
22-Oct	0	0	0	0	29	5	12	57	183	29	31	119
23-Oct	1	0	0	0	23	7	20	29	204	32	70	89
Total	7	0	3	2	414	52	91	472	1029	197	184	970

Details of residue burning events in Punjab on 23-Oct-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	AMRITSAR	AJNALA	S-NPP	31.92285	74.88148	14:25:38	D	6.20
2	AMRITSAR	AJNALA	S-NPP	31.92320	74.88337	14:25:38	D	3.60
3	AMRITSAR	AJNALA	S-NPP	31.93668	74.89973	14:25:38	D	4.80
4	AMRITSAR	AJNALA	S-NPP	31.93714	74.90166	14:25:38	D	5.10
5	AMRITSAR	AJNALA	S-NPP	31.95142	74.91526	12:45:21	D	5.80
6	AMRITSAR	AJNALA	S-NPP	31.95213	74.91943	12:45:21	D	6.20
7	AMRITSAR	AJNALA	S-NPP	31.95244	74.91930	12:45:21	D	10.60
8	AMRITSAR	AJNALA	S-NPP	31.97093	74.87801	12:45:21	D	2.40
9	AMRITSAR	ATTARI	S-NPP	31.55057	74.69659	14:25:38	D	6.60
10	AMRITSAR	ATTARI	S-NPP	31.57381	74.70444	12:45:21	D	3.20
11	AMRITSAR	ATTARI	S-NPP	31.59031	74.70387	12:45:21	D	2.70
12	AMRITSAR	CHOGAWAN	S-NPP	31.66255	74.67052	12:45:21	D	2.90
13	AMRITSAR	CHOGAWAN	S-NPP	31.66413	74.66969	12:45:21	D	2.70
14	AMRITSAR	CHOGAWAN	S-NPP	31.82466	74.59473	14:25:38	D	3.50
15	AMRITSAR	CHOGAWAN	S-NPP	31.82566	74.66793	12:45:21	D	5.90
16	AMRITSAR	CHOGAWAN	S-NPP	31.85301	74.63241	14:25:38	D	3.30
17	AMRITSAR	HARSHA CHHINA	S-NPP	31.76806	74.75701	14:25:38	D	4.30
18	AMRITSAR	HARSHA CHHINA	S-NPP	31.77045	74.91267	12:45:21	D	2.10
19	AMRITSAR	HARSHA CHHINA	S-NPP	31.80817	74.71471	12:45:21	D	3.00
20	AMRITSAR	JANDIALA GURU	S-NPP	31.55135	74.99552	14:25:38	D	5.40
21	AMRITSAR	MAJITHA	AQUA	31.78200	75.03400	14:29:10	D	11.90
22	AMRITSAR	MAJITHA	AQUA	31.79000	74.95900	14:29:10	D	18.70
23	AMRITSAR	MAJITHA	S-NPP	31.81114	75.01671	14:25:38	D	2.10
24	AMRITSAR	MAJITHA	S-NPP	31.81290	75.01958	14:25:38	D	3.00
25	AMRITSAR	TARSIKKA	S-NPP	31.64296	75.17297	12:45:21	D	1.30
26	AMRITSAR	TARSIKKA	S-NPP	31.65232	75.08791	12:45:21	D	2.50
27	AMRITSAR	TARSIKKA	S-NPP	31.65618	75.08664	12:45:21	D	3.20
28	AMRITSAR	TARSIKKA	S-NPP	31.73900	75.13649	12:45:21	D	6.90
29	AMRITSAR	VERKA	S-NPP	31.65796	74.76286	12:45:21	D	2.20
30	BARNALA	BARNALA	S-NPP	30.25382	75.48868	12:45:21	D	2.30

31	BATHINDA	TALWANDI SABO	S-NPP	29.83831	75.14661	12:45:21	D	10.40
32	FARIDKOT	FARIDKOT	S-NPP	30.73793	74.63529	12:45:21	D	2.40
33	FARIDKOT	FARIDKOT	S-NPP	30.77240	74.74039	14:25:38	D	11.10
34	FARIDKOT	FARIDKOT	S-NPP	30.77324	74.73991	14:25:38	D	10.10
35	FARIDKOT	FARIDKOT	S-NPP	30.77768	74.56763	14:25:38	D	6.90
36	FARIDKOT	FARIDKOT	S-NPP	30.78218	74.56803	14:25:38	D	11.60
37	FARIDKOT	FARIDKOT	S-NPP	30.78948	74.79343	12:45:21	D	4.70
38	FATEHGARH SAHIB	AMLOH	S-NPP	30.59672	76.17502	12:45:21	D	2.60
39	FATEHGARH SAHIB	AMLOH	S-NPP	30.59682	76.17554	12:45:21	D	2.60
40	FATEHGARH SAHIB	AMLOH	S-NPP	30.64570	76.21806	12:45:21	D	2.40
41	FATEHGARH SAHIB	BASSI PATHANAN	S-NPP	30.66535	76.46431	14:25:38	D	5.90
42	FATEHGARH SAHIB	BASSI PATHANAN	S-NPP	30.66784	76.46641	14:25:38	D	9.60
43	FATEHGARH SAHIB	BASSI PATHANAN	S-NPP	30.67476	76.40790	12:45:21	D	4.10
44	FATEHGARH SAHIB	BASSI PATHANAN	S-NPP	30.67976	76.45149	12:45:21	D	4.10
45	FATEHGARH SAHIB	BASSI PATHANAN	S-NPP	30.72260	76.44931	12:45:21	D	4.70
46	FATEHGARH SAHIB	BASSI PATHANAN	S-NPP	30.74523	76.45348	12:45:21	D	3.70
47	FATEHGARH SAHIB	BASSI PATHANAN	S-NPP	30.74605	76.45696	12:45:21	D	3.70
48	FATEHGARH SAHIB	KHERA	S-NPP	30.57873	76.51382	12:45:21	D	2.00
49	FATEHGARH SAHIB	KHERA	S-NPP	30.58384	76.48980	12:45:21	D	3.60
50	FATEHGARH SAHIB	KHERA	S-NPP	30.58544	76.51924	12:45:21	D	4.10
51	FATEHGARH SAHIB	KHERA	S-NPP	30.59048	76.51768	12:45:21	D	4.10
52	FATEHGARH SAHIB	KHERA	S-NPP	30.63628	76.41316	12:45:21	D	5.90
53	FATEHGARH SAHIB	SIRHIND	S-NPP	30.50479	76.48181	12:45:21	D	2.90
54	FATEHGARH SAHIB	SIRHIND	S-NPP	30.51656	76.48566	12:45:21	D	1.70
55	FATEHGARH SAHIB	SIRHIND	S-NPP	30.63545	76.40965	12:45:21	D	4.00
56	FAZILKA	FAZILKA	S-NPP	30.32411	73.98626	14:25:38	D	2.70
57	FAZILKA	JALALABAD	S-NPP	30.46776	74.24590	14:25:38	D	5.70
58	FAZILKA	KHUIAN SARWAR	S-NPP	30.22843	74.02628	14:25:38	D	3.10
59	FIROZPUR	FIROZPUR	S-NPP	30.87345	74.65397	14:25:38	D	6.20
60	FIROZPUR	FIROZPUR	S-NPP	31.04117	74.65237	14:25:38	D	3.50
61	FIROZPUR	GHALL KHURD	S-NPP	30.77385	74.84995	12:45:21	D	4.00
62	FIROZPUR	GHALL KHURD	S-NPP	30.87169	74.65644	14:25:38	D	9.30
63	FIROZPUR	GHALL KHURD	S-NPP	30.87373	74.65991	14:25:38	D	6.20

64	FIROZPUR	GHALL KHURD	S-NPP	30.88812	74.77268	12:45:21	D	4.70
65	FIROZPUR	GURUHAR SAHAI	S-NPP	30.76579	74.33195	14:25:38	D	6.90
66	FIROZPUR	MAKHU	S-NPP	31.09921	75.04666	14:25:38	D	10.80
67	FIROZPUR	MAKHU	S-NPP	31.09966	75.04214	14:25:38	D	6.30
68	FIROZPUR	MAKHU	S-NPP	31.09997	75.04842	14:25:38	D	8.10
69	FIROZPUR	MAMDOT	S-NPP	30.75386	74.40187	14:25:38	D	3.80
70	FIROZPUR	MAMDOT	S-NPP	30.81459	74.35902	12:45:21	D	2.80
71	FIROZPUR	MAMDOT	S-NPP	30.81552	74.35992	12:45:21	D	3.10
72	FIROZPUR	MAMDOT	S-NPP	30.88892	74.38460	12:45:21	D	10.00
73	GURDASPUR	BATALA	S-NPP	31.75367	75.24231	12:45:21	D	11.20
74	GURDASPUR	DERA BABA NANAK	S-NPP	31.96281	75.03311	12:45:21	D	1.60
75	GURDASPUR	DERA BABA NANAK	S-NPP	31.96378	75.03262	12:45:21	D	1.90
76	GURDASPUR	DERA BABA NANAK	S-NPP	31.97818	75.10362	14:25:38	D	4.10
77	GURDASPUR	FATEHGARH CHURIAN	S-NPP	31.80259	75.13383	14:25:38	D	5.90
78	GURDASPUR	FATEHGARH CHURIAN	S-NPP	31.80474	75.13001	14:25:38	D	3.70
79	JALANDHAR	JALANDHAR WEST	S-NPP	31.46862	75.52309	12:45:21	D	2.30
80	JALANDHAR	JALANDHAR WEST	S-NPP	31.47517	75.48102	14:25:38	D	10.80
81	JALANDHAR	NAKODAR	S-NPP	31.18534	75.48447	12:45:21	D	4.20
82	JALANDHAR	NAKODAR	S-NPP	31.18628	75.48836	12:45:21	D	5.60
83	JALANDHAR	PHILLAUR	S-NPP	31.12174	75.81743	12:45:21	D	3.10
84	JALANDHAR	SHAHKOT	S-NPP	31.05142	75.27542	14:25:38	D	3.30
85	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.28462	75.14366	14:25:38	D	4.60
86	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.28588	75.14170	14:25:38	D	3.00
87	LUDHIANA	JAGRAON	S-NPP	30.61205	75.40553	14:25:38	D	4.40
88	LUDHIANA	JAGRAON	S-NPP	30.69122	75.52213	12:45:21	D	9.20
89	LUDHIANA	JAGRAON	S-NPP	30.75634	75.48392	12:45:21	D	9.50
90	LUDHIANA	JAGRAON	S-NPP	30.75711	75.48330	12:45:21	D	18.00
91	LUDHIANA	JAGRAON	S-NPP	30.76165	75.48219	12:45:21	D	9.50
92	LUDHIANA	RAIKOT	S-NPP	30.69025	75.51818	12:45:21	D	8.50
93	LUDHIANA	RAIKOT	S-NPP	30.70859	75.54622	12:45:21	D	7.10
94	LUDHIANA	SIDHWAN BET	S-NPP	30.89864	75.45251	14:25:38	D	9.40
95	LUDHIANA	SIDHWAN BET	S-NPP	30.90234	75.45067	14:25:38	D	6.10
96	LUDHIANA	SIDHWAN BET	S-NPP	30.91056	75.42456	12:45:21	D	8.30

97	MANSA	BHIKHI	S-NPP	30.11980	75.60870	14:25:38	D	8.10
98	MANSA	BUDHLADA	S-NPP	29.81112	75.66775	14:25:38	D	4.90
99	MANSA	SARDULGARH	S-NPP	29.67461	75.35017	12:45:21	D	2.50
100	MANSA	SARDULGARH	S-NPP	29.71441	75.22254	12:45:21	D	3.00
101	MOGA	MOGA-1	S-NPP	30.77081	75.30612	12:45:21	D	1.80
102	MOGA	MOGA-1	S-NPP	30.80047	75.19074	12:45:21	D	1.50
103	PATIALA	BHUNARHERI	S-NPP	30.18761	76.65231	12:45:21	D	2.30
104	PATIALA	BHUNARHERI	S-NPP	30.19688	76.64574	12:45:21	D	1.90
105	PATIALA	GHANAUR	S-NPP	30.30183	76.65776	14:25:38	D	6.90
106	PATIALA	GHANAUR	S-NPP	30.35107	76.50904	12:45:21	D	1.50
107	PATIALA	GHANAUR	S-NPP	30.38084	76.56915	14:25:38	D	4.70
108	PATIALA	GHANAUR	S-NPP	30.39519	76.57679	12:45:21	D	8.00
109	PATIALA	NABHA	S-NPP	30.40933	76.21986	12:45:21	D	2.60
110	PATIALA	PATIALA	S-NPP	30.23896	76.19598	12:45:21	D	5.70
111	PATIALA	PATRAM	S-NPP	29.93981	76.00617	12:45:21	D	6.70
112	PATIALA	SAMANA	S-NPP	30.20263	76.18359	12:45:21	D	1.70
113	PATIALA	SANAUR	S-NPP	30.14832	76.39500	12:45:21	D	1.90
114	PATIALA	SANAUR	S-NPP	30.15345	76.39342	12:45:21	D	1.90
115	PATIALA	SHAMBU KALAN	S-NPP	30.44606	76.49335	12:45:21	D	3.60
116	PATIALA	SHAMBU KALAN	S-NPP	30.44744	76.49206	12:45:21	D	3.50
117	SANGRUR	ANDANA	S-NPP	29.73205	75.93937	12:45:21	D	4.70
118	SANGRUR	ANDANA	S-NPP	29.79930	75.97610	12:45:21	D	4.10
119	SANGRUR	BHAWANIGARH	S-NPP	30.21709	75.95243	12:45:21	D	1.70
120	SANGRUR	BHAWANIGARH	S-NPP	30.26505	76.01068	12:45:21	D	16.80
121	SANGRUR	LEHRA GAGA	S-NPP	29.88634	75.83192	14:25:38	D	2.70
122	SANGRUR	LEHRA GAGA	S-NPP	29.98151	75.87259	12:45:21	D	7.10
123	SANGRUR	LEHRA GAGA	S-NPP	29.98273	75.87189	12:45:21	D	7.60
124	SANGRUR	MALERKOTLA-2	S-NPP	30.51927	75.83492	12:45:21	D	4.00
125	SANGRUR	MALERKOTLA-2	S-NPP	30.52153	75.83440	12:45:21	D	4.00
126	SANGRUR	SANGRUR	S-NPP	30.22203	75.91608	14:25:38	D	11.40
127	SANGRUR	SUNAM	S-NPP	30.09159	75.73081	14:25:38	D	3.40
128	SANGRUR	SUNAM	S-NPP	30.13263	75.77625	12:45:21	D	5.00
129	SANGRUR	SUNAM	S-NPP	30.13935	75.87456	12:45:21	D	3.80

130	SAS NAGAR (MOHALI)	DERABASSI	S-NPP	30.51636	76.79622	12:45:21	D	1.80
131	SAS NAGAR (MOHALI)	DERABASSI	S-NPP	30.58187	76.81141	14:25:38	D	4.30
132	SAS NAGAR (MOHALI)	KHARAR	S-NPP	30.72035	76.57655	12:45:21	D	2.20
133	SBS NAGAR	NAWAN SHAHR	S-NPP	31.05601	76.20558	12:45:21	D	1.60
134	TARN TARAN	BHIKHIWIND	S-NPP	31.27784	74.66283	12:45:21	D	3.30
135	TARN TARAN	BHIKHIWIND	S-NPP	31.31147	74.59335	12:45:21	D	10.70
136	TARN TARAN	BHIKHIWIND	S-NPP	31.31286	74.60740	14:25:38	D	3.80
137	TARN TARAN	BHIKHIWIND	S-NPP	31.42800	74.71196	14:25:38	D	4.50
138	TARN TARAN	GANDIWIND TATLA	S-NPP	31.51632	74.79913	14:25:38	D	2.60
139	TARN TARAN	GANDIWIND TATLA	S-NPP	31.52110	74.63480	12:45:21	D	5.70
140	TARN TARAN	GANDIWIND TATLA	S-NPP	31.54844	74.76785	12:45:21	D	1.90
141	TARN TARAN	KHADUR SAHIB	S-NPP	31.36983	75.12356	12:45:21	D	4.20
142	TARN TARAN	KHADUR SAHIB	S-NPP	31.42503	75.08100	14:25:38	D	6.90
143	TARN TARAN	KHADUR SAHIB	S-NPP	31.42651	75.07790	14:25:38	D	4.90
144	TARN TARAN	KHADUR SAHIB	S-NPP	31.42682	75.08430	14:25:38	D	7.80
145	TARN TARAN	KHADUR SAHIB	S-NPP	31.47242	75.11060	14:25:38	D	3.40
146	TARN TARAN	KHADUR SAHIB	S-NPP	31.49788	75.03047	12:45:21	D	1.30
147	TARN TARAN	KHADUR SAHIB	S-NPP	31.51660	75.06979	14:25:38	D	5.50
148	TARN TARAN	TARN TARAN	S-NPP	31.33152	74.80624	12:45:21	D	1.60
149	TARN TARAN	VALTOHA	S-NPP	31.16741	74.54960	14:25:38	D	5.00
150	TARN TARAN	VALTOHA	S-NPP	31.31036	74.58902	12:45:21	D	10.70
151	TARN TARAN	VALTOHA	S-NPP	31.31312	74.58998	12:45:21	D	15.90
152	TARN TARAN	VALTOHA	S-NPP	31.31420	74.59432	12:45:21	D	14.10

Details of residue burning events in Haryana on 23-Oct-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	AMBALA	AMBALA-II	S-NPP	30.31102	76.71161	14:25:38	D	4.30
2	AMBALA	BARARA	S-NPP	30.19590	77.01813	12:45:21	D	2.10
3	FATEHABAD	BHUNA	S-NPP	29.42059	75.75312	12:45:21	D	5.20
4	FATEHABAD	BHUNA	S-NPP	29.53409	75.67377	12:45:21	D	2.50
5	FATEHABAD	BHUNA	S-NPP	29.62665	75.74470	12:45:21	D	2.30
6	FATEHABAD	BHUNA	S-NPP	29.62667	75.74255	12:45:21	D	1.60
7	FATEHABAD	FATEHABAD	AQUA	29.44100	75.50200	14:29:10	D	25.80
8	JIND	NARWANA	S-NPP	29.64559	76.10980	12:45:21	D	2.40
9	KAITHAL	GUHLA	S-NPP	29.99357	76.27578	12:45:21	D	3.40
10	KAITHAL	GUHLA	S-NPP	30.03155	76.27186	12:45:21	D	2.80
11	KAITHAL	GUHLA	S-NPP	30.03262	76.34626	12:45:21	D	1.10
12	KAITHAL	GUHLA	S-NPP	30.05325	76.36331	12:45:21	D	2.20
13	KAITHAL	GUHLA	S-NPP	30.05755	76.42798	12:45:21	D	2.10
14	KAITHAL	SIWAN	S-NPP	29.89531	76.32670	12:45:21	D	1.70
15	KAITHAL	SIWAN	S-NPP	29.90180	76.23741	12:45:21	D	7.70
16	KARNAL	ASSANDH	S-NPP	29.49220	76.59259	14:25:38	D	5.80
17	KARNAL	ASSANDH	S-NPP	29.49363	76.58944	14:25:38	D	6.40
18	KARNAL	GHARAUNDA	S-NPP	29.51844	77.05728	12:45:21	D	4.80
19	KURUKSHETRA	ISMAILABAD	S-NPP	30.05387	76.61967	12:45:21	D	2.50
20	KURUKSHETRA	PEHOWA	S-NPP	29.94205	76.49921	12:45:21	D	3.00
21	KURUKSHETRA	PEHOWA	S-NPP	29.96021	76.68992	01:35:21	N	1.80
22	KURUKSHETRA	PEHOWA	S-NPP	29.96147	76.69076	03:14:56	N	1.60
23	KURUKSHETRA	PEHOWA	S-NPP	29.96151	76.69000	01:35:21	N	4.00
24	KURUKSHETRA	PEHOWA	S-NPP	29.96257	76.69340	03:14:56	N	1.60
25	KURUKSHETRA	PEHOWA	S-NPP	29.96526	76.69051	01:35:21	N	1.80
26	KURUKSHETRA	PEHOWA	S-NPP	30.00699	76.44827	12:45:21	D	3.20
27	KURUKSHETRA	PEHOWA	S-NPP	30.00713	76.44738	12:45:21	D	2.40
28	KURUKSHETRA	PEHOWA	S-NPP	30.00817	76.57051	12:45:21	D	4.90
29	YAMUNANAGAR	BILASPUR	S-NPP	30.33965	77.25653	12:45:21	D	3.50

Details of residue burning events in Uttar Pradesh on 23-Oct-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	BALRAMPUR	TULSIPUR	S-NPP	27.52490	82.30143	12:45:21	D	2.20
2	BARABANKI	FATEHPUR	S-NPP	27.20686	81.19041	12:45:21	D	2.30
3	BARABANKI	NAWABGANJ	S-NPP	26.94906	81.27763	12:45:21	D	2.80
4	FAIZABAD	RUDAULI	S-NPP	26.66782	81.68533	12:45:21	D	2.40
5	FATEHPUR	KHAGA	S-NPP	25.78396	81.25828	12:45:21	D	3.20
6	HARDOI	SANDILA	S-NPP	27.17375	80.43174	12:45:21	D	3.10
7	HARDOI	SHAHABAD	S-NPP	27.59263	79.91853	12:45:21	D	3.40
8	JHANSI	JHANSI	S-NPP	25.54638	78.55122	12:45:21	D	3.70
9	JHANSI	JHANSI	S-NPP	25.54922	78.55219	12:45:21	D	4.40
10	JHANSI	TAHRAULI	S-NPP	25.54929	78.74569	12:45:21	D	4.40
11	KHERI	MOHMADI	S-NPP	27.78470	80.41317	12:45:21	D	2.60
12	KHERI	MOHMADI	S-NPP	27.78899	80.41206	12:45:21	D	2.60
13	LUCKNOW	LUCKNOW	S-NPP	26.80505	80.78596	12:45:21	D	5.40
14	MATHURA	CHHATA	S-NPP	27.64656	77.57658	12:45:21	D	2.80
15	MATHURA	CHHATA	S-NPP	27.66714	77.50129	12:45:21	D	2.10
16	PILHIBHIT	BISALPUR	S-NPP	28.22598	79.94357	12:45:21	D	9.50
17	PILHIBHIT	PILHIBHIT	S-NPP	28.84786	79.68814	12:45:21	D	3.80
18	PILHIBHIT	PURANPUR	S-NPP	28.63956	80.13329	12:45:21	D	3.10
19	SANTKABIRNAGAR	KHALILABAD	S-NPP	26.68324	83.02827	12:45:21	D	3.40
20	SHRAWASTI	BHINGA	S-NPP	27.75699	81.81996	12:45:21	D	4.80

Details of residue burning events in Rajasthan on 23-Oct-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	BARAN	CHHABRA	S-NPP	24.59558	76.89468	12:45:21	D	2.30
2	BARAN	CHHABRA	S-NPP	24.62901	76.87665	12:45:21	D	3.60
3	BARAN	CHHABRA	S-NPP	24.63300	76.87493	12:45:21	D	3.30
4	BARAN	CHHABRA	S-NPP	24.64065	76.95089	12:45:21	D	2.00
5	BARAN	CHHABRA	S-NPP	24.66705	76.96149	12:45:21	D	1.80
6	BARAN	KISHANGUNJ	S-NPP	25.26662	76.64727	12:45:21	D	3.20
7	BARAN	KISHANGUNJ	S-NPP	25.29228	76.60314	12:45:21	D	2.60
8	BARAN	SHAHBAD	S-NPP	25.10574	77.03108	14:25:38	D	7.70
9	BARAN	SHAHBAD	S-NPP	25.11138	77.02783	14:25:38	D	15.20
10	BARAN	SHAHBAD	S-NPP	25.13307	77.08395	12:45:21	D	7.60
11	BUNDI	BUNDI	S-NPP	25.27326	75.84989	14:25:38	D	6.00
12	BUNDI	KESHORAIPATAN	AQUA	25.47000	76.02700	14:29:10	D	20.40
13	BUNDI	KESHORAIPATAN	S-NPP	25.32727	75.91064	12:45:21	D	2.30
14	BUNDI	KESHORAIPATAN	S-NPP	25.36392	76.01086	12:45:21	D	2.50
15	BUNDI	KESHORAIPATAN	S-NPP	25.43588	75.95679	14:25:38	D	7.30
16	BUNDI	KESHORAIPATAN	S-NPP	25.43626	75.96281	14:25:38	D	11.00
17	BUNDI	KESHORAIPATAN	S-NPP	25.43779	75.96012	14:25:38	D	14.30
18	BUNDI	KESHORAIPATAN	S-NPP	25.44322	76.06825	12:45:21	D	4.90
19	BUNDI	KESHORAIPATAN	S-NPP	25.44958	75.99191	12:45:21	D	3.20
20	BUNDI	KESHORAIPATAN	S-NPP	25.45388	76.03545	12:45:21	D	6.60
21	BUNDI	KESHORAIPATAN	S-NPP	25.47329	76.06451	12:45:21	D	2.90
22	HANUMANGARH	HANUMANGARH	S-NPP	29.57982	74.28719	14:25:38	D	13.40
23	HANUMANGARH	HANUMANGARH	S-NPP	29.58072	74.28407	14:25:38	D	6.40
24	HANUMANGARH	HANUMANGARH	S-NPP	29.58105	74.28948	14:25:38	D	6.40
25	KOTA	PIPALDA	S-NPP	25.47383	76.52274	12:45:21	D	3.90
26	KOTA	PIPALDA	S-NPP	25.48410	76.51517	12:45:21	D	5.60
27	KOTA	SANGOD	S-NPP	25.01467	76.14380	12:45:21	D	2.60
28	KOTA	SANGOD	S-NPP	25.06028	76.19133	12:45:21	D	8.30
29	KOTA	SANGOD	S-NPP	25.06139	76.19596	12:45:21	D	11.30

Details of residue burning events in Madhya Pradesh on 23-Oct-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	ASHOKNAGAR	ASHOKNAGAR	S-NPP	24.52962	77.83624	12:45:21	D	1.40
2	ASHOKNAGAR	ASHOKNAGAR	S-NPP	24.53041	77.83529	12:45:21	D	4.60
3	ASHOKNAGAR	CHANDERI	S-NPP	24.67163	78.04651	12:45:21	D	2.30
4	ASHOKNAGAR	ISAGARH	S-NPP	24.69977	77.84918	12:45:21	D	6.90
5	ASHOKNAGAR	MUNGAOLI	S-NPP	24.25954	77.95844	12:45:21	D	2.50
6	ASHOKNAGAR	MUNGAOLI	S-NPP	24.30676	77.94189	12:45:21	D	2.50
7	BHIND	LAHAR	S-NPP	26.17294	78.87987	12:45:21	D	3.20
8	BHIND	LAHAR	S-NPP	26.17658	78.88086	12:45:21	D	4.30
9	BHIND	MAJHGAWAN	S-NPP	26.32739	79.03874	12:45:21	D	4.30
10	BHIND	MAJHGAWAN	S-NPP	26.33039	79.04027	12:45:21	D	5.50
11	CHHINDWARA	CHAURAI	S-NPP	22.12932	79.27149	12:45:21	D	2.80
12	DAMOH	JABERA	S-NPP	23.55245	79.80068	12:45:21	D	3.70
13	DATIA	BHANDER	S-NPP	25.83156	78.63500	12:45:21	D	2.10
14	DATIA	DATIA	S-NPP	25.73343	78.37092	12:45:21	D	3.60
15	DATIA	DATIA	S-NPP	25.73559	78.37231	12:45:21	D	2.90
16	DATIA	DATIA	S-NPP	25.76493	78.51510	12:45:21	D	3.70
17	DATIA	DATIA	S-NPP	25.76730	78.51286	12:45:21	D	3.50
18	DATIA	SEONDHA	S-NPP	25.82308	78.59676	12:45:21	D	3.60
19	DATIA	SEONDHA	S-NPP	25.85741	78.48873	12:45:21	D	1.40
20	DATIA	SEONDHA	S-NPP	25.93599	78.56340	12:45:21	D	2.50
21	DHAR	MANAWAR	S-NPP	22.26206	75.13322	01:35:21	N	0.70
22	GUNA	ARON	S-NPP	24.26966	77.55161	12:45:21	D	2.80
23	GUNA	ARON	S-NPP	24.31836	77.43824	01:35:21	N	0.80
24	GUNA	ARON	S-NPP	24.39414	77.34797	12:45:21	D	5.90
25	GUNA	ARON	S-NPP	24.39662	77.34756	12:45:21	D	5.20
26	GUNA	GUNA	S-NPP	24.54174	77.43515	12:45:21	D	1.00
27	GUNA	GUNA	S-NPP	24.54259	77.43496	12:45:21	D	2.20
28	GUNA	GUNA	S-NPP	24.71296	77.37798	12:45:21	D	3.20
29	GUNA	GUNA	S-NPP	24.78858	77.28054	12:45:21	D	1.60

30	GUNA	GUNA	S-NPP	24.87437	77.07869	12:45:21	D	9.20
31	GUNA	GUNA	S-NPP	24.88195	77.11165	12:45:21	D	2.30
32	GUNA	GUNA	S-NPP	24.90630	77.19218	12:45:21	D	6.00
33	GUNA	GUNA	S-NPP	24.91027	77.19115	12:45:21	D	5.30
34	GUNA	GUNA	S-NPP	24.91180	77.19064	12:45:21	D	5.20
35	GUNA	GUNA	S-NPP	24.95994	77.07696	12:45:21	D	6.20
36	GWALIOR	DABRA	S-NPP	25.87234	78.20512	12:45:21	D	4.60
37	HOSHANGABAD	BABAI	S-NPP	22.76114	77.79933	12:45:21	D	4.20
38	HOSHANGABAD	BABAI	S-NPP	22.76348	77.79855	12:45:21	D	3.50
39	HOSHANGABAD	ITARSI	S-NPP	22.62833	77.79936	12:45:21	D	9.40
40	HOSHANGABAD	ITARSI	S-NPP	22.63770	77.79138	14:25:38	D	4.40
41	HOSHANGABAD	ITARSI	S-NPP	22.64110	77.78861	14:25:38	D	6.70
42	HOSHANGABAD	SEONI MALWA	S-NPP	22.37221	77.37796	14:25:38	D	4.50
43	HOSHANGABAD	SEONI MALWA	S-NPP	22.57221	77.55806	14:25:38	D	3.90
44	HOSHANGABAD	SEONI MALWA	S-NPP	22.61034	77.49927	14:25:38	D	6.00
45	JABALPUR	JABALPUR	S-NPP	23.20901	80.07060	12:45:21	D	13.00
46	JABALPUR	SAHPURA	S-NPP	23.18384	79.70660	12:45:21	D	11.30
47	MORENA	MORENA	S-NPP	26.46456	77.96832	12:45:21	D	2.50
48	MORENA	SABALGARH	S-NPP	26.27381	77.48979	12:45:21	D	8.80
49	NARSHIMAPURA	GOTECAON	S-NPP	22.92572	79.56342	12:45:21	D	2.10
50	NARSHIMAPURA	NARSIMHAPUR	S-NPP	23.08548	79.23114	12:45:21	D	3.00
51	RAISEN	RAISEN	S-NPP	23.48969	77.75494	12:45:21	D	7.40
52	RAISEN	RAISEN	S-NPP	23.49518	77.75350	12:45:21	D	7.40
53	SAGAR	DEVRI	S-NPP	23.48015	79.07168	12:45:21	D	1.60
54	SATNA	NAGOD	S-NPP	24.58315	80.66022	12:45:21	D	3.20
55	SATNA	NAGOD	S-NPP	24.58404	80.66241	12:45:21	D	7.30
56	SEHORE	BUDHNI	S-NPP	22.77083	77.46606	12:45:21	D	4.00
57	SEONI	GHANSAUR	S-NPP	22.43673	79.65980	12:45:21	D	2.40
58	SEONI	GHANSAUR	S-NPP	22.43741	79.66298	12:45:21	D	2.40
59	SEONI	SEONI	S-NPP	22.15480	79.36376	12:45:21	D	1.70
60	SEONI	SEONI	S-NPP	22.16363	79.35463	12:45:21	D	2.30
61	SEONI	SEONI	S-NPP	22.18866	79.54508	12:45:21	D	4.00
62	SEONI	SEONI	S-NPP	22.26109	79.63510	12:45:21	D	1.40
63	SEONI	SEONI	S-NPP	22.31366	79.64544	12:45:21	D	1.70

64	SHEOPUR	KARAHAL	S-NPP	25.43829	76.81223	12:45:21	D	3.30
65	SHEOPUR	KARAHAL	S-NPP	25.46403	76.75805	12:45:21	D	4.10
66	SHEOPUR	KARAHAL	S-NPP	25.46640	76.75465	12:45:21	D	2.20
67	SHEOPUR	SHEOPUR	S-NPP	25.40999	76.66633	12:45:21	D	3.60
68	SHEOPUR	SHEOPUR	S-NPP	25.46083	76.75627	12:45:21	D	3.90
69	SHEOPUR	SHEOPUR	S-NPP	25.46302	76.75382	12:45:21	D	4.10
70	SHEOPUR	SHEOPUR	S-NPP	25.54641	76.67159	12:45:21	D	2.60
71	SHEOPUR	SHEOPUR	S-NPP	25.55052	76.67043	12:45:21	D	2.20
72	SHEOPUR	SHEOPUR	S-NPP	25.59754	76.71098	12:45:21	D	4.00
73	SHEOPUR	SHEOPUR	S-NPP	25.59932	76.74045	14:25:38	D	9.30
74	SHEOPUR	SHEOPUR	S-NPP	25.59990	76.73919	14:25:38	D	7.80
75	SHEOPUR	SHEOPUR	S-NPP	25.60311	76.70940	12:45:21	D	4.70
76	SHEOPUR	SHEOPUR	S-NPP	25.62840	76.58907	12:45:21	D	2.80
77	SHEOPUR	SHEOPUR	S-NPP	25.73443	76.64975	12:45:21	D	1.70
78	SHEOPUR	SHEOPUR	S-NPP	25.74047	76.66651	14:25:38	D	7.20
79	SHEOPUR	SHEOPUR	S-NPP	25.74207	76.69371	14:25:38	D	6.00
80	SHEOPUR	SHEOPUR	S-NPP	25.75375	76.65886	14:25:38	D	4.90
81	SHEOPUR	SHEOPUR	S-NPP	25.75473	76.65749	14:25:38	D	4.70
82	SHEOPUR	SHEOPUR	S-NPP	25.86750	76.72755	12:45:21	D	5.20
83	SHEOPUR	SHEOPUR	S-NPP	25.86878	76.75818	12:45:21	D	5.00
84	SHEOPUR	SHEOPUR	S-NPP	25.89084	76.75169	12:45:21	D	10.10
85	SHEOPUR	SHEOPUR	S-NPP	25.89198	76.68054	12:45:21	D	5.30
86	SHEOPUR	SHEOPUR	S-NPP	25.89505	76.68002	12:45:21	D	6.30
87	SHEOPUR	VIJAYPUR	S-NPP	26.02337	76.87506	12:45:21	D	3.80
88	SHIVPURI	KOLARAS	S-NPP	24.95518	77.63251	12:45:21	D	4.10
89	SHIVPURI	KOLARAS	S-NPP	24.97851	77.73455	12:45:21	D	2.00

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 (ISRO)**

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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)

The DASHBOARD for paddy residue burning events is available at weblink: [CREAMS Fire Dashboard](#)
