



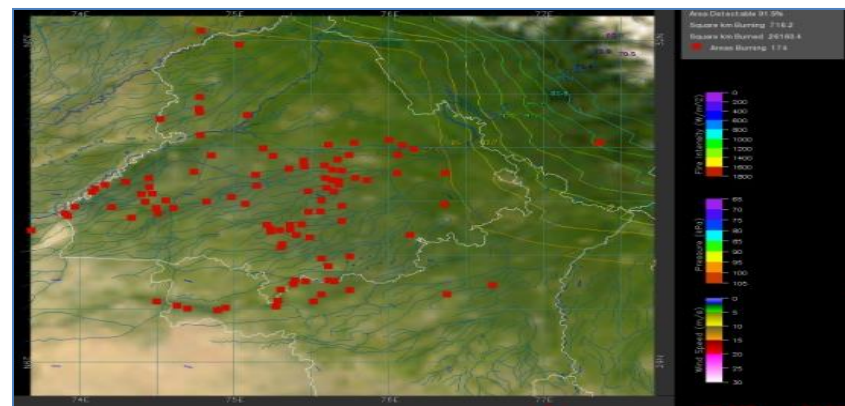
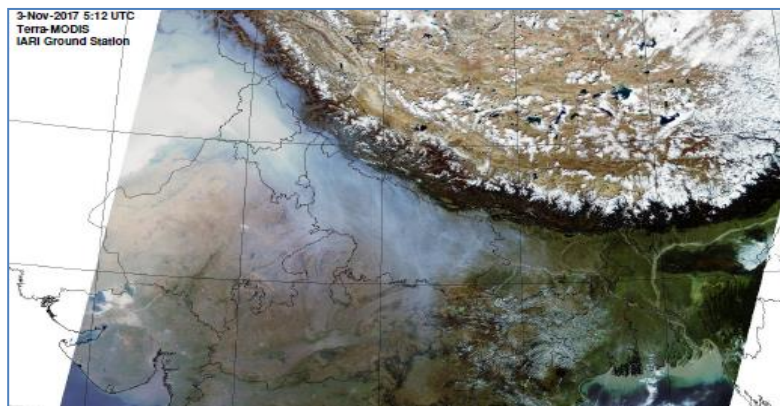
**Bulletin
No. 37**

**Events Date:
21-Oct-2023**

**Issued on:
21-Oct-2023**



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



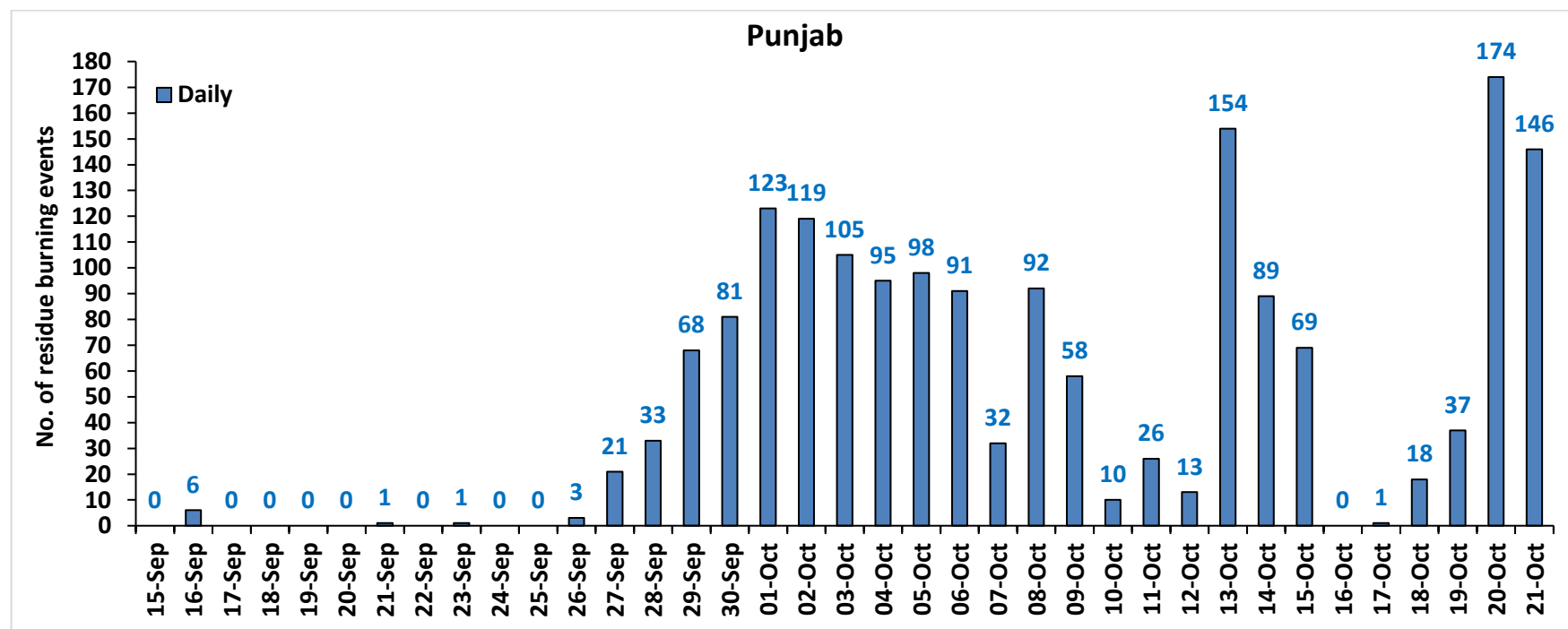
**Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory,
Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012**

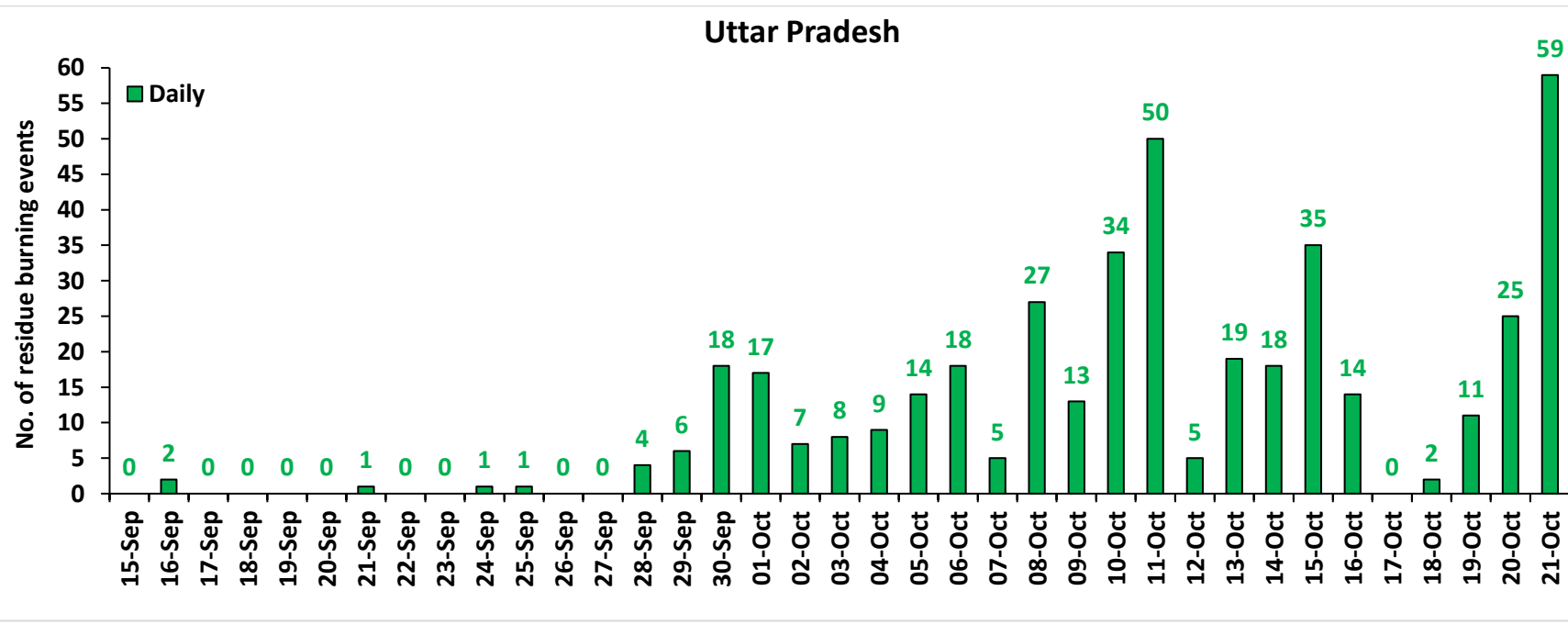
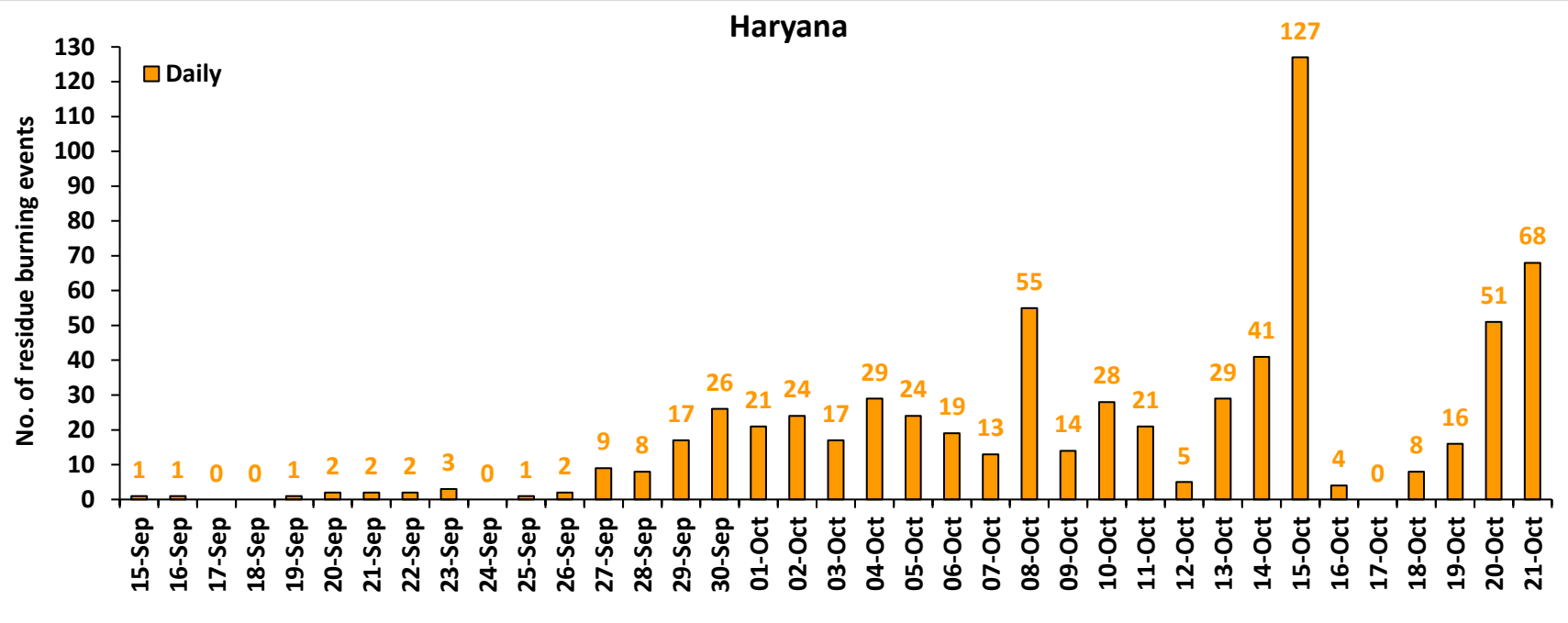
<http://creams.iari.res.in>

Highlights for 21-Oct-2023

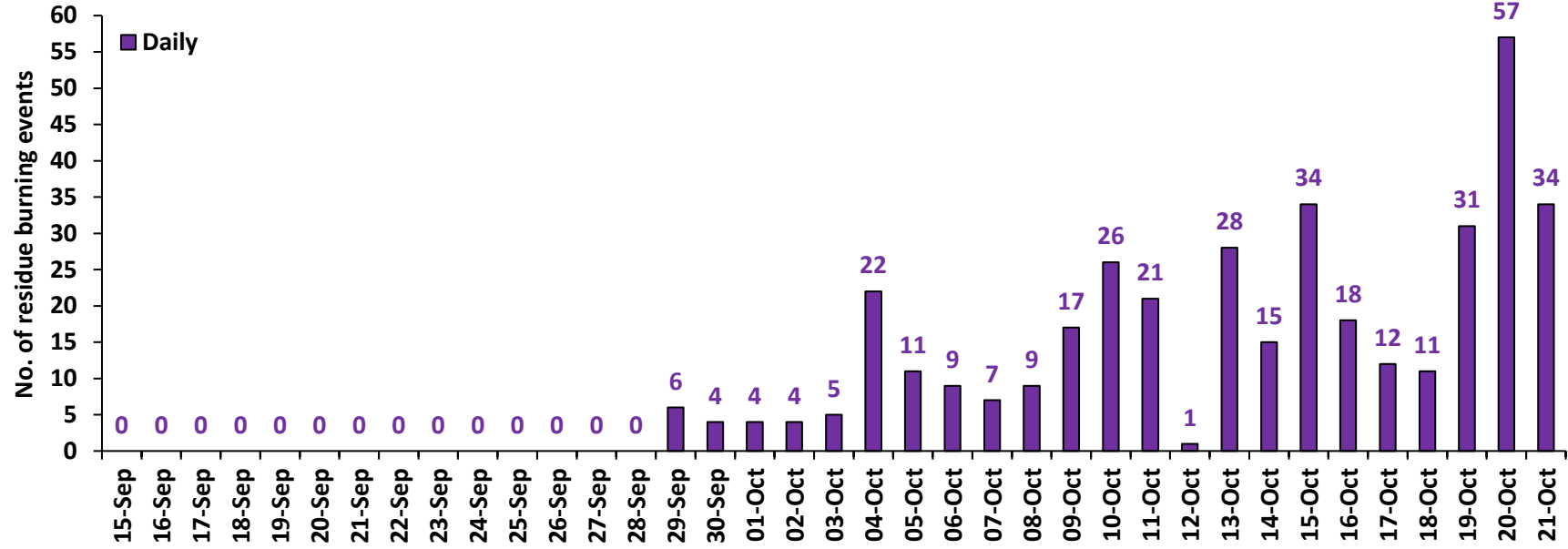
- The active fire events due to rice residue burning were monitored using satellite remote sensing, following the "Standard Protocol for Estimation of Crop Residue Burning Fire Events using Satellite Data".
- Satellites detected **454** residue burning events in the six study States on 21-Oct-2023.
- The state wise events detected on 21-Oct-2023 were **146** in Punjab, **68** in Haryana, **59** in UP, **00** in Delhi, **34** in Rajasthan and **147** in MP.
- Total **4026** burning events were detected in the six states between 15-Sept-2023 and 21-Oct-2023, which are distributed as **1764**, **689**, **423**, **02**, **386** and **762** in Punjab, Haryana, UP, Delhi, Rajasthan and MP, respectively.

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

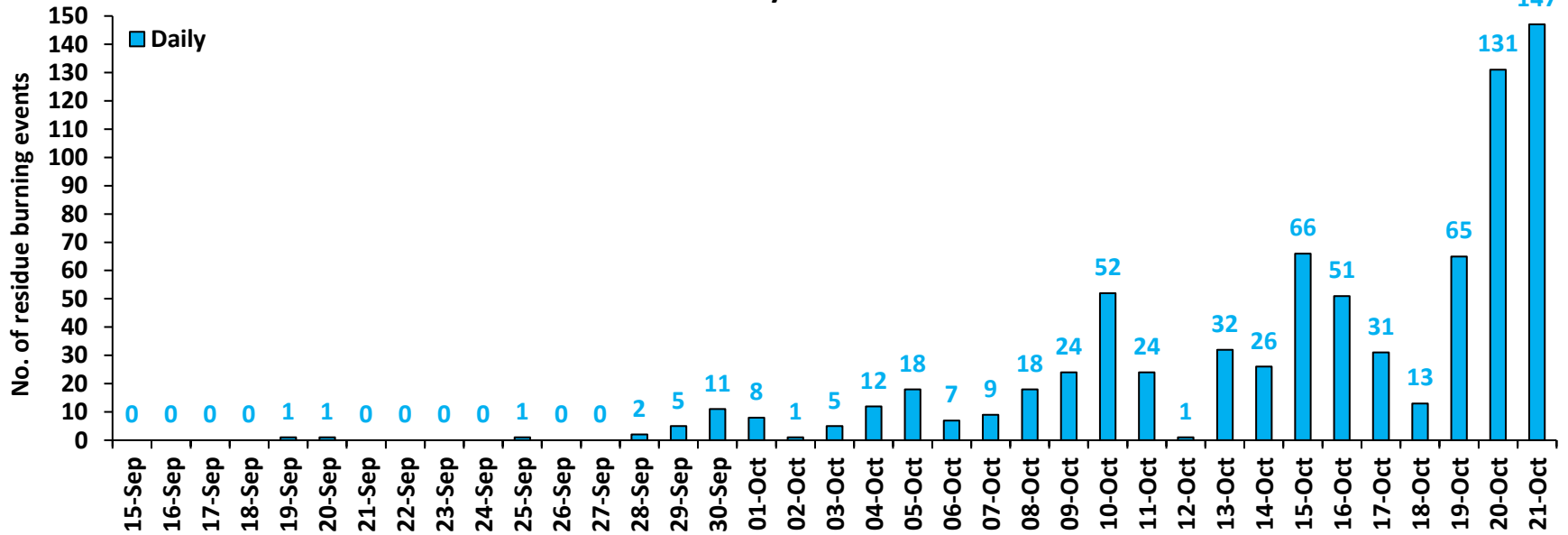




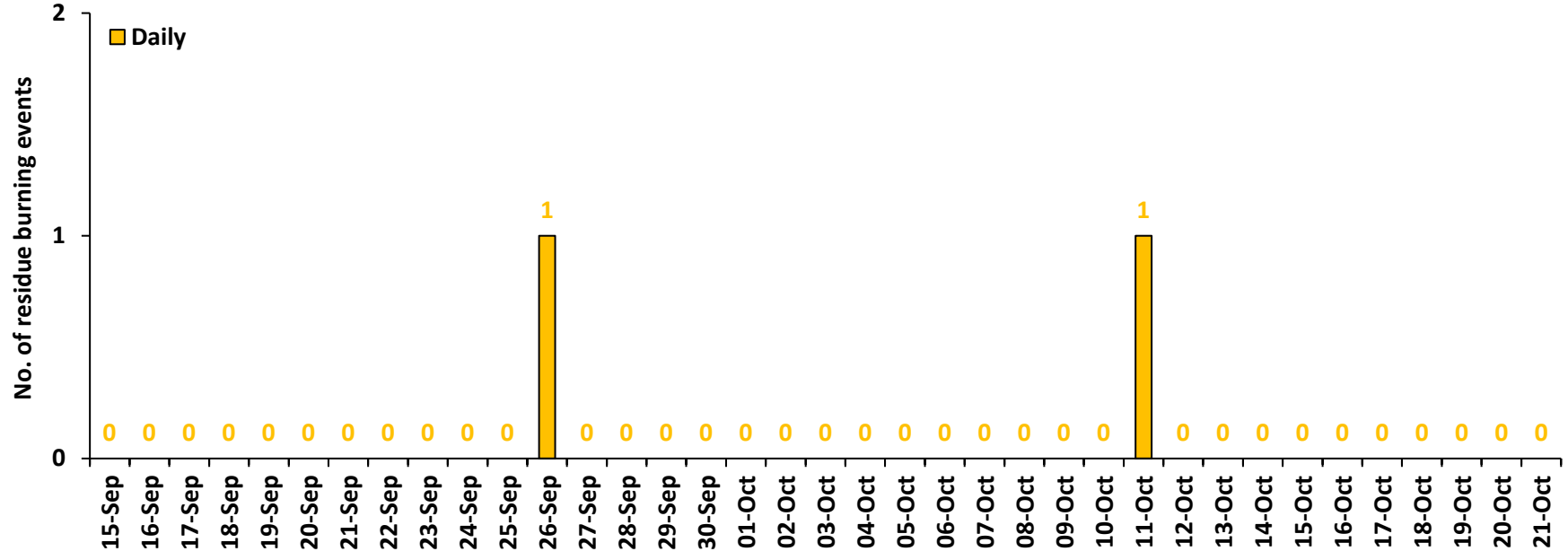
Rajasthan



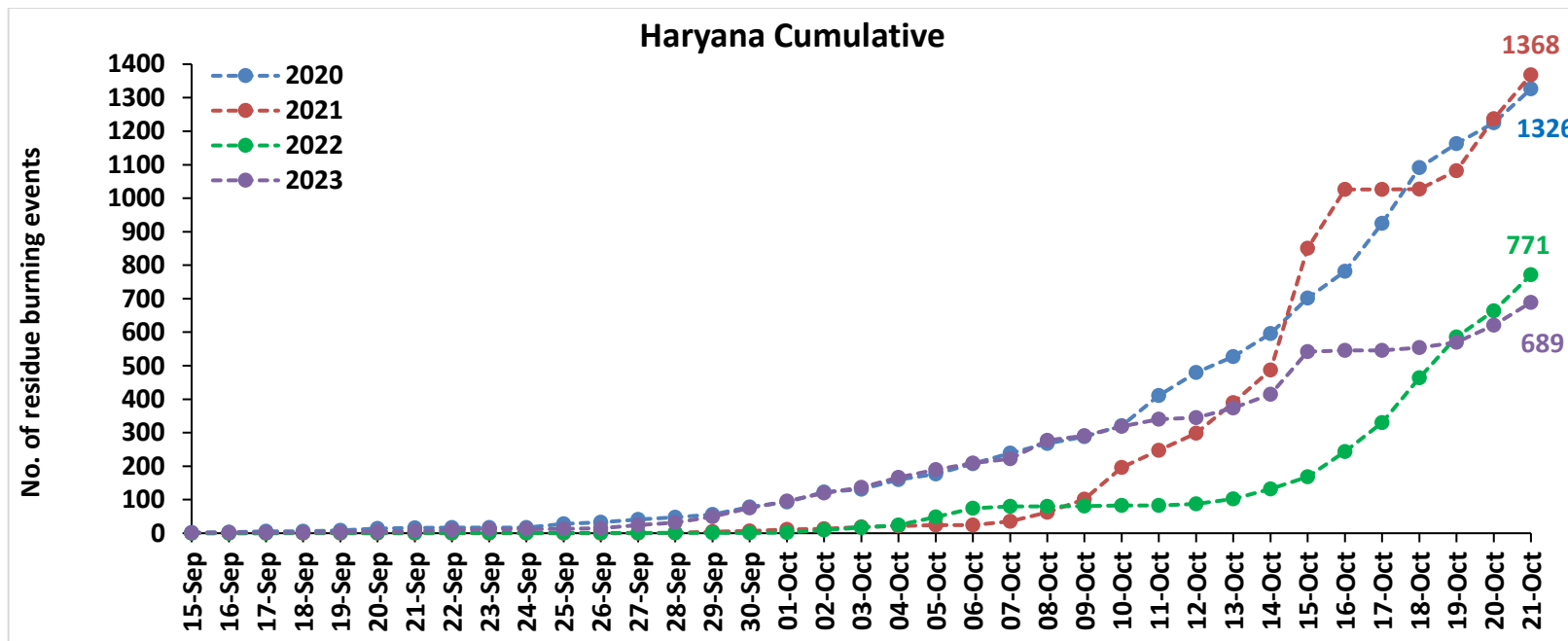
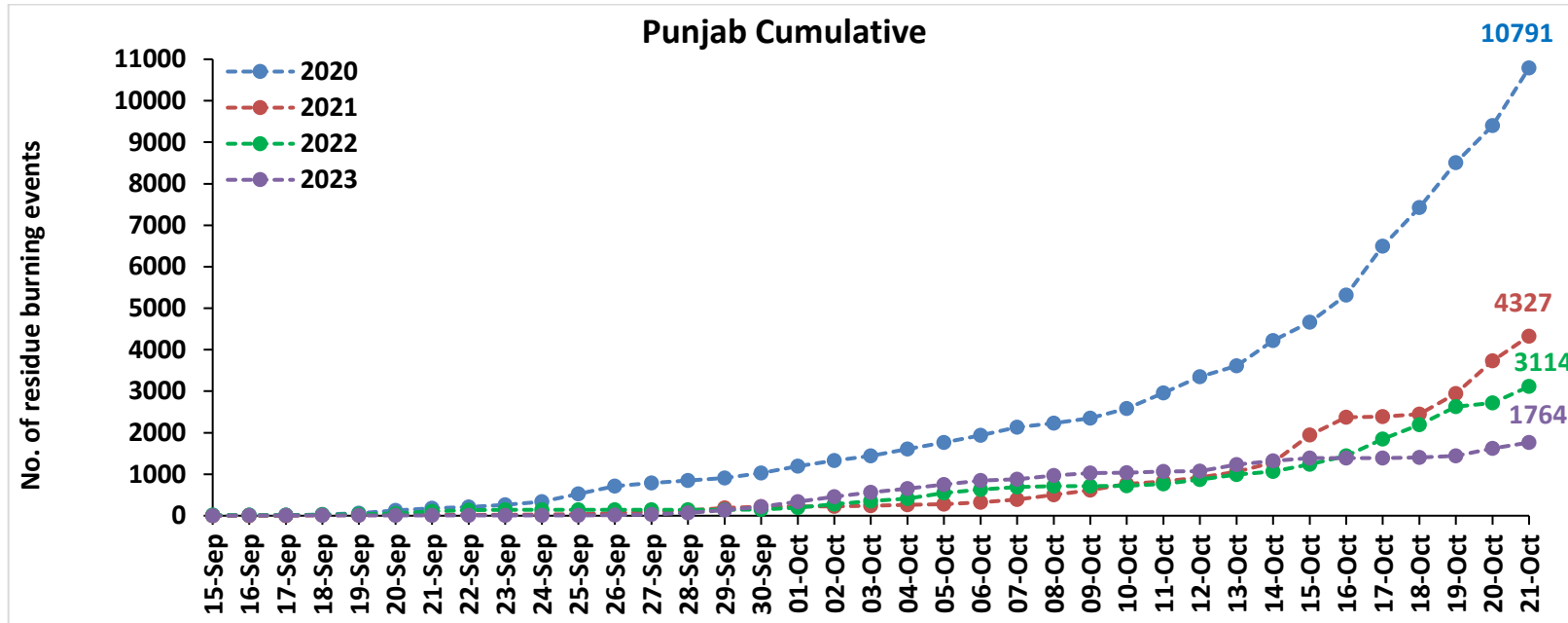
Madhya Pradesh

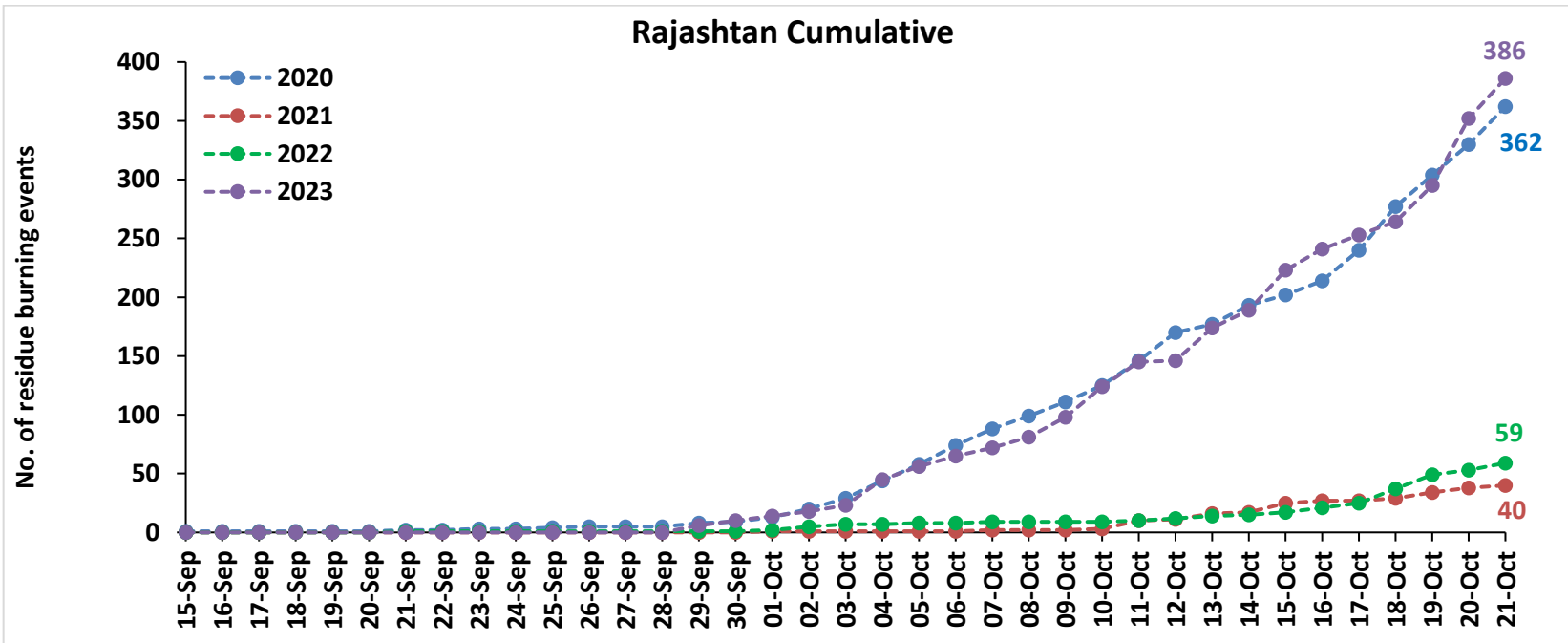
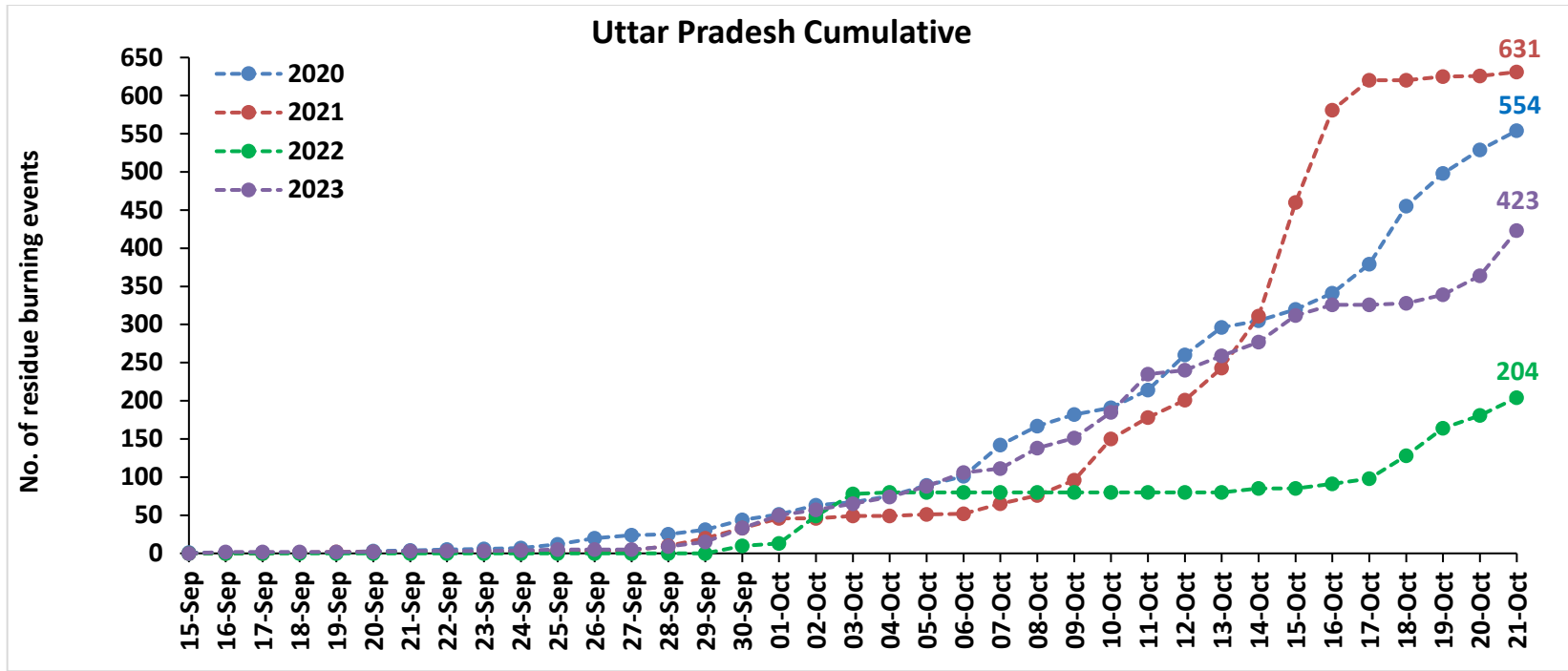


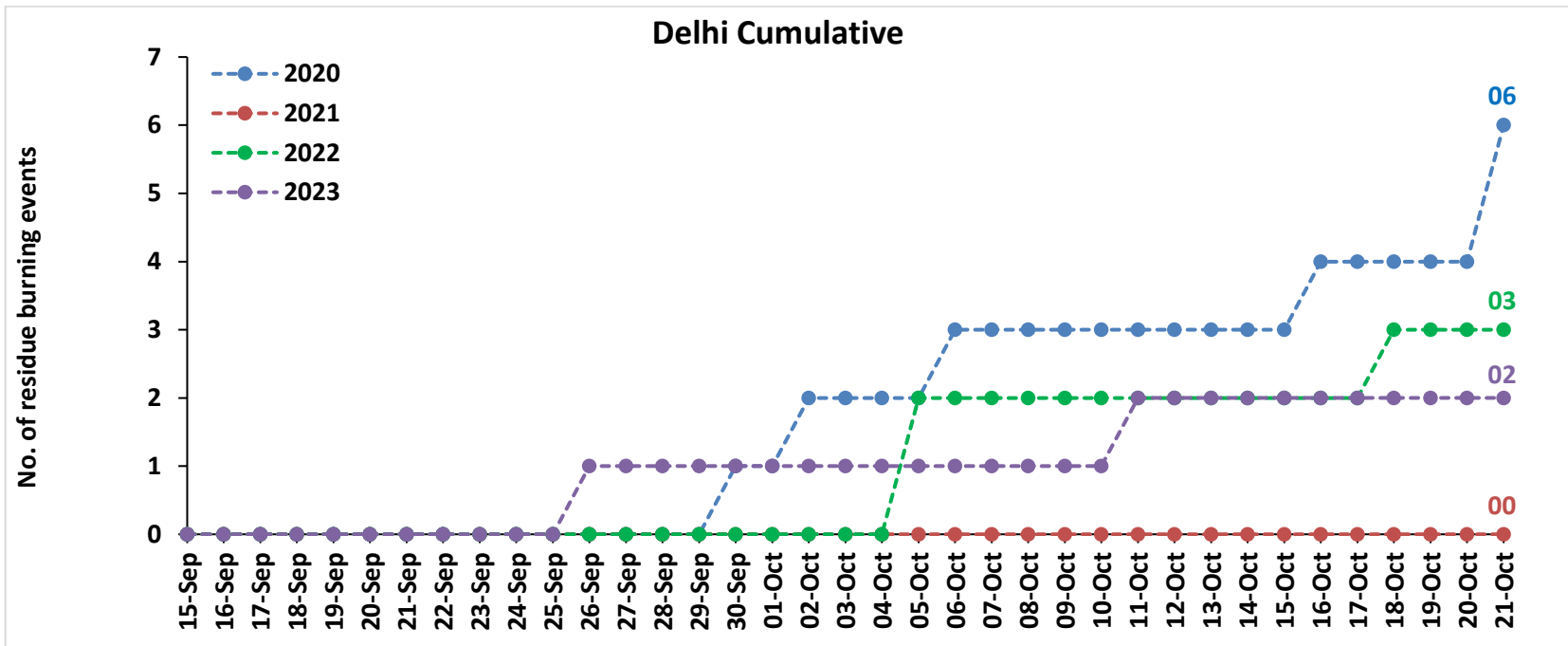
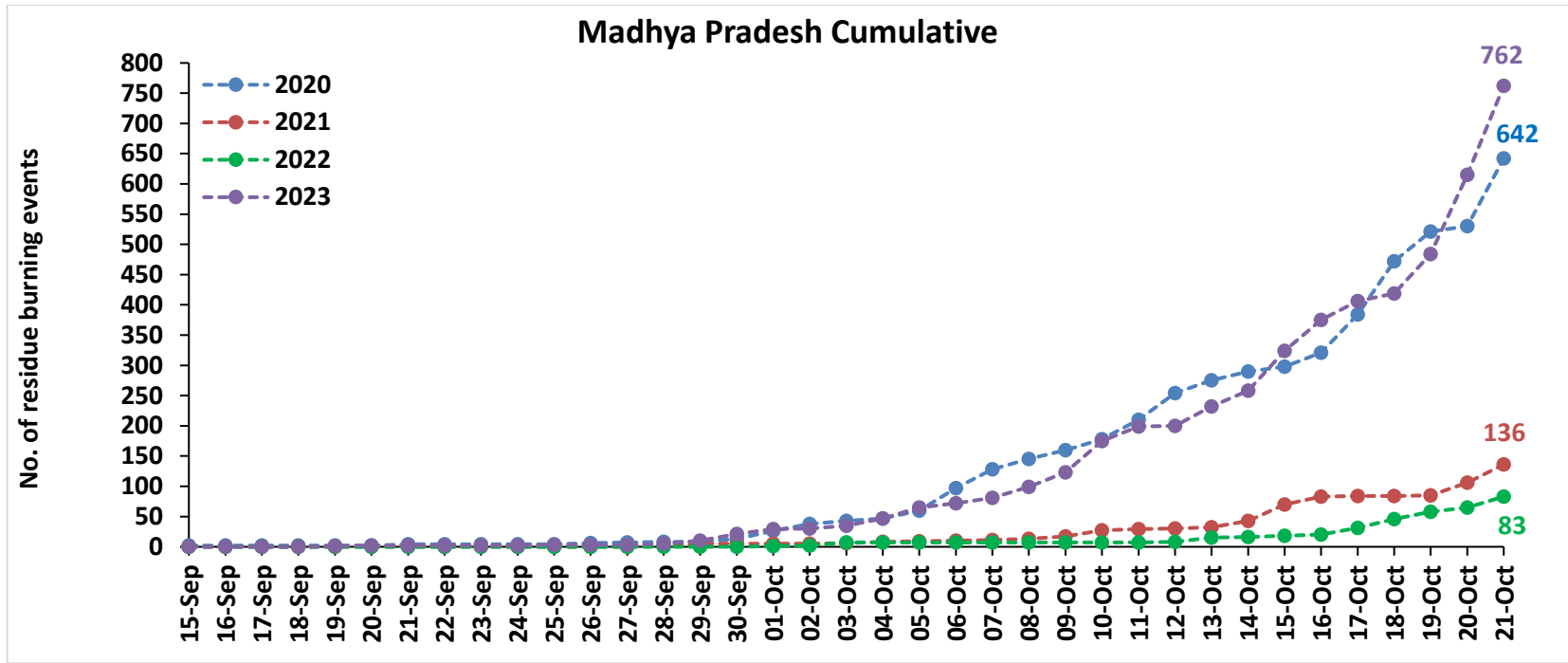
Delhi



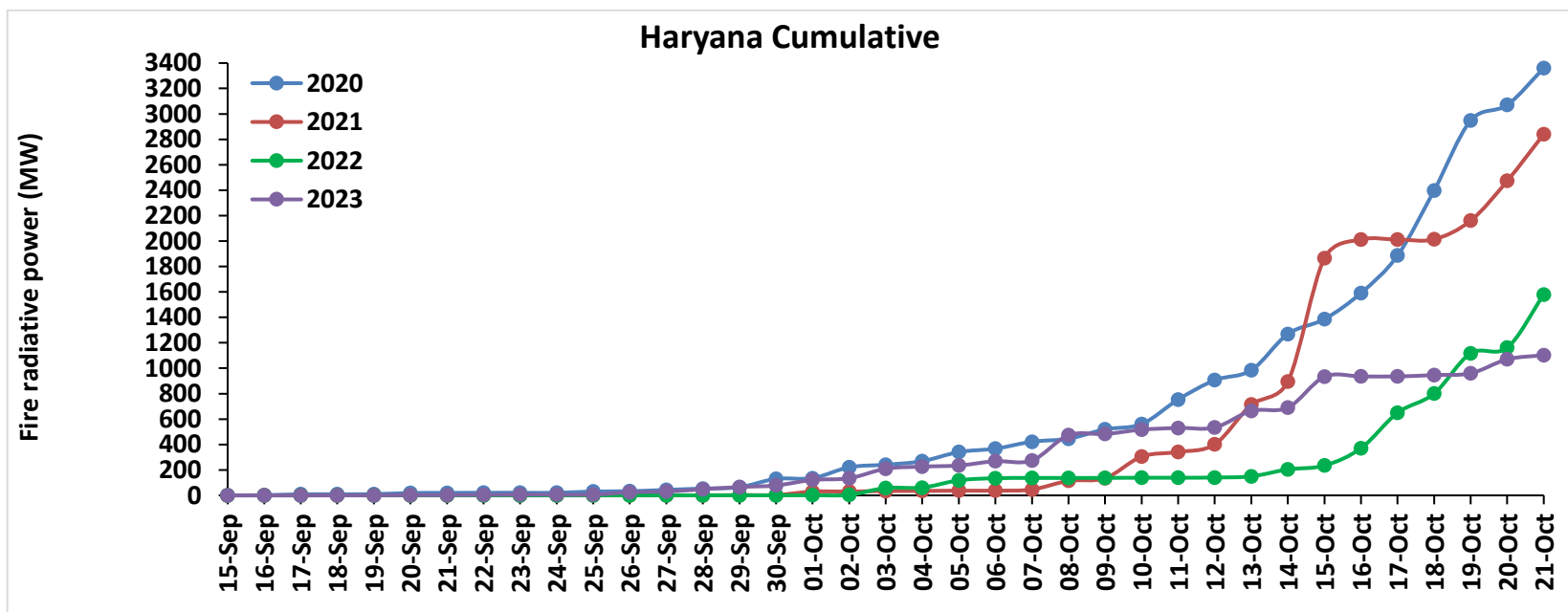
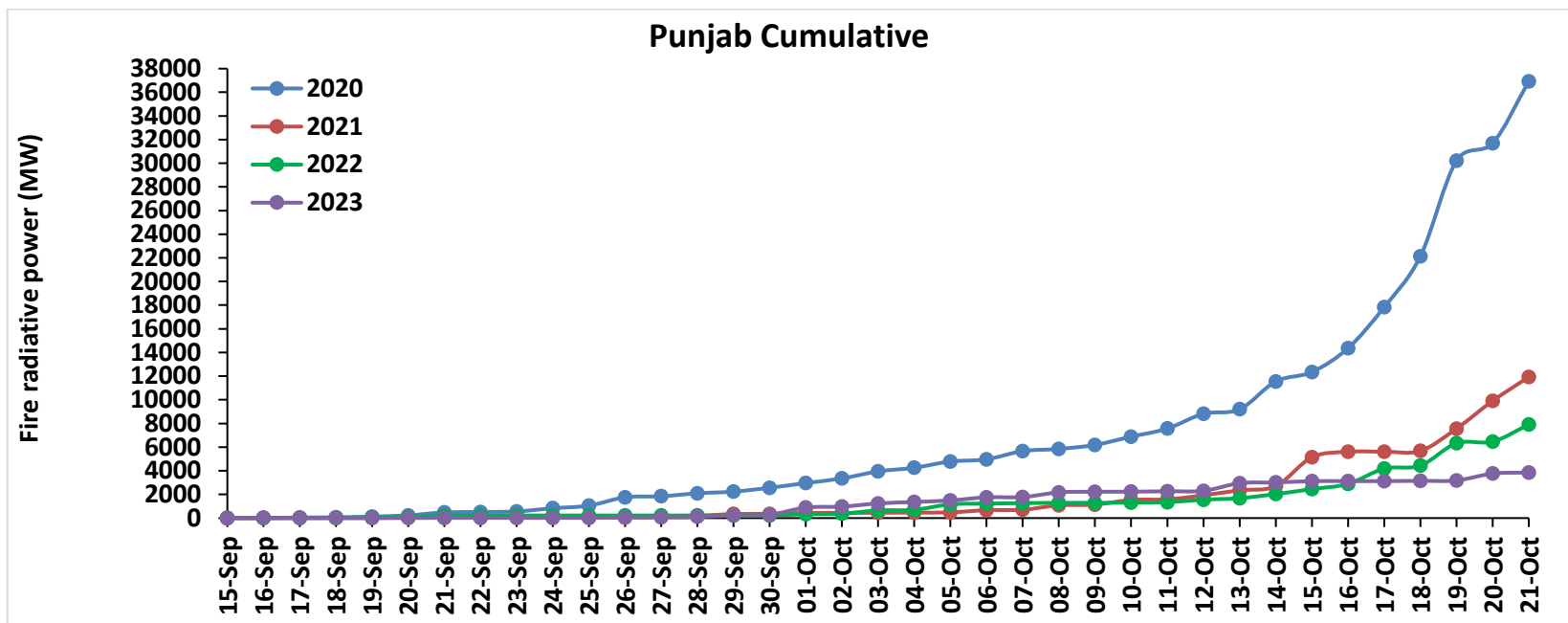
Comparison of residue burning events in current year (2023) with previous years (2020, 2021 and 2022) for the study State

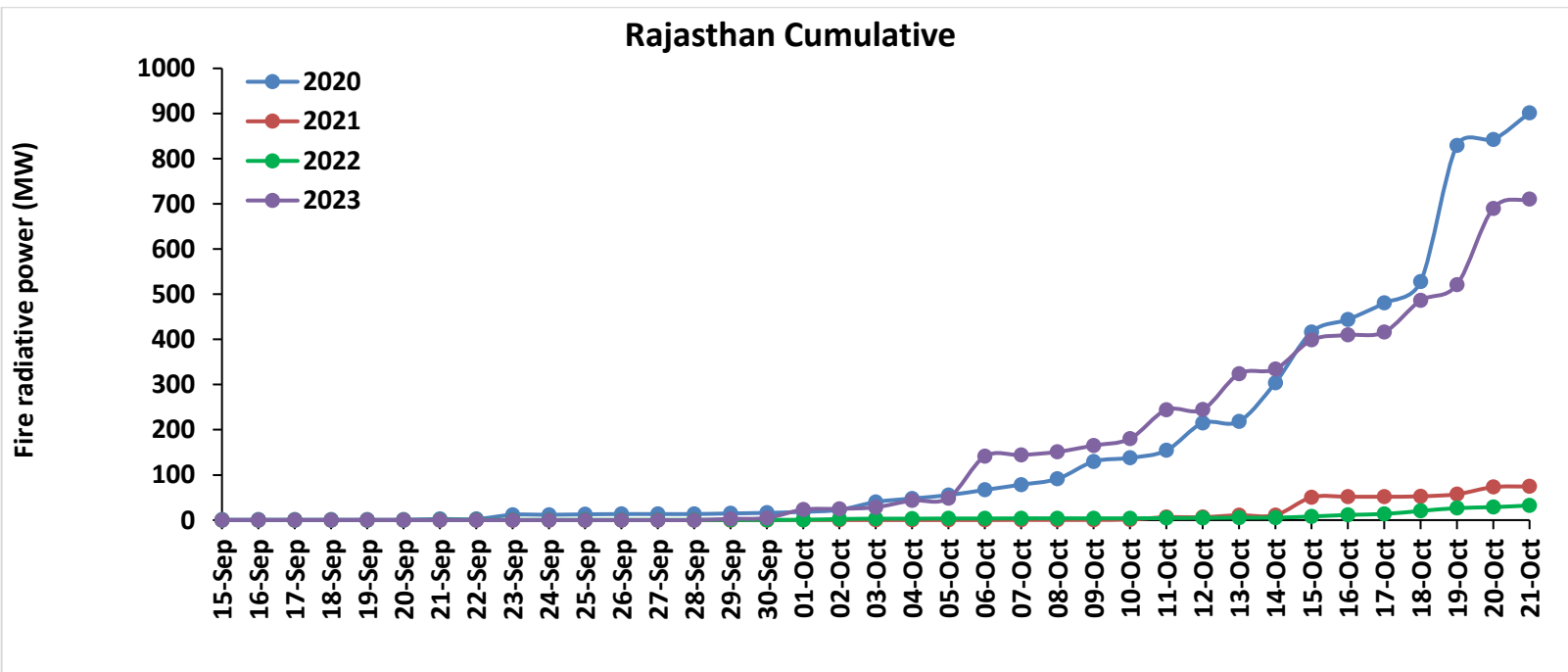
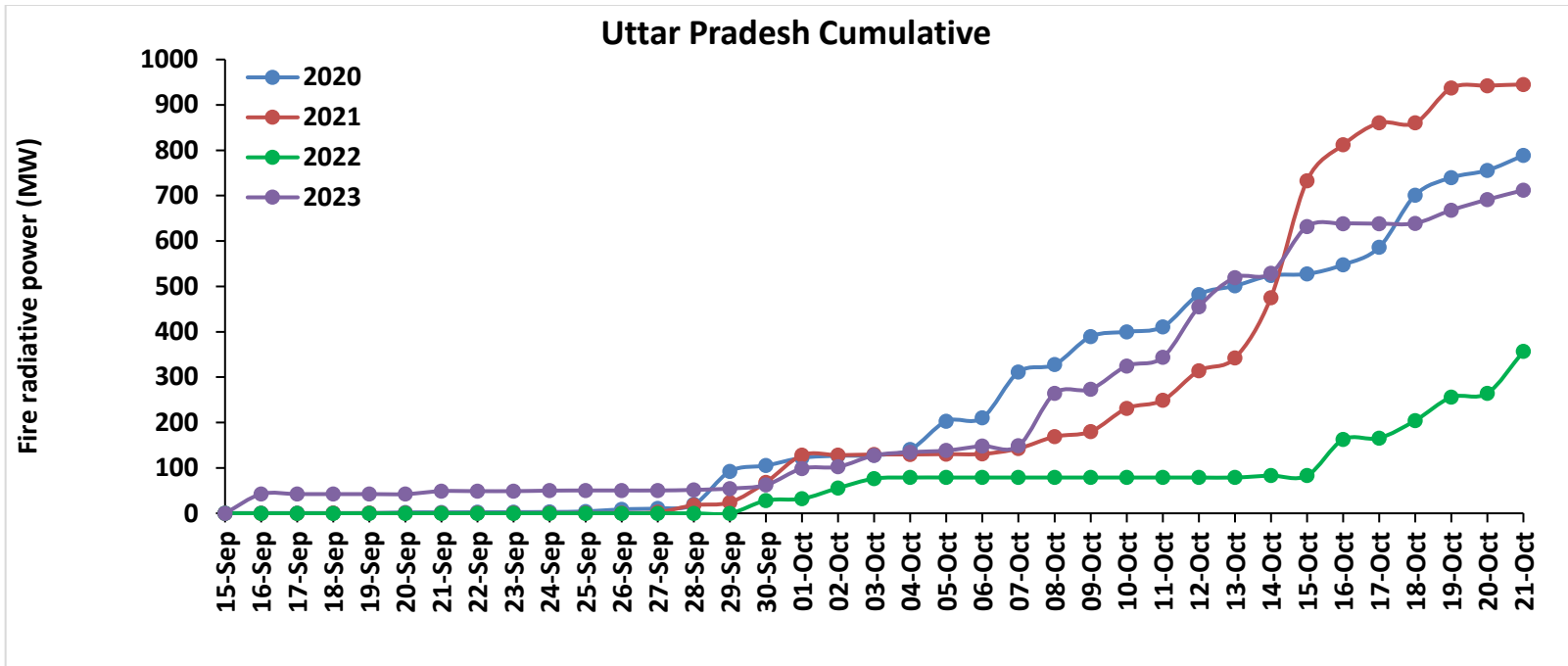


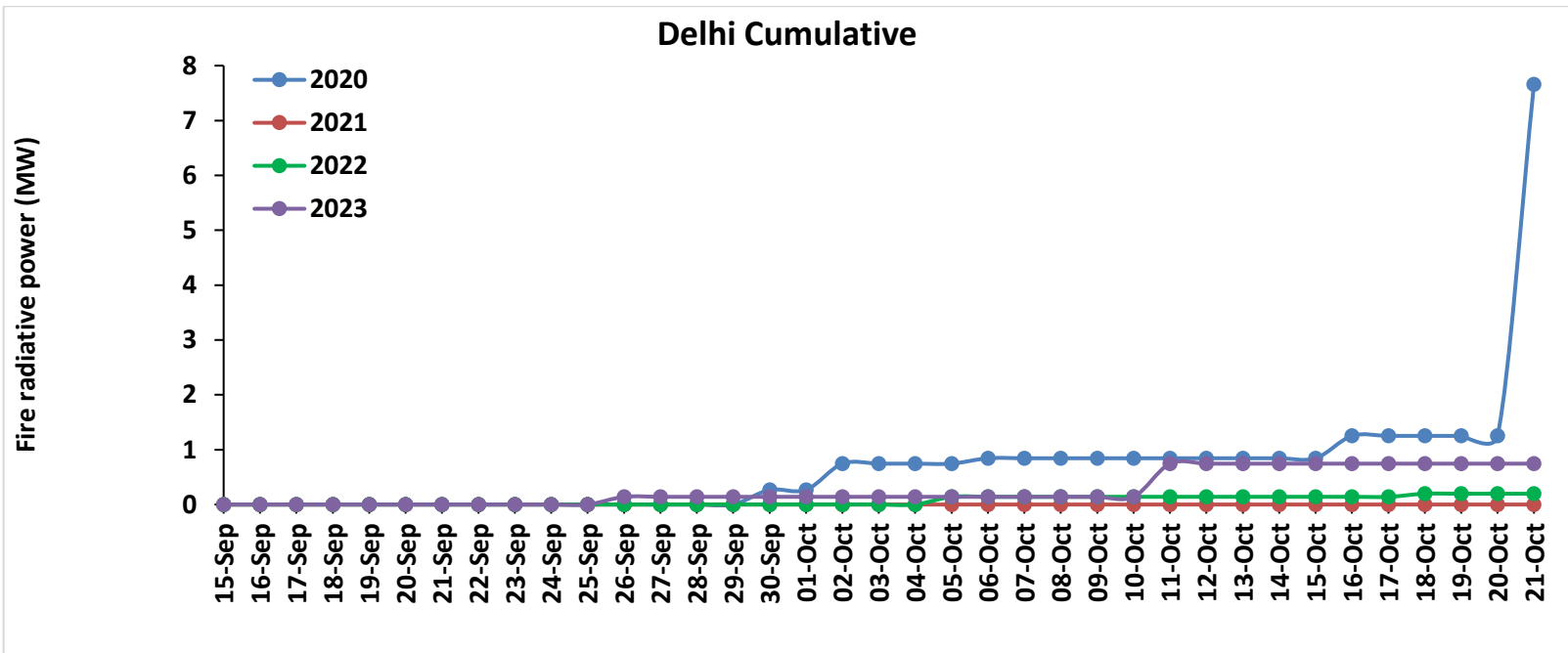
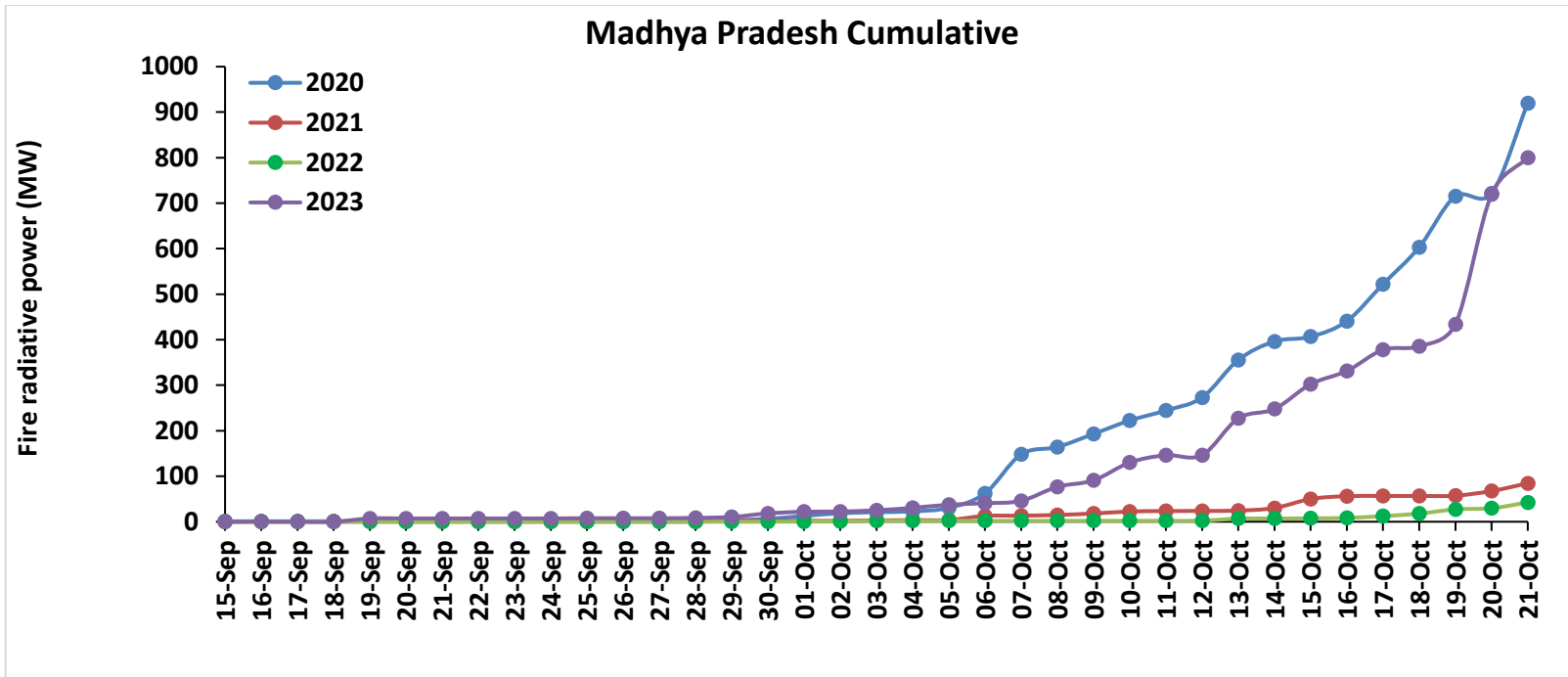




Comparison of residue burning fire power in current year (2023) with previous years (2020, 2021 and 2022) for the study States

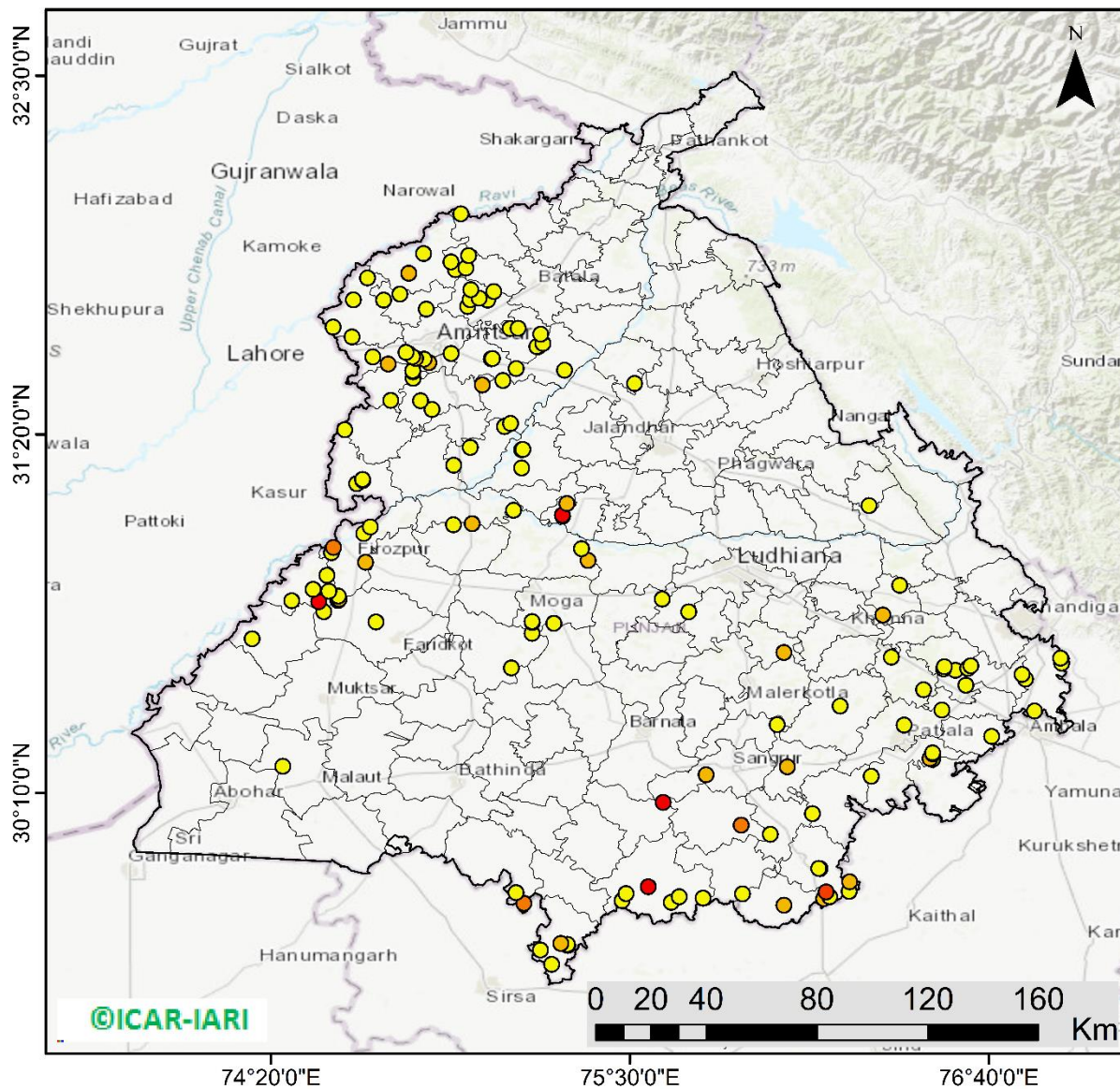






Punjab

RICE RESIDUE BURNING IN PUNJAB



146 burning events detected in Punjab during (21st Oct 2023)

Fire Intensity (W/m²)

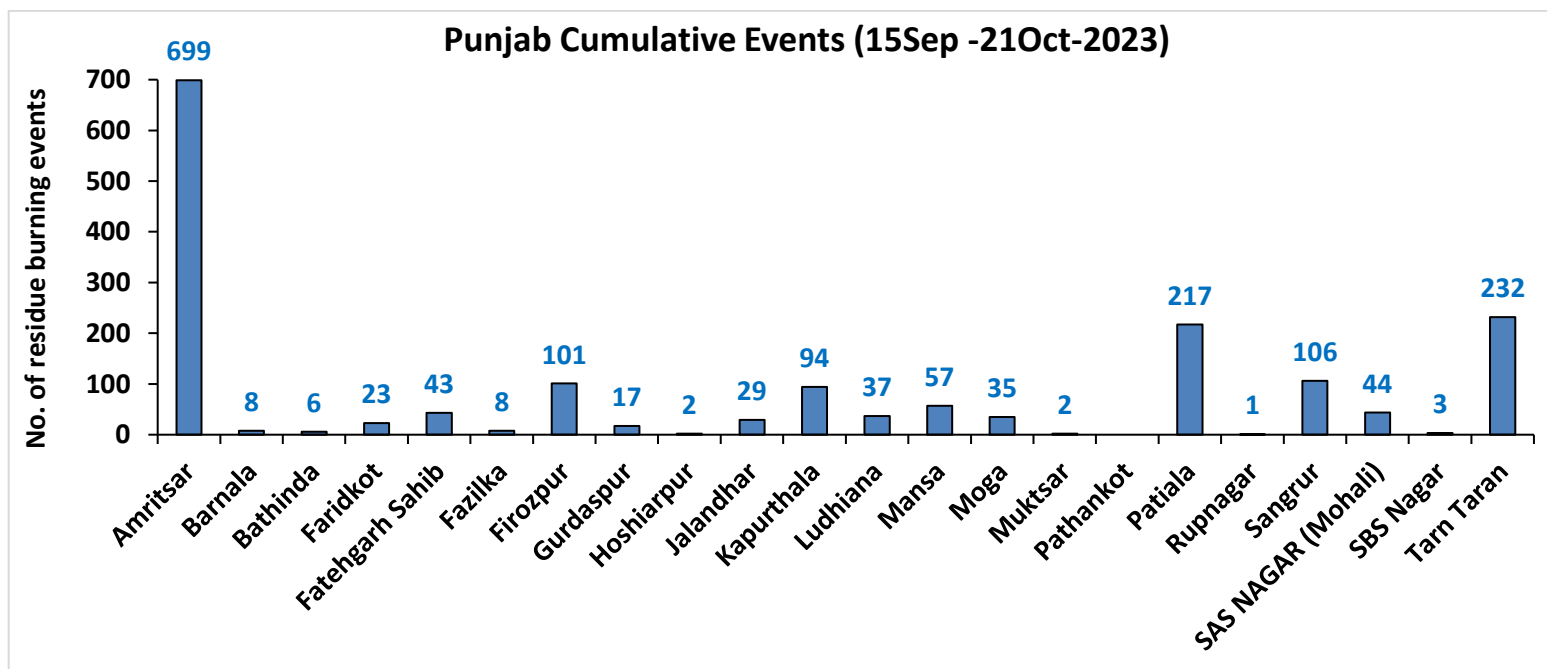
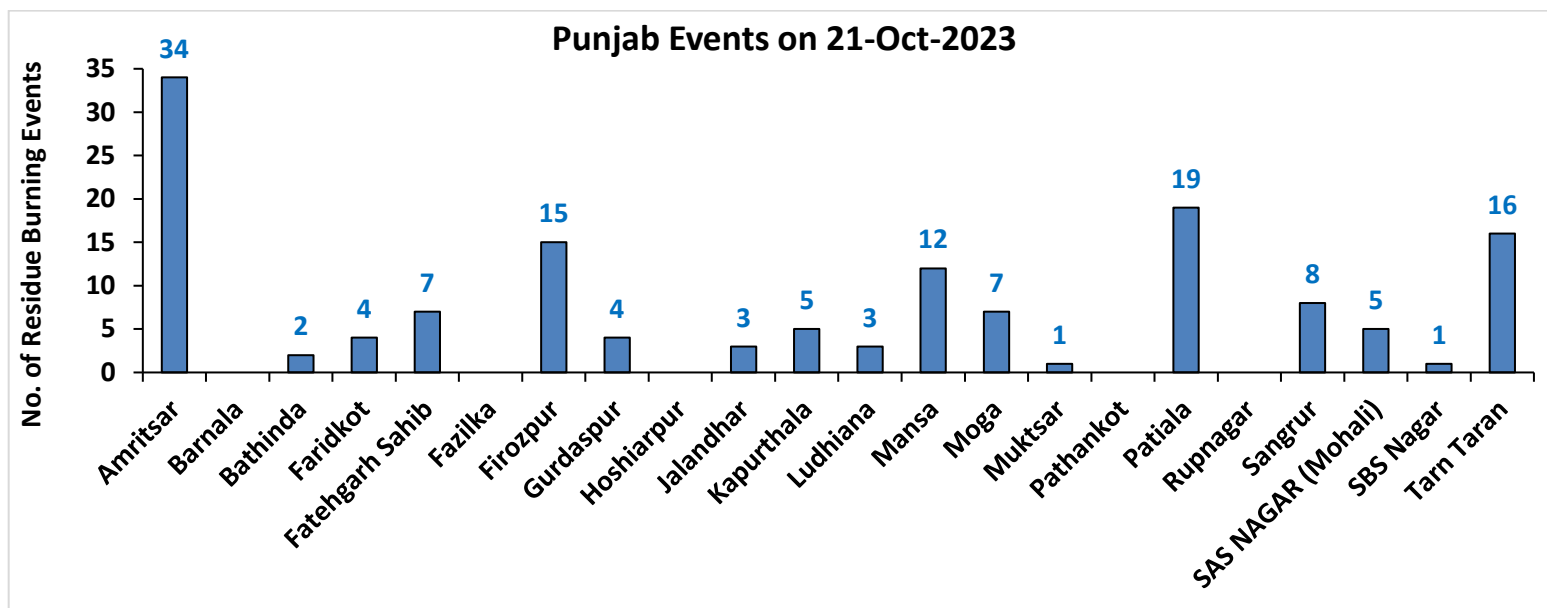
- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- >20



©ICAR-IARI

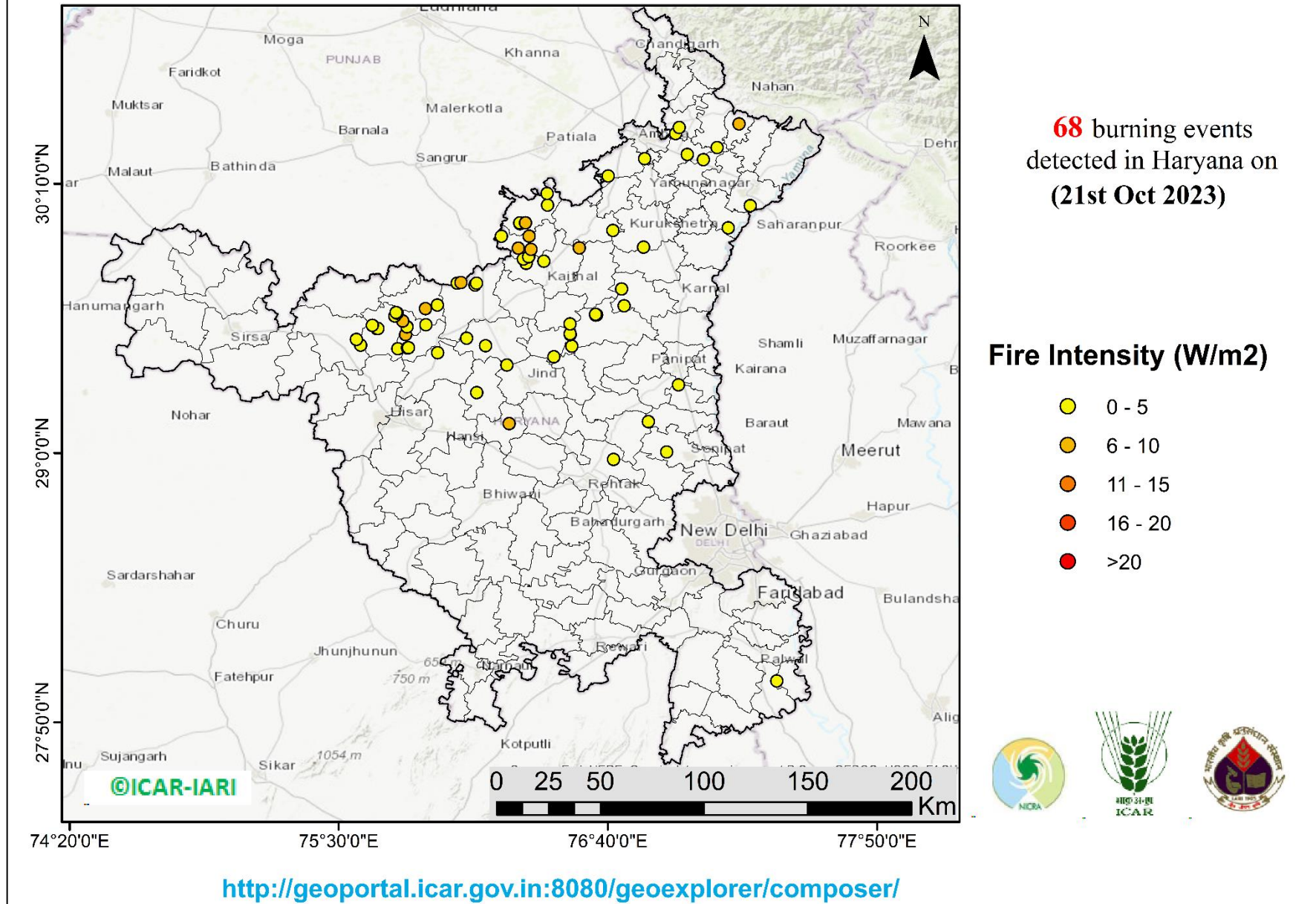
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Punjab (15Sep- 21Oct-2023)

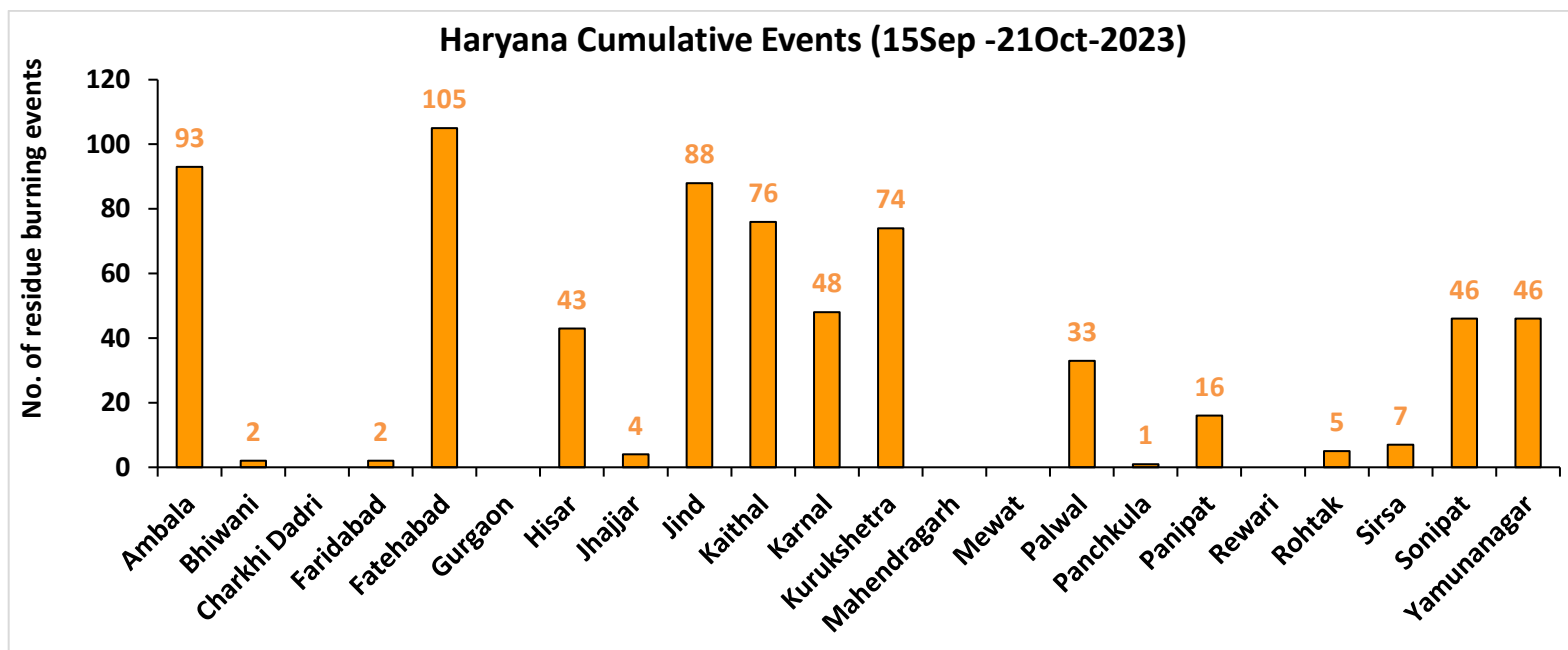
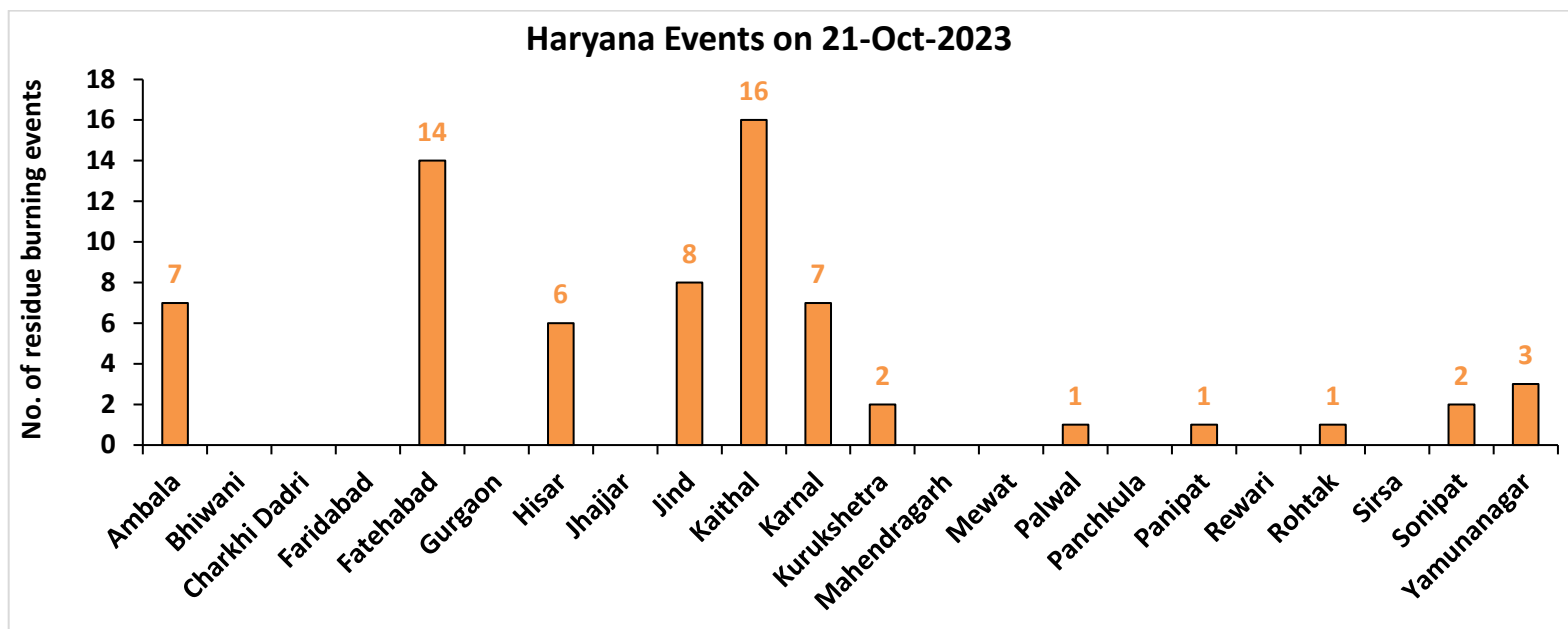


Haryana

RICE RESIDUE BURNING IN HARYANA

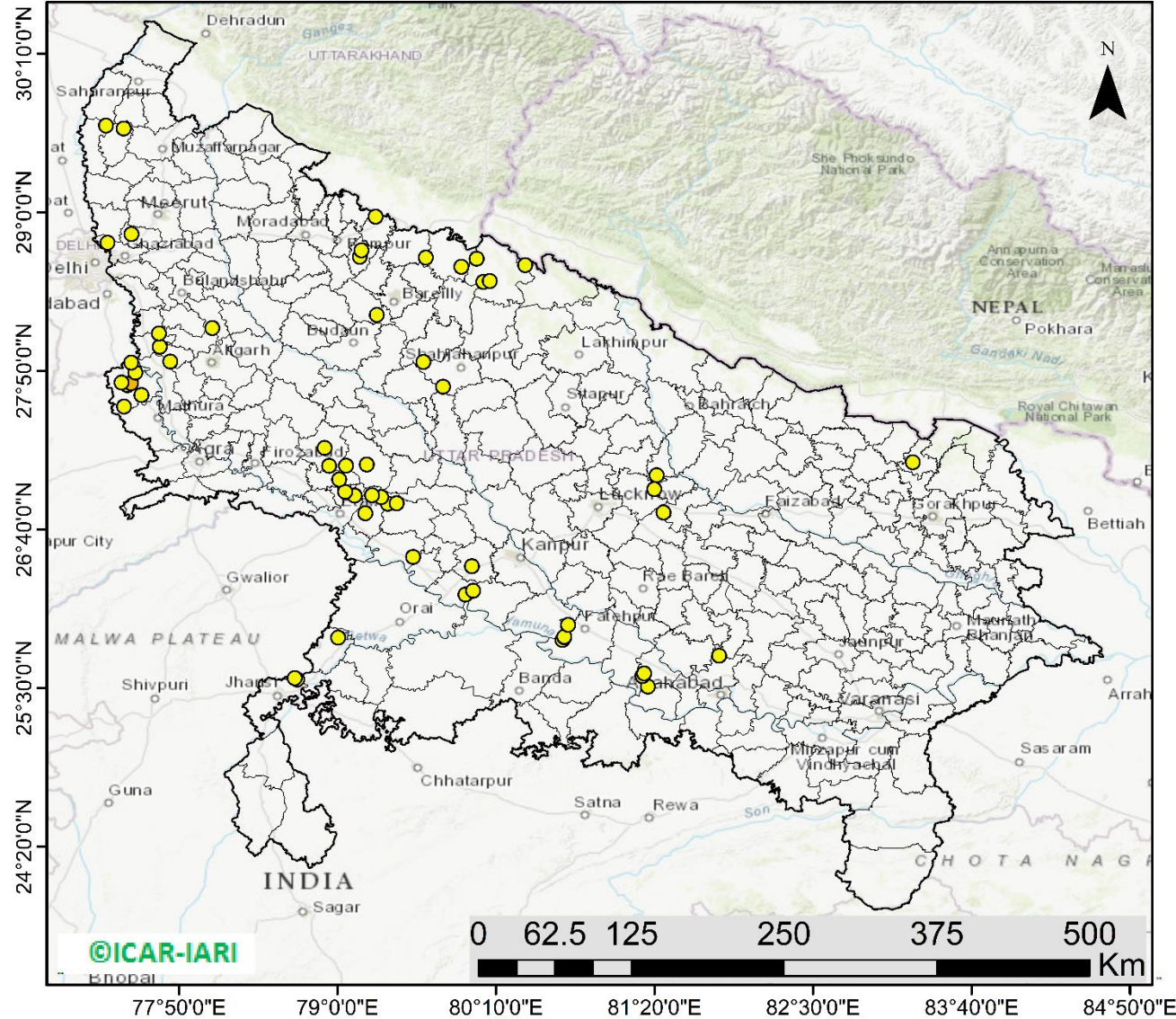


District-wise cumulative number of residues burning events in Haryana (15Sep-21Oct -2023)



Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



59 burning events detected in Uttar Pradesh on (21st Oct 2023)

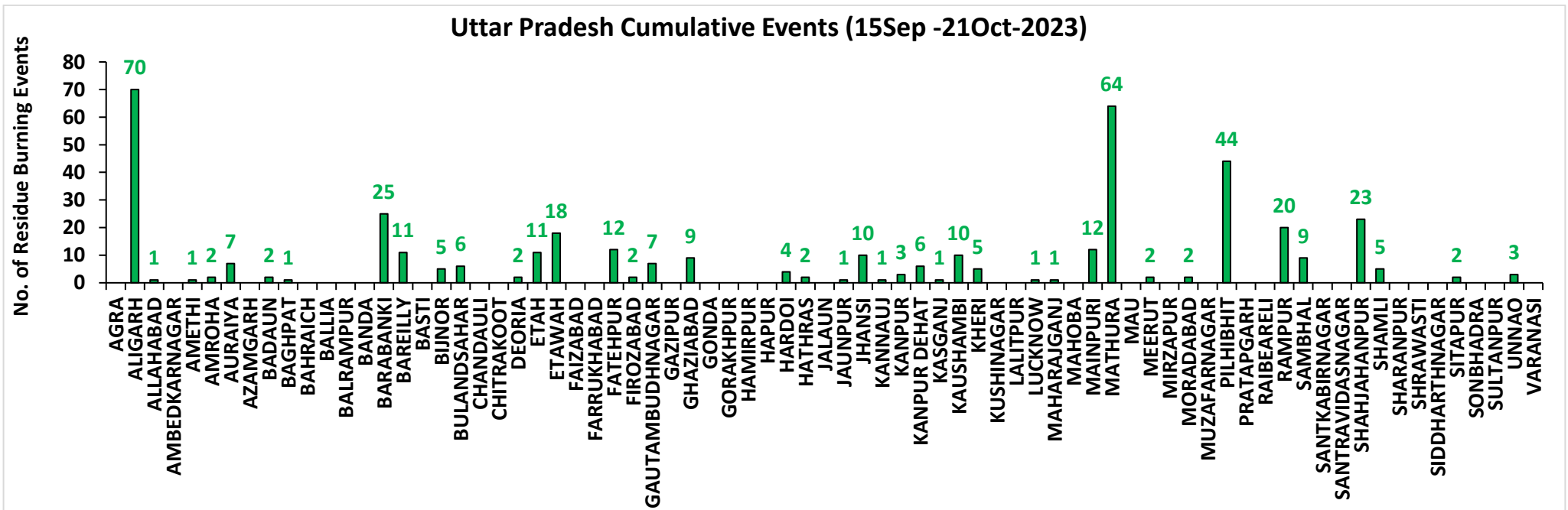
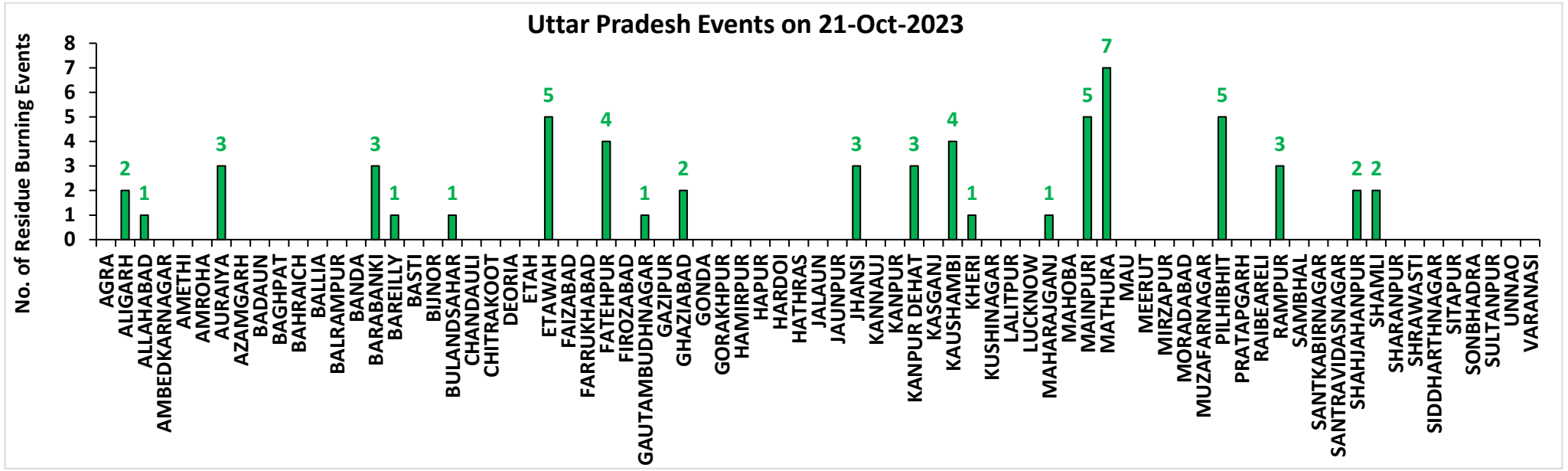
Fire Intensity (W/m2)

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



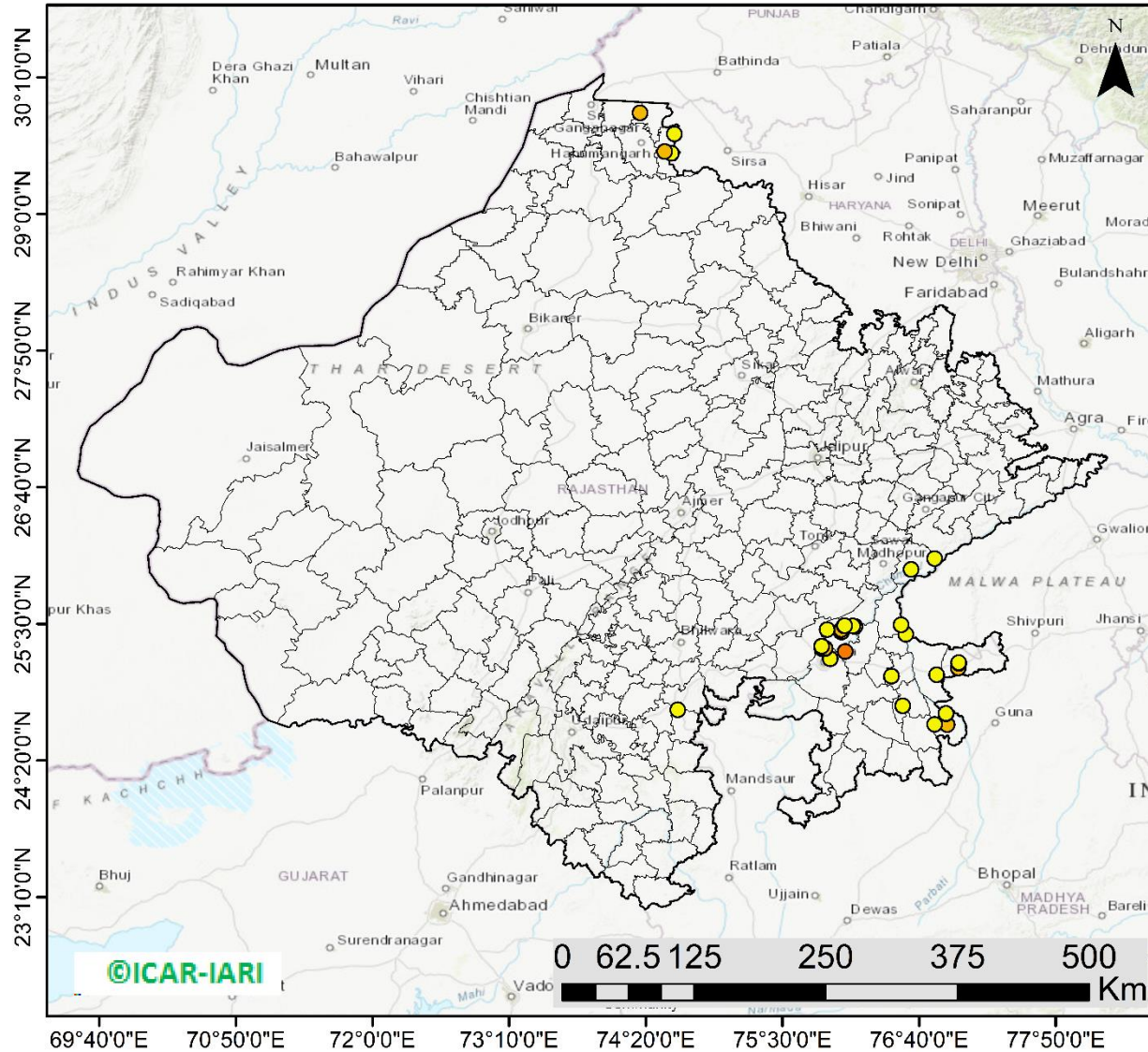
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Uttar Pradesh (15Sep-21Oct -2023)



Rajasthan

RICE RESIDUE BURNING IN RAJASTHAN



34 burning events
detected in Rajasthan on
(21st Oct 2023)

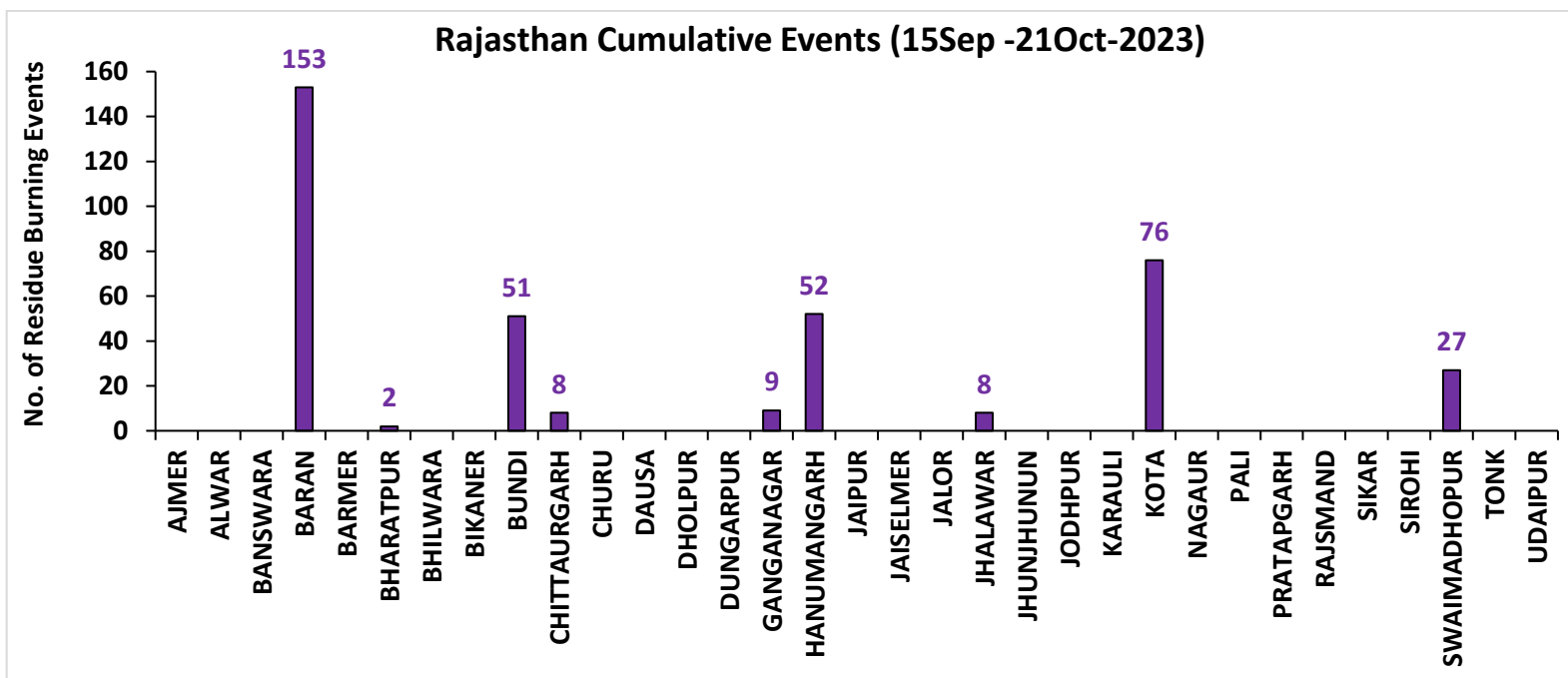
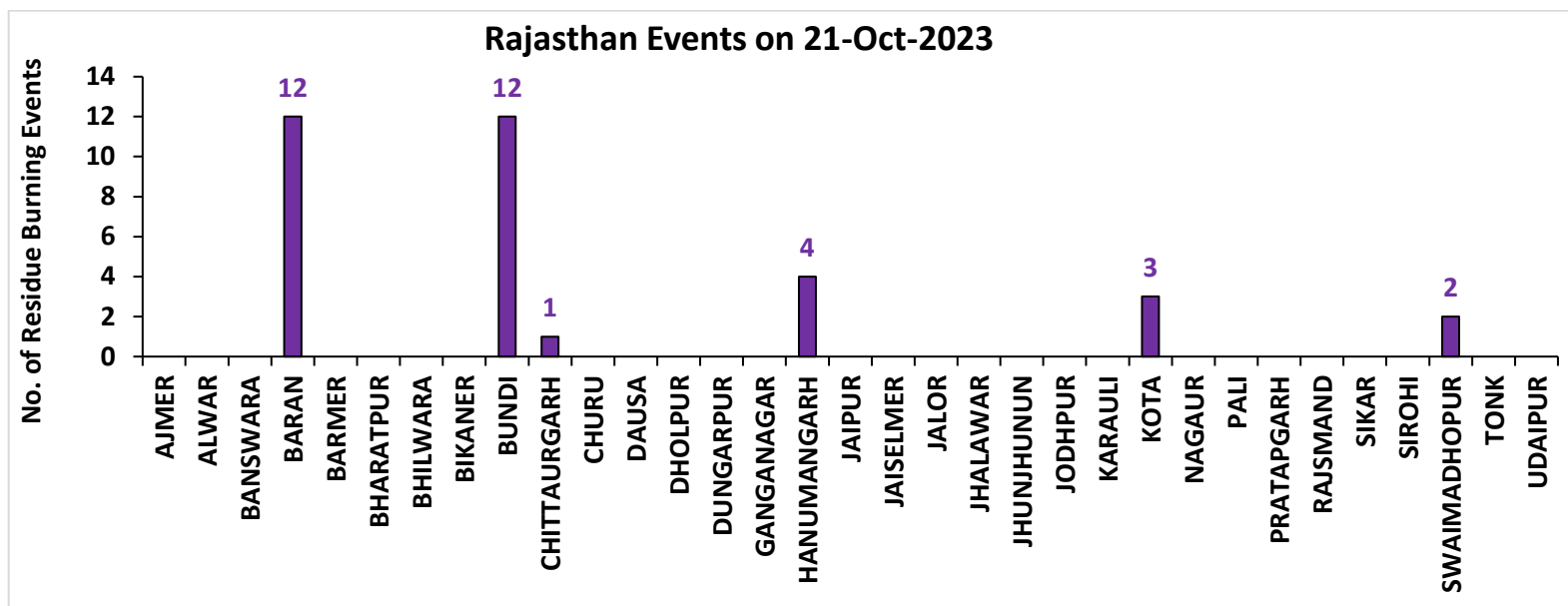
Fire Intensity (W/m²)

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



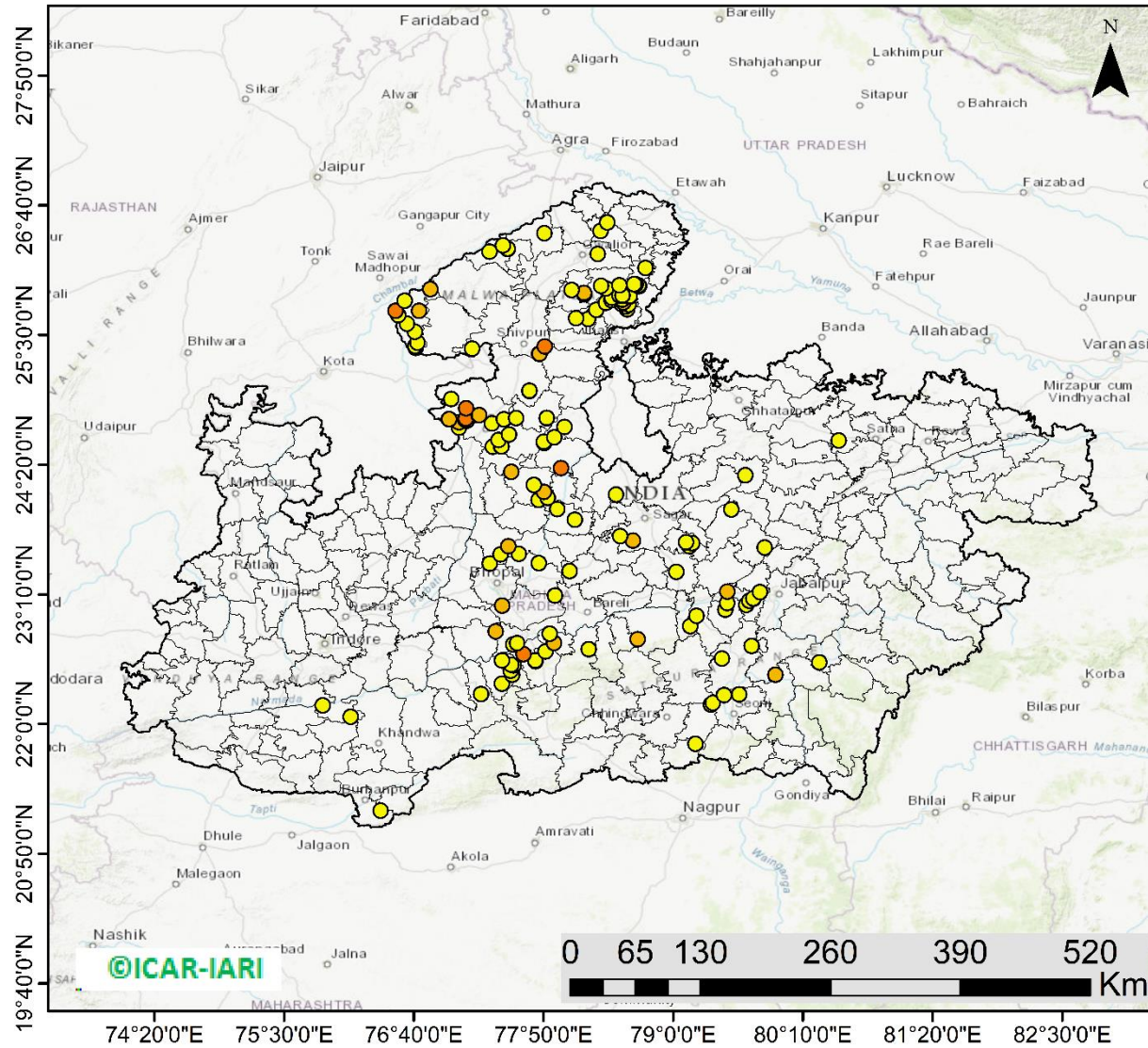
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Rajasthan (15Sep-21Oct -2023)



Madhya Pradesh

RICE RESIDUE BURNING IN MADHYA PRADESH



147 burning events detected in MP on (21st Oct 2023)

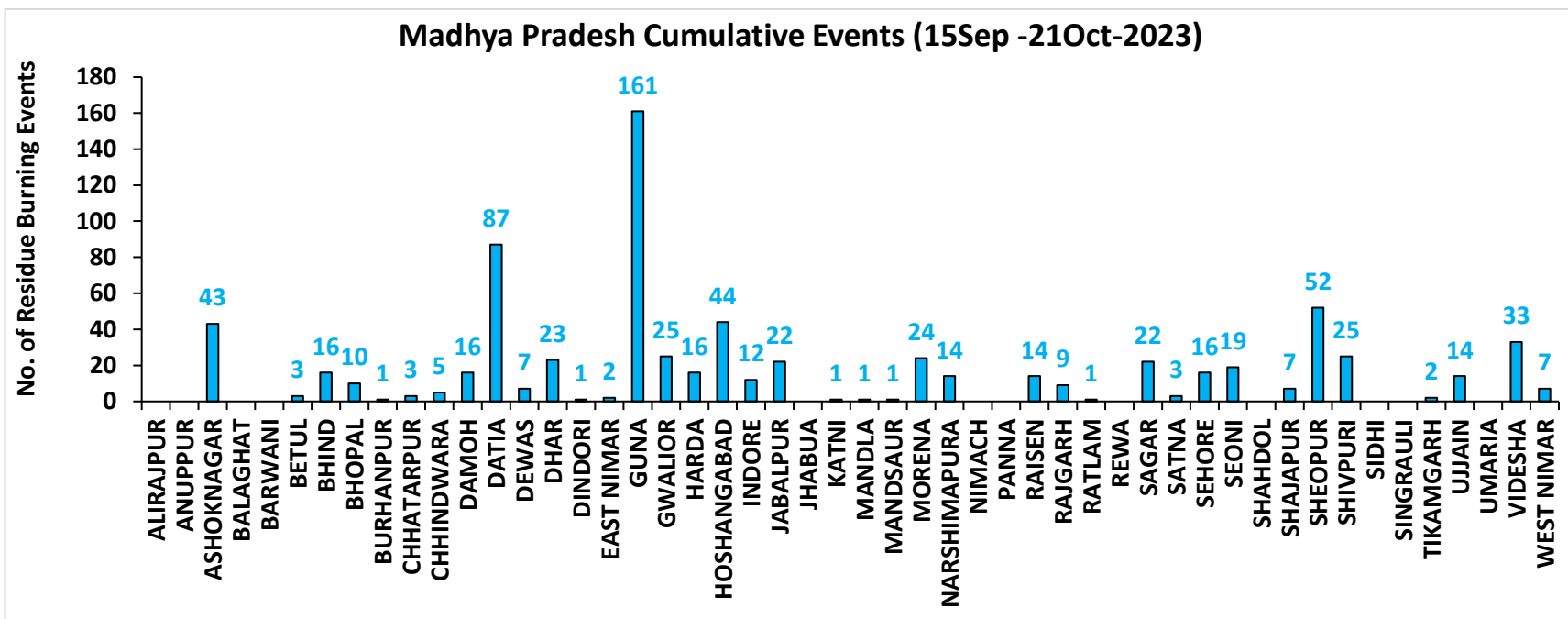
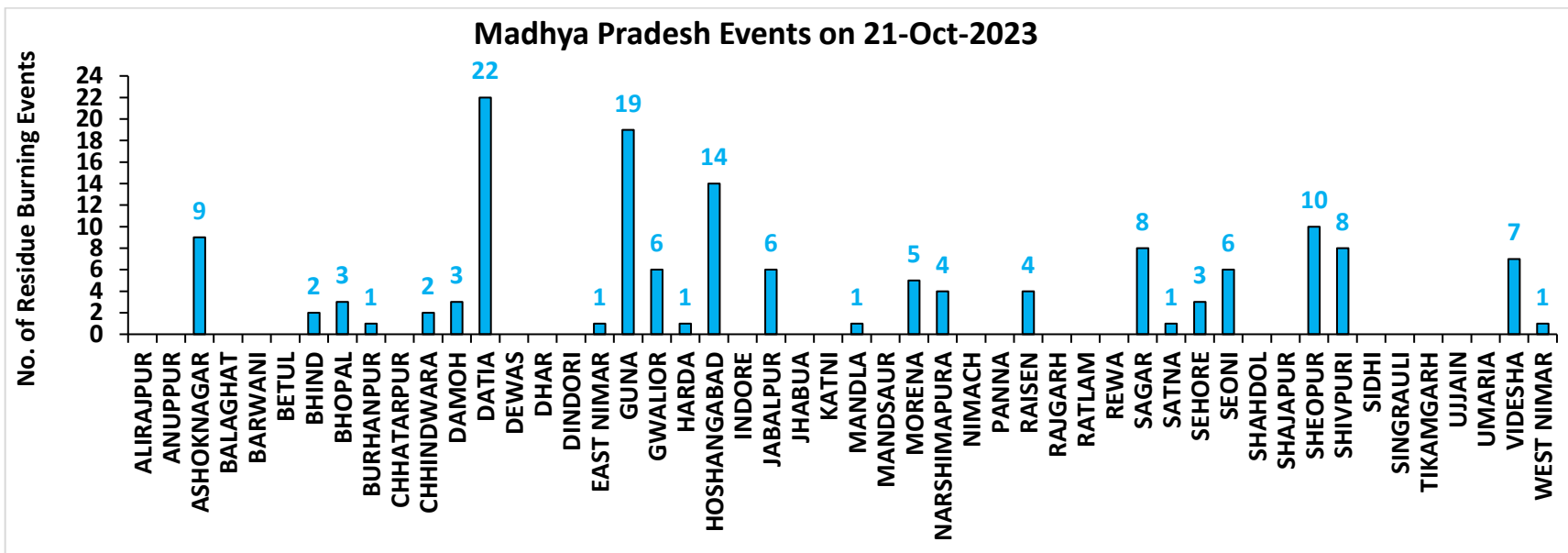
Fire Intensity (W/m²)

- 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-21Oct -2023)



District-wise cumulative number of residues burning events detected in 2020, 2021, 2022 and 2023
(Period: 15 September-21 October)

(a) Punjab

District	15 Sep-21 Oct			
	2020	2021	2022	2023
Amritsar	2185	804	834	699
Barnala	36	38	15	8
Bathinda	131	36	22	6
Faridkot	549	182	24	23
Fatehgarh Sahib	291	182	68	43
Fazilka	164	69	25	8
Firozpur	1278	253	142	101
Gurdaspur	816	287	270	17
Hoshiarpur	124	38	8	2
Jalandhar	234	174	137	29
Kapurthala	513	211	165	94
Ludhiana	257	266	100	37
Mansa	96	13	20	57
Moga	167	91	63	35
Muktsar	135	56	7	2
Pathankot	4	0	0	0
Patiala	889	375	194	217
Rupnagar	48	29	9	1
Sangrur	239	86	95	106
SAS NAGAR (Mohali)	58	40	16	44
SBS Nagar	18	21	2	3
Tarn Taran	2559	1076	898	232
Total	10791	4327	3114	1764

(b) Haryana

District	15 Sep-21 Oct			
	2020	2021	2022	2023
AMBALA	153	60	46	93
BHIWANI	0	0	0	2
CHARKHI DADRI	0	0	0	0
FARIDABAD	1	1	1	2
FATEHABAD	73	77	67	105
GURGAON	0	0	0	0
HISAR	9	2	11	43
JHAJJAR	1	0	0	4
JIND	38	55	66	88
KAITHAL	263	382	220	76
KARNAL	363	451	126	48
KURUKSHETRA	283	226	161	74
MAHENDRAGARH	0	0	0	0
MEWAT	0	0	0	0
PALWAL	21	25	4	33
PANCHKULA	0	0	0	1
PANIPAT	11	19	11	16
REWARI	0	0	0	0
ROHTAK	1	0	0	5
SIRSA	23	13	12	7
SONIPAT	13	6	7	46
YAMUNANAGAR	73	51	39	46
Total	1326	1368	771	689

(c) Uttar Pradesh

District	15 Sep-21 Oct													
	2020	2021	2022	2023	GAUTAMBUDHNAGAR	2	7	2	7	MUZAFARNAGAR	3	2	1	0
AGRA	2	0	0	0	GAZIPUR	0	0	0	0	PILHIBHIT	8	108	28	44
ALIGARH	41	21	6	70	GHAZIABAD	3	2	1	9	PRATAPGARH	1	0	0	0
ALLAHABAD	0	1	0	1	GONDA	0	0	0	0	RAIBEARELI	1	0	0	0
AMBEDKARNAGAR	0	0	0	0	GORAKHPUR	1	0	0	0	RAMPUR	37	50	7	20
AMETHI	0	1	4	1	HAMIRPUR	1	0	0	0	SAMBHAL	7	7	4	9
AMROHA	1	0	0	2	HAPUR	3	1	0	0	SANTKABIRNAGAR	0	0	0	0
AURAIYA	19	6	5	7	HARDOI	13	6	2	4	SANTRAVIDASNAGAR	0	0	0	0
AZAMGARH	0	0	0	0	HATHRAS	0	0	0	2	SHAHJAHANPUR	47	181	89	23
BADAUN	1	6	0	2	JALAUN	0	0	0	0	SHAMLI	20	11	5	5
BAGHPAT	3	1	1	1	JAUNPUR	0	0	0	1	SHARANPUR	35	20	2	0
BAHRAICH	9	2	4	0	JHANSI	12	6	0	10	SHRAWASTI	7	0	0	0
BALLIA	0	0	0	0	KANNAUJ	3	1	0	1	SIDDHARTHANAGAR	0	0	0	0
BALRAMPUR	1	1	1	0	KANPUR	4	7	10	3	SITAPUR	14	9	0	2
BANDA	0	0	0	0	KANPUR DEHAT	11	1	0	6	SONBHADRA	0	0	0	0
BARABANKI	15	20	2	25	KASGANJ	2	2	0	1	SULTANPUR	0	0	0	0
BAREILLY	19	15	2	11	KAUSHAMBI	9	3	0	10	UNNAO	5	1	0	3
BASTI	3	1	0	0	KHERI	46	54	12	5	VARANASI	1	0	0	0
BIJNOR	6	4	2	5	KUSHINAGAR	0	0	0	0	Total	554	631	204	423
BULANDSAHAR	16	2	2	6	LALITPUR	0	1	2	0					
CHANDAULI	0	0	0	0	LUCKNOW	2	0	0	1					
CHITRAKOOT	0	1	1	0	MAHARAJGANJ	0	0	0	1					
DEORIA	0	0	0	2	MAHOBA	3	0	0	0					
ETAH	11	6	0	11	MAINPURI	11	7	4	12					
ETAWAH	5	7	0	18	MATHURA	36	27	1	64					
FAIZABAD	1	0	0	0	MAU	0	0	0	0					
FARRUKHABAD	0	0	0	0	MEERUT	12	4	1	2					
FATEHPUR	19	6	1	12	MIRZAPUR	6	5	2	0					
FIROZABAD	11	4	0	2	MORADABAD	5	3	0	2					

(d) Delhi

District	15 Sep-21 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	0	0	0	0
Total	6	0	3	2

(e) Rajasthan

District	15 Sep-21 Oct			
	2020	2021	2022	2023
AJMER	1	0	0	0
ALWAR	1	0	0	0
BANSWARA	0	0	0	0
BARAN	93	0	7	153
BARMER	2	0	0	0
BHARATPUR	2	0	0	2
BHILWARA	2	0	0	0
BIKANER	1	0	0	0
BUNDI	12	0	22	51
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	1	9
HANUMANGARH	188	37	11	52
JAIPUR	2	0	0	0
JAISELMER	2	0	0	0
JALOR	0	0	0	0
JHALAWAR	1	0	1	8
JHUNJHUNUN	1	0	0	0
JODHPUR	1	0	0	0
KARAULI	1	0	0	0
KOTA	32	1	12	76
NAGAU	0	0	0	0
PALI	1	0	0	0
PRATAPGARH	4	0	0	0
RAJSMAND	0	0	0	0
SIKAR	0	0	0	0
SIROHI	1	0	0	0
SWAIMADHOPUR	9	0	3	27
TONK	2	0	0	0
UDAIPUR	0	0	0	0
Total	362	40	59	386

(f) Madhya Pradesh

District	15 Sep-21 Oct								
	2020	2021	2022	2023					
					PANNA	4	1	0	0
ALIRAJPUR	0	0	0	0	RAISEN	23	2	2	14
ANUPPUR	0	0	0	0	RAJGARH	7	1	3	9
ASHOKNAGAR	24	1	3	43	RATLAM	0	0	0	1
BALAGHAT	0	0	0	0	REWA	4	0	1	0
BARWANI	0	0	0	0	SAGAR	16	11	6	22
BETUL	2	0	0	3	SATNA	15	8	0	3
BHIND	11	1	0	16	SEHORE	12	3	13	16
BHOPAL	7	5	2	10	SEONI	40	33	5	19
BURHANPUR	0	0	0	1	SHAHDOL	0	0	0	0
CHHATARPUR	4	0	0	3	SHAJAPUR	5	0	0	7
CHHINDWARA	5	7	0	5	SHEOPUR	23	0	1	52
DAMOH	21	7	6	16	SHIVPURI	10	0	8	25
DATIA	89	8	2	87	SIDHI	0	0	0	0
DEWAS	3	0	0	7	SINGRAULI	0	0	0	0
DHAR	22	0	0	23	TIKAMGARH	1	0	0	2
DINDORI	0	0	0	1	UJJAIN	5	0	0	14
EAST NIMAR	3	1	3	2	UMARIA	0	0	0	0
GUNA	17	2	6	161	VIDESHA	65	8	7	33
GWALIOR	54	0	2	25	WEST NIMAR	7	0	0	7
HARDA	8	10	1	16	Total	642	136	83	762
HOSHANGABAD	79	9	4	44					
INDORE	2	0	0	12					
JABALPUR	14	4	3	22					
JHABUA	0	0	0	0					
KATNI	8	0	0	1					
MANDLA	1	1	0	1					
MANDSAUR	3	0	0	1					
MORENA	18	5	0	24					
NARSHIMAPURA	10	8	5	14					
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-21 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
Total	10791	4327	3114	1764	1326	1368	771	689	554	631	204	423

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
Total	6	0	3	2	362	40	59	386	642	136	83	762

Details of residue burning events in Punjab on 21-Oct-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	AMRITSAR	AJNALA	S-NPP	31.85703	74.78114	13:22:29	D	6.40
2	AMRITSAR	AJNALA	S-NPP	31.86832	74.93286	13:22:29	D	2.50
3	AMRITSAR	AJNALA	S-NPP	31.92102	74.82903	13:22:29	D	4.60
4	AMRITSAR	ATTARI	S-NPP	31.56138	74.71443	13:22:29	D	5.70
5	AMRITSAR	ATTARI	S-NPP	31.56620	74.84637	13:22:29	D	6.10
6	AMRITSAR	ATTARI	S-NPP	31.57756	74.83050	13:22:29	D	2.20
7	AMRITSAR	ATTARI	S-NPP	31.57999	74.80338	13:22:29	D	8.60
8	AMRITSAR	ATTARI	S-NPP	31.58463	74.66445	13:22:29	D	4.30
9	AMRITSAR	ATTARI	S-NPP	31.58532	74.79329	13:22:29	D	4.80
10	AMRITSAR	CHOGAWAN	S-NPP	31.64988	74.59650	13:22:29	D	1.50
11	AMRITSAR	CHOGAWAN	S-NPP	31.68187	74.53520	13:22:29	D	3.00
12	AMRITSAR	CHOGAWAN	S-NPP	31.77031	74.60091	13:22:29	D	3.10
13	AMRITSAR	CHOGAWAN	S-NPP	31.84157	74.64693	13:22:29	D	4.90
14	AMRITSAR	HARSHA CHHINA	S-NPP	31.74003	74.83813	13:22:29	D	2.60
15	AMRITSAR	HARSHA CHHINA	S-NPP	31.76944	74.69933	13:22:29	D	2.70
16	AMRITSAR	HARSHA CHHINA	S-NPP	31.78902	74.75255	13:22:29	D	4.40
17	AMRITSAR	JANDIALA GURU	S-NPP	31.54679	75.13040	13:22:29	D	0.90
18	AMRITSAR	JANDIALA GURU	S-NPP	31.57865	75.04907	13:22:29	D	3.50
19	AMRITSAR	JANDIALA GURU	S-NPP	31.57935	75.05328	13:22:29	D	3.50
20	AMRITSAR	MAJITHA	S-NPP	31.74849	74.97255	13:22:29	D	2.60
21	AMRITSAR	MAJITHA	S-NPP	31.76979	75.03770	13:22:29	D	2.40
22	AMRITSAR	MAJITHA	S-NPP	31.77079	74.98060	13:22:29	D	3.20
23	AMRITSAR	MAJITHA	S-NPP	31.77569	75.01013	13:22:29	D	1.80
24	AMRITSAR	MAJITHA	S-NPP	31.79749	75.05759	13:22:29	D	1.90
25	AMRITSAR	MAJITHA	S-NPP	31.80331	74.98280	13:22:29	D	4.60
26	AMRITSAR	RAYYA	S-NPP	31.54154	75.28758	13:22:29	D	3.40
27	AMRITSAR	RAYYA	S-NPP	31.62838	75.21696	13:22:29	D	2.80
28	AMRITSAR	RAYYA	S-NPP	31.65854	75.21017	13:22:29	D	3.60
29	AMRITSAR	TARSIKKA	S-NPP	31.61766	75.20124	13:22:29	D	2.40

30	AMRITSAR	TARSIKKA	S-NPP	31.61821	75.19759	13:22:29	D	2.40
31	AMRITSAR	TARSIKKA	S-NPP	31.67685	75.11050	13:22:29	D	1.80
32	AMRITSAR	TARSIKKA	S-NPP	31.67765	75.13641	13:22:29	D	2.50
33	AMRITSAR	VERKA	S-NPP	31.59598	74.91888	13:22:29	D	3.20
34	AMRITSAR	VERKA	S-NPP	31.59936	74.77233	13:22:29	D	2.20
35	BATHINDA	TALWANDI SABO	S-NPP	29.80716	75.15530	13:22:29	D	12.00
36	BATHINDA	TALWANDI SABO	S-NPP	29.84174	75.13004	13:22:29	D	2.50
37	FARIDKOT	FARIDKOT	S-NPP	30.72252	74.67445	13:22:29	D	4.50
38	FARIDKOT	FARIDKOT	S-NPP	30.75560	74.50495	13:22:29	D	5.00
39	FARIDKOT	FARIDKOT	S-NPP	30.79215	74.55102	13:22:29	D	2.20
40	FARIDKOT	FARIDKOT	S-NPP	30.79633	74.55458	13:22:29	D	8.10
41	FATEHGARH SAHIB	KHAMANON	S-NPP	30.74524	76.32240	13:22:29	D	5.40
42	FATEHGARH SAHIB	KHAMANON	S-NPP	30.84158	76.37713	13:22:29	D	1.30
43	FATEHGARH SAHIB	KHERA	S-NPP	30.56531	76.55771	13:22:29	D	1.30
44	FATEHGARH SAHIB	KHERA	S-NPP	30.56958	76.51959	13:22:29	D	1.30
45	FATEHGARH SAHIB	KHERA	S-NPP	30.57682	76.52222	13:22:29	D	2.40
46	FATEHGARH SAHIB	SIRHIND	S-NPP	30.50194	76.45467	13:22:29	D	3.60
47	FATEHGARH SAHIB	SIRHIND	S-NPP	30.60787	76.34991	13:22:29	D	3.70
48	FIROZPUR	FIROZPUR	S-NPP	30.80663	74.55221	13:22:29	D	4.70
49	FIROZPUR	FIROZPUR	S-NPP	30.82273	74.52127	13:22:29	D	2.60
50	FIROZPUR	FIROZPUR	S-NPP	30.91672	74.64088	13:22:29	D	5.50
51	FIROZPUR	FIROZPUR	S-NPP	30.94757	74.52991	13:22:29	D	1.80
52	FIROZPUR	FIROZPUR	S-NPP	30.96471	74.53672	13:22:29	D	10.80
53	FIROZPUR	FIROZPUR	S-NPP	31.01007	74.63456	13:22:29	D	2.60
54	FIROZPUR	FIROZPUR	S-NPP	31.03159	74.65656	13:22:29	D	1.80
55	FIROZPUR	GURUHAR SAHAI	S-NPP	30.66747	74.27184	13:22:29	D	3.90
56	FIROZPUR	MAKHU	S-NPP	31.08572	75.12186	13:22:29	D	2.90
57	FIROZPUR	MAMDOT	S-NPP	30.78847	74.48826	13:22:29	D	21.50
58	FIROZPUR	MAMDOT	S-NPP	30.79127	74.40082	13:22:29	D	3.40
59	FIROZPUR	MAMDOT	S-NPP	30.82823	74.46994	13:22:29	D	1.50
60	FIROZPUR	MAMDOT	S-NPP	30.87370	74.51524	13:22:29	D	2.70
61	FIROZPUR	ZIRA	S-NPP	31.03871	74.92635	13:22:29	D	2.40
62	FIROZPUR	ZIRA	S-NPP	31.04200	74.98725	13:22:29	D	7.30

63	GURDASPUR	DERA BABA NANAK	S-NPP	32.05036	74.95050	13:22:29	D	2.20
64	GURDASPUR	FATEHGARH CHURIAN	S-NPP	31.87394	74.96666	13:22:29	D	1.80
65	GURDASPUR	FATEHGARH CHURIAN	S-NPP	31.89385	74.91821	13:22:29	D	3.30
66	GURDASPUR	FATEHGARH CHURIAN	S-NPP	31.91417	74.97567	13:22:29	D	2.10
67	JALANDHAR	SHAHKOT	S-NPP	31.06652	75.28119	13:22:29	D	4.10
68	JALANDHAR	SHAHKOT	S-NPP	31.06988	75.28044	13:22:29	D	31.70
69	JALANDHAR	SHAHKOT	S-NPP	31.10765	75.29493	13:22:29	D	7.70
70	KAPURTHALA	NADALA	S-NPP	31.49812	75.51506	13:22:29	D	1.30
71	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.22363	75.14826	13:22:29	D	2.00
72	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.28291	75.14796	13:22:29	D	2.80
73	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.28339	75.14845	13:22:29	D	5.70
74	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.28360	75.15215	13:22:29	D	2.80
75	LUDHIANA	JAGRAON	S-NPP	30.79685	75.60518	13:22:29	D	2.00
76	LUDHIANA	MALOD	S-NPP	30.62295	76.00065	13:22:29	D	5.20
77	LUDHIANA	SUDHAR	S-NPP	30.75545	75.69084	13:22:29	D	1.80
78	MANSA	BHIKHI	S-NPP	30.13510	75.60829	13:22:29	D	21.60
79	MANSA	BUDHLADA	S-NPP	29.81026	75.63444	13:22:29	D	2.80
80	MANSA	BUDHLADA	S-NPP	29.81531	75.47462	13:22:29	D	4.00
81	MANSA	BUDHLADA	S-NPP	29.82379	75.73802	13:22:29	D	3.60
82	MANSA	BUDHLADA	S-NPP	29.82844	75.66037	13:22:29	D	2.50
83	MANSA	BUDHLADA	S-NPP	29.83846	75.48740	13:22:29	D	2.60
84	MANSA	BUDHLADA	S-NPP	29.86101	75.55981	13:22:29	D	24.50
85	MANSA	SARDULGARH	S-NPP	29.60849	75.24583	13:22:29	D	2.50
86	MANSA	SARDULGARH	S-NPP	29.65525	75.20923	13:22:29	D	2.00
87	MANSA	SARDULGARH	S-NPP	29.67004	75.29775	13:22:29	D	3.00
88	MANSA	SARDULGARH	S-NPP	29.67343	75.29700	13:22:29	D	4.70
89	MANSA	SARDULGARH	S-NPP	29.67668	75.27533	13:22:29	D	6.40
90	MOGA	BAGHA PURANA	S-NPP	30.57251	75.11471	13:22:29	D	3.20
91	MOGA	BAGHA PURANA	S-NPP	30.68522	75.18192	13:22:29	D	2.40
92	MOGA	KOT ISE KHAN AT DHARAMKOT	S-NPP	30.92256	75.36432	13:22:29	D	5.60
93	MOGA	KOT ISE KHAN AT DHARAMKOT	S-NPP	30.96078	75.34287	13:22:29	D	3.00
94	MOGA	MOGA-1	S-NPP	30.71804	75.25285	13:22:29	D	3.40
95	MOGA	MOGA-1	S-NPP	30.72038	75.18275	13:22:29	D	2.30

96	MOGA	MOGA-1	S-NPP	30.72375	75.18200	13:22:29	D	2.30
97	MUKTSAR	MALOUT	S-NPP	30.25289	74.37153	13:22:29	D	2.90
98	PATIALA	GHANAUR	S-NPP	30.34980	76.67608	13:22:29	D	1.60
99	PATIALA	NABHA	S-NPP	30.44876	76.18336	13:22:29	D	2.50
100	PATIALA	PATIALA	S-NPP	30.38714	76.39147	13:22:29	D	4.00
101	PATIALA	PATIALA	S-NPP	30.43606	76.51399	13:22:29	D	1.20
102	PATIALA	PATRAN	S-NPP	29.82200	76.13000	13:22:29	D	5.20
103	PATIALA	PATRAN	S-NPP	29.82860	76.14948	13:22:29	D	4.40
104	PATIALA	PATRAN	S-NPP	29.84394	76.13787	13:22:29	D	19.30
105	PATIALA	PATRAN	S-NPP	29.84566	76.21255	13:22:29	D	2.00
106	PATIALA	PATRAN	S-NPP	29.87690	76.21428	13:22:29	D	5.10
107	PATIALA	PATRAN	S-NPP	29.91988	76.11758	13:22:29	D	4.50
108	PATIALA	PATRAN	S-NPP	29.92079	76.11359	13:22:29	D	5.00
109	PATIALA	RAJPURA	S-NPP	30.57157	76.59772	13:22:29	D	3.50
110	PATIALA	RAJPURA	S-NPP	30.58006	76.60834	13:22:29	D	2.50
111	PATIALA	SANAUR	S-NPP	30.22031	76.28436	13:22:29	D	3.20
112	PATIALA	SANAUR	S-NPP	30.27590	76.48405	13:22:29	D	1.60
113	PATIALA	SANAUR	S-NPP	30.27795	76.47535	13:22:29	D	5.10
114	PATIALA	SANAUR	S-NPP	30.29308	76.48459	13:22:29	D	3.60
115	PATIALA	SANAUR	S-NPP	30.29639	76.48389	13:22:29	D	3.60
116	PATIALA	SHAMBU KALAN	S-NPP	30.51663	76.59219	13:22:29	D	3.40
117	SANGRUR	ANDANA	S-NPP	29.80093	76.00051	13:22:29	D	5.10
118	SANGRUR	BHAWANIGARH	S-NPP	30.25098	76.01191	13:22:29	D	8.60
119	SANGRUR	DHURI	S-NPP	30.38845	75.97865	13:22:29	D	3.50
120	SANGRUR	DIRBA	S-NPP	30.03165	75.95641	13:22:29	D	2.30
121	SANGRUR	DIRBA	S-NPP	30.09857	76.09306	13:22:29	D	3.90
122	SANGRUR	LEHRA GAGA	S-NPP	29.83783	75.86630	13:22:29	D	2.20
123	SANGRUR	SANGRUR	S-NPP	30.22519	75.74759	13:22:29	D	5.70
124	SANGRUR	SUNAM	S-NPP	30.06116	75.86160	13:22:29	D	11.10
125	SAS NAGAR (MOHALI)	DERABASSI	S-NPP	30.43283	76.81533	13:22:29	D	3.20
126	SAS NAGAR (MOHALI)	DERABASSI	S-NPP	30.53650	76.78599	13:22:29	D	3.40
127	SAS NAGAR (MOHALI)	DERABASSI	S-NPP	30.55178	76.77460	13:22:29	D	2.60
128	SAS NAGAR (MOHALI)	DERABASSI	S-NPP	30.58829	76.90337	13:22:29	D	2.00

129	SAS NAGAR (MOHALI)	DERABASSI	S-NPP	30.60479	76.89998	13:22:29	D	1.90
130	SBS NAGAR	SAROYA	S-NPP	31.10094	76.27712	13:22:29	D	1.80
131	TARN TARAN	BHIKHIWIND	S-NPP	31.34783	74.57318	13:22:29	D	3.60
132	TARN TARAN	CHOHLA SAHIB	S-NPP	31.29023	74.98088	13:22:29	D	2.10
133	TARN TARAN	CHOHLA SAHIB	S-NPP	31.35785	75.09247	13:22:29	D	3.20
134	TARN TARAN	GANDIWIND TATLA	S-NPP	31.44314	74.72287	13:22:29	D	5.00
135	TARN TARAN	GANDIWIND TATLA	S-NPP	31.51527	74.79514	13:22:29	D	3.40
136	TARN TARAN	GANDIWIND TATLA	S-NPP	31.53630	74.79474	13:22:29	D	3.90
137	TARN TARAN	GANDIWIND TATLA	S-NPP	31.53968	74.79396	13:22:29	D	2.70
138	TARN TARAN	KHADUR SAHIB	S-NPP	31.36806	75.11195	13:22:29	D	4.10
139	TARN TARAN	KHADUR SAHIB	S-NPP	31.50815	75.08688	13:22:29	D	3.30
140	TARN TARAN	PATTI	S-NPP	31.23229	74.92737	13:22:29	D	2.80
141	TARN TARAN	TARN TARAN	S-NPP	31.41354	74.85680	13:22:29	D	2.50
142	TARN TARAN	TARN TARAN	S-NPP	31.44239	74.81921	13:22:29	D	1.40
143	TARN TARAN	TARN TARAN	S-NPP	31.49350	75.02032	13:22:29	D	9.40
144	TARN TARAN	VALTOHA	S-NPP	31.17209	74.61180	13:22:29	D	1.40
145	TARN TARAN	VALTOHA	S-NPP	31.18258	74.63184	13:22:29	D	9.80
146	TARN TARAN	VALTOHA	S-NPP	31.18600	74.63106	13:22:29	D	3.30

Details of residue burning events in Haryana on 21-Oct-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	AMBALA	AMBALA-II	S-NPP	30.20003	76.66869	13:22:29	D	2.00
2	AMBALA	AMBALA-II	S-NPP	30.27475	76.82623	13:22:29	D	2.40
3	AMBALA	BARARA	S-NPP	30.27059	77.08116	13:22:29	D	2.00
4	AMBALA	BARARA	S-NPP	30.32305	77.14045	13:22:29	D	1.40
5	AMBALA	SAHA	S-NPP	30.29309	77.01127	13:22:29	D	2.90
6	AMBALA	SAHA	S-NPP	30.38375	76.96101	13:22:29	D	2.40
7	AMBALA	SHAHZADPUR	S-NPP	30.40992	76.97619	13:22:29	D	2.70
8	FATEHABAD	BHUNA	S-NPP	29.45178	75.75641	13:22:29	D	2.70
9	FATEHABAD	BHUNA	S-NPP	29.46692	75.59519	13:22:29	D	3.50
10	FATEHABAD	BHUNA	S-NPP	29.53875	75.66586	13:22:29	D	2.70
11	FATEHABAD	BHUNA	S-NPP	29.53943	75.66998	13:22:29	D	2.70
12	FATEHABAD	BHUNA	S-NPP	29.54644	75.79610	13:22:29	D	2.80
13	FATEHABAD	BHUNA	S-NPP	29.55284	75.64573	13:22:29	D	4.40
14	FATEHABAD	BHUNA	S-NPP	29.57126	75.77803	13:22:29	D	7.10
15	FATEHABAD	BHUNA	S-NPP	29.59340	75.74354	13:22:29	D	2.70
16	FATEHABAD	BHUNA	S-NPP	29.60550	75.75368	13:22:29	D	4.60
17	FATEHABAD	BHUNA	S-NPP	29.60818	75.74885	13:22:29	D	2.30
18	FATEHABAD	FATEHABAD	S-NPP	29.49185	75.57691	13:22:29	D	1.10
19	FATEHABAD	TOHANA	S-NPP	29.55516	75.87828	13:22:29	D	4.40
20	FATEHABAD	TOHANA	S-NPP	29.62560	75.87643	13:22:29	D	5.30
21	FATEHABAD	TOHANA	S-NPP	29.64094	75.92799	13:22:29	D	4.30
22	HISAR	BARWALA	S-NPP	29.43419	75.92915	13:22:29	D	2.70
23	HISAR	HANSI-II	S-NPP	29.12726	76.23914	13:22:29	D	5.30
24	HISAR	NARNAUND	S-NPP	29.26180	76.09856	13:22:29	D	2.40
25	HISAR	UKLANA	S-NPP	29.45521	75.79814	13:22:29	D	3.00
26	HISAR	UKLANA	S-NPP	29.45588	75.80223	13:22:29	D	5.00
27	HISAR	UKLANA	S-NPP	29.51297	75.78997	13:22:29	D	5.10
28	JIND	JIND	S-NPP	29.38077	76.22896	13:22:29	D	4.60
29	JIND	NARWANA	S-NPP	29.72752	76.09104	13:22:29	D	4.90
30	JIND	NARWANA	S-NPP	29.73551	76.09771	13:22:29	D	2.80
31	JIND	NARWANA	S-NPP	29.73571	76.01389	13:22:29	D	2.40
32	JIND	NARWANA	S-NPP	29.73835	76.03011	13:22:29	D	5.10

33	JIND	PILLUKHERA	S-NPP	29.41681	76.43289	13:22:29	D	3.50
34	JIND	UCHANA	S-NPP	29.46438	76.13673	13:22:29	D	3.90
35	JIND	UCHANA	S-NPP	29.49735	76.05468	13:22:29	D	1.40
36	KAITHAL	GUHLA	S-NPP	29.99321	76.28572	13:22:29	D	4.70
37	KAITHAL	GUHLA	S-NPP	29.99653	76.28503	13:22:29	D	4.70
38	KAITHAL	GUHLA	S-NPP	29.99706	76.30982	13:22:29	D	6.40
39	KAITHAL	GUHLA	S-NPP	30.07398	76.40558	13:22:29	D	2.10
40	KAITHAL	GUHLA	S-NPP	30.12416	76.40383	13:22:29	D	4.80
41	KAITHAL	KAITHAL	S-NPP	29.82168	76.31274	13:22:29	D	2.50
42	KAITHAL	KAITHAL	S-NPP	29.83048	76.38965	13:22:29	D	2.40
43	KAITHAL	KAITHAL	S-NPP	29.84982	76.32388	13:22:29	D	3.90
44	KAITHAL	PUNDRI	S-NPP	29.88823	76.54324	13:22:29	D	6.90
45	KAITHAL	RAJOUND	S-NPP	29.51617	76.50337	13:22:29	D	2.70
46	KAITHAL	RAJOUND	S-NPP	29.55932	76.50280	13:22:29	D	1.70
47	KAITHAL	SIWAN	S-NPP	29.84034	76.30052	13:22:29	D	2.90
48	KAITHAL	SIWAN	S-NPP	29.88228	76.33364	13:22:29	D	7.40
49	KAITHAL	SIWAN	S-NPP	29.88722	76.27864	13:22:29	D	6.10
50	KAITHAL	SIWAN	S-NPP	29.93912	76.20564	13:22:29	D	4.10
51	KAITHAL	SIWAN	S-NPP	29.93937	76.32578	13:22:29	D	5.60
52	KARNAL	ASSANDH	S-NPP	29.46243	76.51041	13:22:29	D	2.60
53	KARNAL	ASSANDH	S-NPP	29.51285	76.50406	13:22:29	D	2.30
54	KARNAL	ASSANDH	S-NPP	29.59757	76.61425	13:22:29	D	2.80
55	KARNAL	ASSANDH	S-NPP	29.59820	76.61823	13:22:29	D	2.80
56	KARNAL	ASSANDH	S-NPP	29.60089	76.61357	13:22:29	D	4.50
57	KARNAL	CHIRAO	S-NPP	29.63749	76.73740	13:22:29	D	2.00
58	KARNAL	CHIRAO	S-NPP	29.71039	76.72684	13:22:29	D	1.60
59	KURUKSHETRA	PEHOWA	S-NPP	29.96423	76.68896	02:13:12	N	2.30
60	KURUKSHETRA	THANESAR	S-NPP	29.89156	76.82161	13:22:29	D	2.70
61	PALWAL	HASSANPUR	S-NPP	28.01246	77.39934	13:22:29	D	1.40
62	PANIPAT	PANIPAT	S-NPP	29.29501	76.97331	13:22:29	D	3.20
63	ROHTAK	ROHTAK	S-NPP	28.97231	76.69154	13:22:29	D	3.80
64	SONIPAT	GOHANA	S-NPP	29.13561	76.84248	13:22:29	D	2.40
65	SONIPAT	SONIPAT	S-NPP	29.00439	76.92213	02:13:12	N	0.60
66	YAMUNANAGAR	JAGADHRI	S-NPP	30.07133	77.28448	13:22:29	D	3.70
67	YAMUNANAGAR	RADAUR	S-NPP	29.97545	77.18897	13:22:29	D	0.70
68	YAMUNANAGAR	SADHAURA	S-NPP	30.42564	77.23562	13:22:29	D	7.00

Details of residue burning events in Uttar Pradesh on 21-Oct-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	ALIGARH	KHAIR	S-NPP	27.90025	77.76981	13:22:29	D	3.30
2	ALIGARH	KHAIR	S-NPP	28.00995	77.69265	13:22:29	D	3.40
3	ALLAHABAD	SORAWN	S-NPP	25.73659	81.80965	13:22:29	D	2.90
4	AURAIYA	AURAIYA	S-NPP	26.46311	79.55708	13:22:29	D	1.90
5	AURAIYA	BIDHUNA	S-NPP	26.85502	79.37180	13:22:29	D	2.50
6	AURAIYA	BIDHUNA	S-NPP	26.85731	79.43639	13:22:29	D	0.90
7	BARABANKI	HAI DARGARH	S-NPP	26.78989	81.40007	13:22:29	D	1.10
8	BARABANKI	NAWABGANJ	S-NPP	26.96199	81.33236	13:22:29	D	3.00
9	BARABANKI	RAMNAGAR	S-NPP	27.06434	81.34978	13:22:29	D	1.60
10	BAREILLY	AONLA	S-NPP	28.24353	79.28979	13:22:29	D	2.60
11	BULANDSAHAR	SHIKARPUR	S-NPP	28.14670	78.07915	13:22:29	D	1.80
12	ETAWAH	BHARTHNA	S-NPP	26.78467	79.20558	13:22:29	D	2.40
13	ETAWAH	BHARTHNA	S-NPP	26.90296	79.32273	13:22:29	D	2.60
14	ETAWAH	BHARTHNA	S-NPP	26.91729	79.25543	13:22:29	D	1.20
15	ETAWAH	ETAWAH	S-NPP	26.91410	79.12708	13:22:29	D	4.40
16	ETAWAH	SAIFAI	S-NPP	26.94173	79.05775	13:22:29	D	2.30
17	FATEHPUR	FATEHPUR	S-NPP	25.85284	80.65623	13:22:29	D	1.60
18	FATEHPUR	FATEHPUR	S-NPP	25.87234	80.67004	13:22:29	D	2.60
19	FATEHPUR	FATEHPUR	S-NPP	25.87579	80.66947	13:22:29	D	2.40
20	FATEHPUR	FATEHPUR	S-NPP	25.96309	80.69839	13:22:29	D	2.60
21	GAUTAMBUDHNAGAR	JEVAR	S-NPP	28.10740	77.68653	13:22:29	D	1.50
22	GHAZIABAD	GHAZIABAD	S-NPP	28.77481	77.30806	02:13:12	N	0.40
23	GHAZIABAD	MODINAGAR	S-NPP	28.83808	77.48495	13:22:29	D	4.70
24	JHANSI	JHANSI	S-NPP	25.56101	78.70373	13:22:29	D	3.50
25	JHANSI	JHANSI	S-NPP	25.57195	78.68605	13:22:29	D	3.50
26	JHANSI	MOTH	S-NPP	25.87000	79.00522	13:22:29	D	1.60
27	KANPUR DEHAT	AKBARPUR	S-NPP	26.39492	79.98954	13:22:29	D	2.30
28	KANPUR DEHAT	BHOGANIPUR	S-NPP	26.18640	79.94225	13:22:29	D	2.10
29	KANPUR DEHAT	BHOGANIPUR	S-NPP	26.21512	79.99900	13:22:29	D	1.70
30	KAUSHAMBI	MANJHANPUR	S-NPP	25.50940	81.28539	13:22:29	D	3.20

31	KAUSHAMBI	SIRATHU	S-NPP	25.58656	81.24319	13:22:29	D	2.00
32	KAUSHAMBI	SIRATHU	S-NPP	25.58685	81.24642	13:22:29	D	2.70
33	KAUSHAMBI	SIRATHU	S-NPP	25.60642	81.25769	13:22:29	D	1.90
34	KHERI	PALIA KALAN	S-NPP	28.61017	80.38258	13:22:29	D	2.70
35	MAHARAJGANJ	PHARENDA	S-NPP	27.16021	83.23490	13:22:29	D	2.90
36	MAINPURI	BHOGAON	S-NPP	27.14287	79.21564	13:22:29	D	2.20
37	MAINPURI	KARHAL	S-NPP	27.03334	79.01330	13:22:29	D	2.90
38	MAINPURI	MAINPURI	S-NPP	27.13387	78.93884	13:22:29	D	3.60
39	MAINPURI	MAINPURI	S-NPP	27.13478	79.06345	13:22:29	D	2.40
40	MAINPURI	MAINPURI	S-NPP	27.26524	78.90565	02:13:12	N	0.80
41	MATHURA	CHHATA	S-NPP	27.65393	77.55761	13:22:29	D	1.20
42	MATHURA	CHHATA	S-NPP	27.72670	77.45535	13:22:29	D	1.90
43	MATHURA	CHHATA	S-NPP	27.74083	77.48065	13:22:29	D	6.90
44	MATHURA	CHHATA	S-NPP	27.74630	77.41141	13:22:29	D	3.40
45	MATHURA	CHHATA	S-NPP	27.82001	77.51315	13:22:29	D	1.40
46	MATHURA	CHHATA	S-NPP	27.89334	77.48296	13:22:29	D	3.80
47	MATHURA	MATHURA	S-NPP	27.56986	77.42981	13:22:29	D	4.40
48	PILHIBHIT	PILHIBHIT	S-NPP	28.59726	79.91242	13:22:29	D	3.00
49	PILHIBHIT	PILHIBHIT	S-NPP	28.66616	79.65128	13:22:29	D	1.30
50	PILHIBHIT	PURANPUR	S-NPP	28.48683	80.07462	13:22:29	D	2.10
51	PILHIBHIT	PURANPUR	S-NPP	28.49314	80.12177	13:22:29	D	2.10
52	PILHIBHIT	PURANPUR	S-NPP	28.65689	80.02518	13:22:29	D	4.80
53	RAMPUR	BILASPUR	S-NPP	28.96624	79.28168	13:22:29	D	2.60
54	RAMPUR	MILAK	S-NPP	28.67183	79.16510	13:22:29	D	1.60
55	RAMPUR	MILAK	S-NPP	28.71849	79.17756	13:22:29	D	2.60
56	SHAHJAHANPUR	SHAHJAHANPUR	S-NPP	27.71569	79.77708	13:22:29	D	1.20
57	SHAHJAHANPUR	TILHAR	S-NPP	27.89760	79.63344	13:22:29	D	2.30
58	SHAMLI	SHAMLI	S-NPP	29.61521	77.42709	13:22:29	D	1.20
59	SHAMLI	SHAMLI	S-NPP	29.63623	77.29674	13:22:29	D	3.00

Details of residue burning events in Rajasthan on 21-Oct-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	BARAN	ATRU	S-NPP	24.79873	76.52737	13:22:29	D	2.30
2	BARAN	BARAN	S-NPP	25.05296	76.43191	13:22:29	D	2.40
3	BARAN	CHHABRA	S-NPP	24.63774	76.90742	13:22:29	D	5.10
4	BARAN	CHHABRA	S-NPP	24.64092	76.79967	13:22:29	D	3.40
5	BARAN	CHHABRA	S-NPP	24.73098	76.89766	13:22:29	D	4.40
6	BARAN	CHHABRA	S-NPP	24.73436	76.89699	13:22:29	D	3.30
7	BARAN	KISHANGUNJ	S-NPP	25.06409	76.81718	13:22:29	D	1.90
8	BARAN	MANGROL	S-NPP	25.40990	76.55425	13:22:29	D	4.20
9	BARAN	SHAHBAD	S-NPP	25.12228	77.00236	13:22:29	D	5.60
10	BARAN	SHAHBAD	S-NPP	25.16119	77.00693	13:22:29	D	4.30
11	BARAN	SHAHBAD	S-NPP	25.16455	77.00626	13:22:29	D	4.30
12	BARAN	SHAHBAD	S-NPP	25.16791	77.00560	13:22:29	D	3.80
13	BUNDI	BUNDI	S-NPP	25.28692	75.83904	13:22:29	D	10.00
14	BUNDI	BUNDI	S-NPP	25.28776	75.86526	13:22:29	D	6.70
15	BUNDI	BUNDI	S-NPP	25.29124	75.86454	13:22:29	D	7.30
16	BUNDI	BUNDI	S-NPP	25.30837	75.83537	13:22:29	D	3.30
17	BUNDI	BUNDI	S-NPP	25.45061	75.88216	13:22:29	D	2.50
18	BUNDI	KESHORAIPATAN	S-NPP	25.43010	76.00240	13:22:29	D	2.80
19	BUNDI	KESHORAIPATAN	S-NPP	25.43081	76.00660	13:22:29	D	2.80
20	BUNDI	KESHORAIPATAN	S-NPP	25.45003	76.00415	13:22:29	D	5.70
21	BUNDI	KESHORAIPATAN	S-NPP	25.47683	76.11942	13:22:29	D	2.00
22	BUNDI	KESHORAIPATAN	S-NPP	25.48088	76.10140	13:22:29	D	2.10
23	BUNDI	KESHORAIPATAN	S-NPP	25.48262	76.02776	13:22:29	D	2.60
24	BUNDI	KESHORAIPATAN	S-NPP	25.48333	76.03194	13:22:29	D	2.60
25	CHITTAURGARH	CHITTAURGARH	S-NPP	24.76535	74.60744	02:13:12	N	1.60
26	HANUMANGARH	SANGHRIYA	S-NPP	29.86348	74.28446	13:22:29	D	5.30
27	HANUMANGARH	TIBI	S-NPP	29.51851	74.55328	13:22:29	D	3.10
28	HANUMANGARH	TIBI	S-NPP	29.53366	74.49444	13:22:29	D	9.30
29	HANUMANGARH	TIBI	S-NPP	29.68279	74.57806	13:22:29	D	2.70
30	KOTA	DIGOD	S-NPP	25.26301	76.03608	13:22:29	D	12.50
31	KOTA	LADPURA	S-NPP	25.20048	75.90876	13:22:29	D	4.90
32	KOTA	PIPALDA	S-NPP	25.49048	76.51333	13:22:29	D	3.00
33	SWAIMADHOPUR	KHANDAR	S-NPP	25.96343	76.59930	13:22:29	D	4.40
34	SWAIMADHOPUR	KHANDAR	S-NPP	26.05623	76.80014	13:22:29	D	2.50

Details of residue burning events in Madhya Pradesh on 21-Oct-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	ASHOKNAGAR	ASHOKNAGAR	S-NPP	24.52811	77.83855	13:22:29	D	5.00
2	ASHOKNAGAR	ASHOKNAGAR	S-NPP	24.53808	77.83666	13:22:29	D	1.80
3	ASHOKNAGAR	ASHOKNAGAR	S-NPP	24.60361	77.52335	13:22:29	D	2.40
4	ASHOKNAGAR	ASHOKNAGAR	S-NPP	24.75163	77.58719	13:22:29	D	2.90
5	ASHOKNAGAR	CHANDERI	S-NPP	24.57906	77.93104	13:22:29	D	4.20
6	ASHOKNAGAR	CHANDERI	S-NPP	24.67208	78.02335	13:22:29	D	2.20
7	ASHOKNAGAR	ISAGARH	S-NPP	24.74887	77.86377	13:22:29	D	5.00
8	ASHOKNAGAR	ISAGARH	S-NPP	24.75219	77.86314	13:22:29	D	5.00
9	ASHOKNAGAR	MUNGAOLI	S-NPP	24.30108	77.99122	13:22:29	D	10.10
10	BHIND	GOHAD	S-NPP	26.43457	78.34707	13:22:29	D	1.70
11	BHIND	GOHAD	S-NPP	26.51135	78.40791	13:22:29	D	2.70
12	BHOPAL	BERASIYA	S-NPP	23.52550	77.44725	13:22:29	D	3.30
13	BHOPAL	BERASIYA	S-NPP	23.59920	77.51738	13:22:29	D	5.30
14	BHOPAL	HUZUR	S-NPP	23.44262	77.35018	13:22:29	D	1.70
15	BURHANPUR	BURHANPUR	S-NPP	21.21944	76.36873	13:22:29	D	2.00
16	CHHINDWARA	BICHHUA	S-NPP	21.82090	79.20061	13:22:29	D	2.30
17	CHHINDWARA	CHAURAI	S-NPP	22.17390	79.34034	13:22:29	D	4.50
18	DAMOH	DAMOH	S-NPP	23.92927	79.52399	13:22:29	D	2.30
19	DAMOH	HATTA	S-NPP	24.23780	79.65002	13:22:29	D	2.60
20	DAMOH	JABERA	S-NPP	23.58738	79.82397	13:22:29	D	2.00
21	DATIA	DATIA	S-NPP	25.72473	78.30889	13:22:29	D	3.40
22	DATIA	DATIA	S-NPP	25.73016	78.58648	13:22:29	D	1.10
23	DATIA	DATIA	S-NPP	25.75471	78.57395	13:22:29	D	4.20
24	DATIA	DATIA	S-NPP	25.77197	78.59824	13:22:29	D	3.30
25	DATIA	DATIA	S-NPP	25.77931	78.53413	13:22:29	D	3.10
26	DATIA	DATIA	S-NPP	25.78886	78.39506	13:22:29	D	2.20
27	DATIA	DATIA	S-NPP	25.79211	78.55138	13:22:29	D	5.30
28	DATIA	SEONDHA	S-NPP	25.81350	78.44543	13:22:29	D	2.90
29	DATIA	SEONDHA	S-NPP	25.81801	78.54269	13:22:29	D	3.10

30	DATIA	SEONDHA	S-NPP	25.83450	78.44939	13:22:29	D	4.70
31	DATIA	SEONDHA	S-NPP	25.84491	78.60841	13:22:29	D	2.60
32	DATIA	SEONDHA	S-NPP	25.84822	78.60780	13:22:29	D	2.60
33	DATIA	SEONDHA	S-NPP	25.85224	78.54424	13:22:29	D	5.70
34	DATIA	SEONDHA	S-NPP	25.85463	78.51701	13:22:29	D	2.60
35	DATIA	SEONDHA	S-NPP	25.85534	78.54435	13:22:29	D	2.40
36	DATIA	SEONDHA	S-NPP	25.93843	78.69016	13:22:29	D	3.70
37	DATIA	SEONDHA	S-NPP	25.93901	78.69398	13:22:29	D	5.40
38	DATIA	SEONDHA	S-NPP	25.94506	78.68893	13:22:29	D	3.40
39	DATIA	SEONDHA	S-NPP	25.94625	78.51582	13:22:29	D	4.30
40	DATIA	SEONDHA	S-NPP	25.95487	78.66360	13:22:29	D	2.20
41	DATIA	SEONDHA	S-NPP	25.95588	78.64767	13:22:29	D	4.20
42	DATIA	SEONDHA	S-NPP	26.10262	78.75069	13:22:29	D	2.30
43	EAST NIMAR	KHANDWA	S-NPP	22.06431	76.09895	13:22:29	D	3.70
44	GUNA	ARON	S-NPP	24.26791	77.54362	13:22:29	D	6.10
45	GUNA	ARON	S-NPP	24.49580	77.45229	13:22:29	D	3.00
46	GUNA	ARON	S-NPP	24.49643	77.45617	13:22:29	D	3.00
47	GUNA	GUNA	S-NPP	24.49392	77.37666	13:22:29	D	4.40
48	GUNA	GUNA	S-NPP	24.55412	77.42912	13:22:29	D	3.30
49	GUNA	GUNA	S-NPP	24.66511	77.07378	13:22:29	D	1.20
50	GUNA	GUNA	S-NPP	24.70284	77.36932	13:22:29	D	3.30
51	GUNA	GUNA	S-NPP	24.71354	77.07249	13:22:29	D	5.90
52	GUNA	GUNA	S-NPP	24.72840	77.14268	13:22:29	D	2.80
53	GUNA	GUNA	S-NPP	24.73994	77.12827	13:22:29	D	7.70
54	GUNA	GUNA	S-NPP	24.74100	77.47785	13:22:29	D	2.20
55	GUNA	GUNA	S-NPP	24.74116	76.98550	13:22:29	D	7.60
56	GUNA	GUNA	S-NPP	24.74137	76.98167	13:22:29	D	4.70
57	GUNA	GUNA	S-NPP	24.74202	76.98563	13:22:29	D	9.20
58	GUNA	GUNA	S-NPP	24.74793	77.13482	13:22:29	D	14.20
59	GUNA	GUNA	S-NPP	24.77693	77.25050	13:22:29	D	4.60
60	GUNA	GUNA	S-NPP	24.77756	77.25441	13:22:29	D	7.30
61	GUNA	GUNA	S-NPP	24.83976	77.13751	13:22:29	D	11.30
62	GUNA	GUNA	S-NPP	24.92283	77.00359	13:22:29	D	2.10
63	GWALIOR	BHITARWAR	S-NPP	25.90404	78.08739	13:22:29	D	3.20

64	GWALIOR	DABRA	S-NPP	25.86442	78.20108	13:22:29	D	16.70
65	GWALIOR	DABRA	S-NPP	25.87765	78.19860	13:22:29	D	5.90
66	GWALIOR	DABRA	S-NPP	25.91783	78.39538	13:22:29	D	1.80
67	GWALIOR	DABRA	S-NPP	25.94104	78.35162	13:22:29	D	1.70
68	GWALIOR	GWALIOR	S-NPP	26.22788	78.32178	13:22:29	D	2.10
69	HARDA	TIMURNI	S-NPP	22.26796	77.27234	13:22:29	D	2.10
70	HOSHANGABAD	BABAI	S-NPP	22.72855	77.92904	13:22:29	D	5.30
71	HOSHANGABAD	BABAI	S-NPP	22.81189	77.88989	13:22:29	D	1.80
72	HOSHANGABAD	BANKHERI	S-NPP	22.76252	78.68026	13:22:29	D	5.50
73	HOSHANGABAD	HOSHANGABAD	S-NPP	22.62743	77.65441	13:22:29	D	12.80
74	HOSHANGABAD	ITARSI	S-NPP	22.56421	77.76190	13:22:29	D	4.40
75	HOSHANGABAD	ITARSI	S-NPP	22.57093	77.76064	13:22:29	D	2.40
76	HOSHANGABAD	ITARSI	S-NPP	22.65239	77.85235	13:22:29	D	3.60
77	HOSHANGABAD	SEONI MALWA	S-NPP	22.36123	77.45914	13:22:29	D	2.50
78	HOSHANGABAD	SEONI MALWA	S-NPP	22.44272	77.55267	13:22:29	D	3.20
79	HOSHANGABAD	SEONI MALWA	S-NPP	22.47937	77.53794	13:22:29	D	2.70
80	HOSHANGABAD	SEONI MALWA	S-NPP	22.52562	77.56541	13:22:29	D	2.50
81	HOSHANGABAD	SEONI MALWA	S-NPP	22.53260	77.54399	13:22:29	D	4.90
82	HOSHANGABAD	SEONI MALWA	S-NPP	22.57147	77.46014	13:22:29	D	3.70
83	HOSHANGABAD	SOHAGPUR	S-NPP	22.67307	78.24050	13:22:29	D	1.60
84	JABALPUR	SAHPURA	S-NPP	23.07016	79.65780	13:22:29	D	0.90
85	JABALPUR	SAHPURA	S-NPP	23.10742	79.68643	13:22:29	D	2.30
86	JABALPUR	SAHPURA	S-NPP	23.12625	79.72175	13:22:29	D	2.40
87	JABALPUR	SAHPURA	S-NPP	23.12957	79.72118	13:22:29	D	3.80
88	JABALPUR	SAHPURA	S-NPP	23.18608	79.78102	13:22:29	D	4.80
89	JABALPUR	SAHPURA	S-NPP	23.18968	79.48717	13:22:29	D	5.60
90	MANDLA	MANDLA	S-NPP	22.55389	80.31467	13:22:29	D	2.00
91	MORENA	JORA	S-NPP	26.41471	77.84157	13:22:29	D	2.60
92	MORENA	KAILARAS	S-NPP	26.27169	77.51180	13:22:29	D	3.40
93	MORENA	KAILARAS	S-NPP	26.27501	77.51115	13:22:29	D	3.40
94	MORENA	SABALGARH	S-NPP	26.24929	77.34851	13:22:29	D	4.50
95	MORENA	SABALGARH	S-NPP	26.30603	77.46928	13:22:29	D	3.20
96	NARSHIMAPURA	GOTECAON	S-NPP	23.02841	79.46887	13:22:29	D	2.50
97	NARSHIMAPURA	GOTECAON	S-NPP	23.08789	79.48576	13:22:29	D	2.20

98	NARSHIMAPURA	KARELI	S-NPP	22.87936	79.15398	13:22:29	D	3.20
99	NARSHIMAPURA	NARSIMHAPUR	S-NPP	22.97255	79.21024	13:22:29	D	3.10
100	RAISEN	GAIRATGANJ	S-NPP	23.37511	78.06832	13:22:29	D	2.40
101	RAISEN	GOHARGANJ	S-NPP	23.06483	77.46115	13:22:29	D	5.40
102	RAISEN	GOHARGANJ	S-NPP	23.15469	77.93694	13:22:29	D	4.90
103	RAISEN	RAISEN	S-NPP	23.44696	77.79230	13:22:29	D	1.70
104	SAGAR	DEVRI	S-NPP	23.36784	79.02869	13:22:29	D	1.60
105	SAGAR	KHURAI	S-NPP	24.06307	78.48660	13:22:29	D	2.50
106	SAGAR	REHLI	S-NPP	23.59863	79.14557	13:22:29	D	2.70
107	SAGAR	REHLI	S-NPP	23.62575	79.16772	13:22:29	D	2.60
108	SAGAR	REHLI	S-NPP	23.62631	79.17148	13:22:29	D	3.50
109	SAGAR	REHLI	S-NPP	23.63494	79.11601	13:22:29	D	1.90
110	SAGAR	SAGAR	S-NPP	23.65000	78.63911	13:22:29	D	6.80
111	SAGAR	SAGAR	S-NPP	23.68970	78.52366	13:22:29	D	3.50
112	SATNA	NAGOD	S-NPP	24.54989	80.49041	13:22:29	D	1.70
113	SEHORE	BUDHNI	S-NPP	22.71426	77.56223	13:22:29	D	2.60
114	SEHORE	BUDHNI	S-NPP	22.72667	77.59595	13:22:29	D	1.70
115	SEHORE	BUDHNI	S-NPP	22.83162	77.40390	13:22:29	D	7.10
116	SEONI	KEWLARI	S-NPP	22.44304	79.91991	13:22:29	D	5.70
117	SEONI	LAKHNADOU	S-NPP	22.58765	79.43861	13:22:29	D	1.70
118	SEONI	LAKHNADOU	S-NPP	22.70162	79.70633	13:22:29	D	3.10
119	SEONI	SEONI	S-NPP	22.18923	79.35635	13:22:29	D	3.40
120	SEONI	SEONI	S-NPP	22.25900	79.45845	13:22:29	D	3.00
121	SEONI	SEONI	S-NPP	22.26587	79.59452	13:22:29	D	1.80
122	SHEOPUR	SHEOPUR	S-NPP	25.38234	76.68443	13:22:29	D	1.20
123	SHEOPUR	SHEOPUR	S-NPP	25.39925	76.68105	13:22:29	D	2.90
124	SHEOPUR	SHEOPUR	S-NPP	25.43026	76.69968	13:22:29	D	3.10
125	SHEOPUR	SHEOPUR	S-NPP	25.52780	76.67632	13:22:29	D	2.20
126	SHEOPUR	SHEOPUR	S-NPP	25.60043	76.60489	13:22:29	D	4.40
127	SHEOPUR	SHEOPUR	S-NPP	25.67842	76.52704	13:22:29	D	2.50
128	SHEOPUR	SHEOPUR	S-NPP	25.71630	76.71424	13:22:29	D	8.90
129	SHEOPUR	SHEOPUR	S-NPP	25.71644	76.50266	13:22:29	D	10.60
130	SHEOPUR	SHEOPUR	S-NPP	25.80730	76.58480	13:22:29	D	4.50
131	SHEOPUR	SHEOPUR	S-NPP	25.91185	76.81550	13:22:29	D	5.90

132	SHIVPURI	KOLARAS	S-NPP	24.99446	77.70736	13:22:29	D	4.30
133	SHIVPURI	KOLARAS	S-NPP	24.99779	77.70673	13:22:29	D	4.30
134	SHIVPURI	NARWAR	S-NPP	25.64261	78.23415	13:22:29	D	1.80
135	SHIVPURI	NARWAR	S-NPP	25.64995	78.12688	13:22:29	D	2.40
136	SHIVPURI	POHRI	S-NPP	25.37688	77.19146	13:22:29	D	0.70
137	SHIVPURI	SHIVPURI	S-NPP	25.33018	77.79419	13:22:29	D	7.30
138	SHIVPURI	SHIVPURI	S-NPP	25.33079	77.79801	13:22:29	D	7.30
139	SHIVPURI	SHIVPURI	S-NPP	25.39615	77.84477	13:22:29	D	12.00
140	VIDESHA	BASODA	S-NPP	23.83661	78.11579	13:22:29	D	1.60
141	VIDESHA	BASODA	S-NPP	23.93264	77.95756	13:22:29	D	2.30
142	VIDESHA	NATERAN	S-NPP	24.01448	77.78894	13:22:29	D	4.30
143	VIDESHA	SIRANJ	S-NPP	24.03454	77.87180	13:22:29	D	2.40
144	VIDESHA	SIRANJ	S-NPP	24.08750	77.83827	13:22:29	D	6.00
145	VIDESHA	SIRANJ	S-NPP	24.15046	77.74747	13:22:29	D	3.00
146	VIDESHA	VIDESHA	S-NPP	23.53032	77.61163	02:13:12	N	0.70
147	WEST NIMAR	BARWAH	S-NPP	22.16727	75.84704	13:22:29	D	2.20

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)**

Study Team

ICAR - IARI	Dr V.K. Sehgal	Pr. Scientist & Nodal Officer	iaricreams@gmail.com
	Dr Rajkumar Dhakar	Scientist	rajdhakar.iari@gmail.com
	Mr Mohd Jahangir	Lab Assistant (KRISHI)	mjahangir198@gmail.com
ICAR - ATARI	Dr Parvender Sheoran	Director ATARI (Zone-I) Ludhiana	zcu1ldh@gmail.com
	Dr. J.P. Mishra	Director ATARI (Zone-II) Jodhpur	jp.mishra67@gov.in
	Dr S.K. Dubey	Director ATARI (Zone-III) Kanpur	zpdicarkanpur@gmail.com
ICAR - IASRI	Dr Rajender Parsad	Director	rajender.parsad@icar.gov.in

GIS Maps of fire events can be visualized online on ICAR KRISHI Geoportal website: <http://geoportal.icar.gov.in:8080/geoexplorer/composer/>
(Part of KRISHI Portal: <https://krishi.icar.gov.in> initiative)

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