



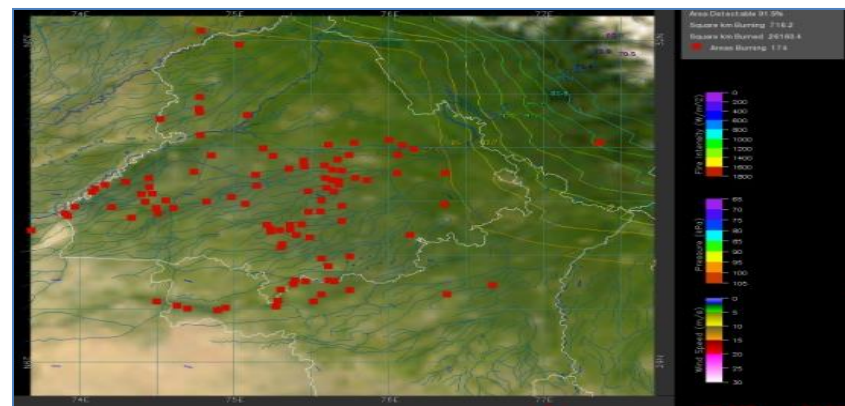
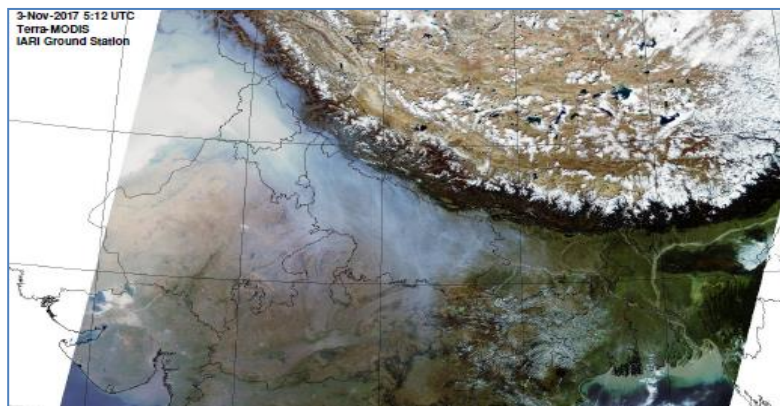
**Bulletin
No. 38**

**Events Date:
22-Oct-2023**

**Issued on:
22-Oct-2023**



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



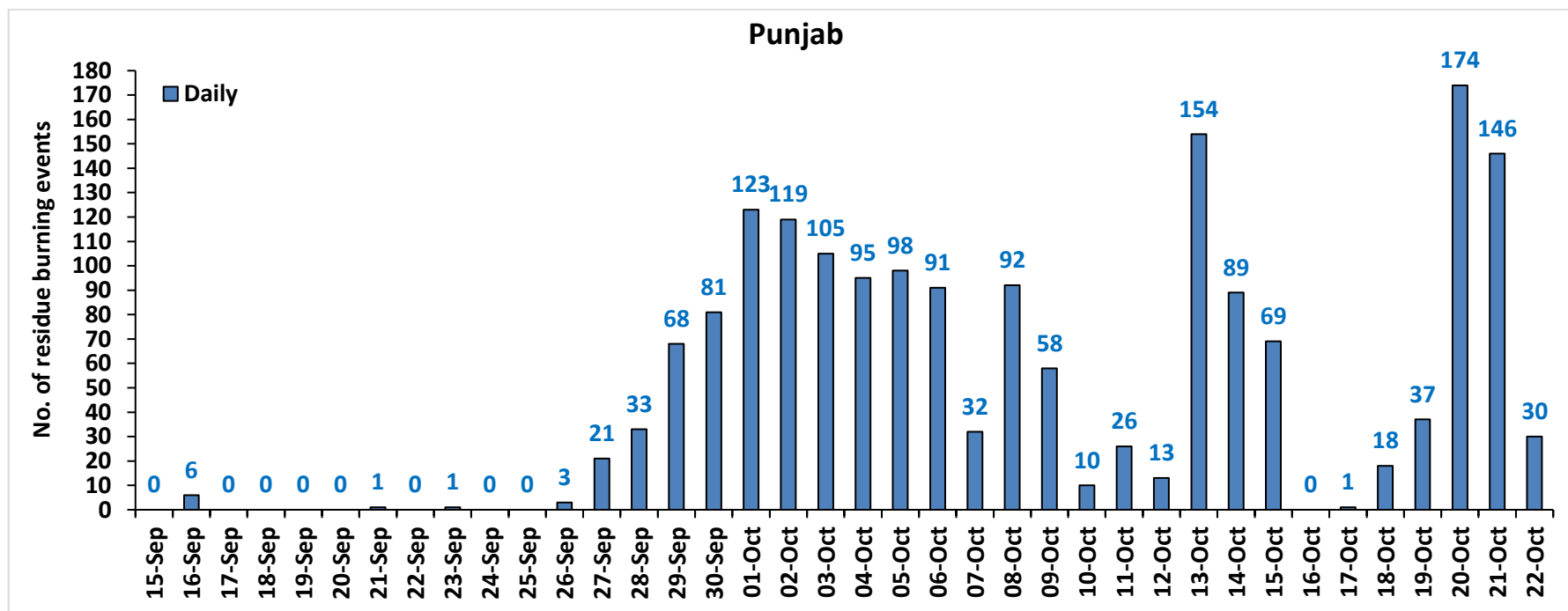
**Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory,
Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012**

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

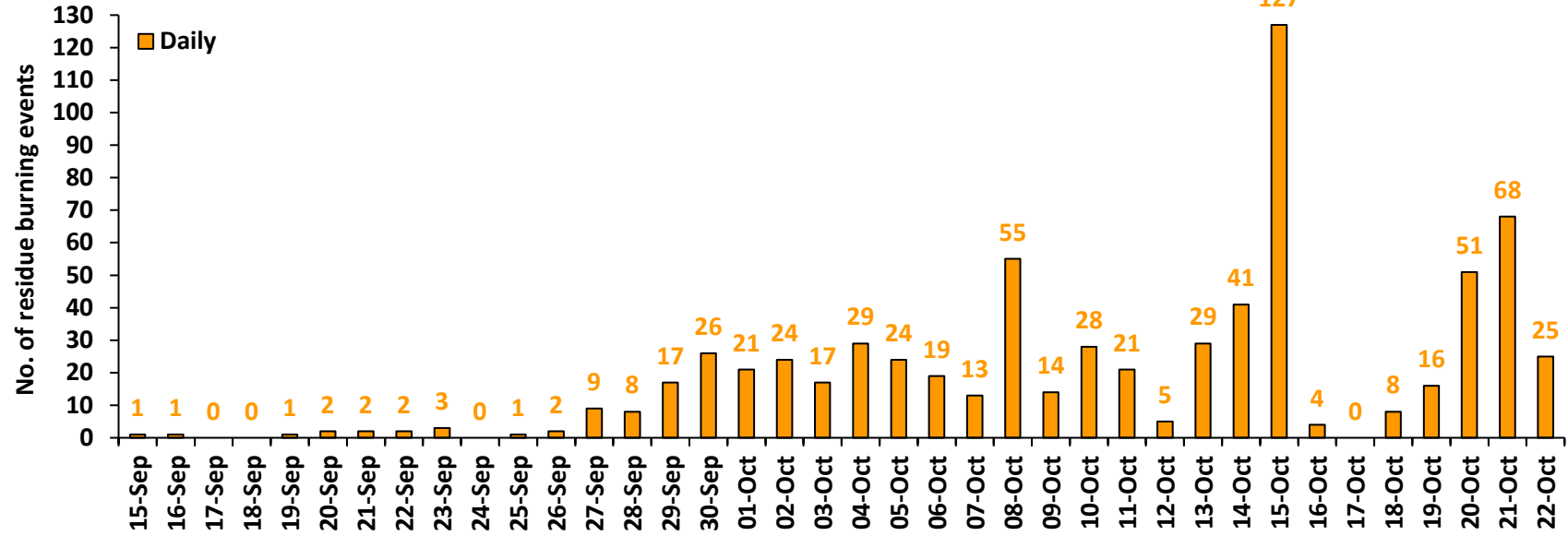
Highlights for 22-Oct-2023

- 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 **348** residue burning events in the six study States on 22-Oct-2023.
- The state wise events detected on 22-Oct-2023 were **30** in Punjab, **25** in Haryana, **117** in UP, **00** in Delhi, **57** in Rajasthan and **119** in MP.
- Total **4374** burning events were detected in the six states between 15-Sept-2023 and 22-Oct-2023, which are distributed as **1734**, **714**, **540**, **02**, **443** and **881** in Punjab, Haryana, UP, Delhi, Rajasthan and MP, respectively.
- Detection of residue burning events was hampered by the presence of clouds over Punjab, Haryana and Rajasthan states.

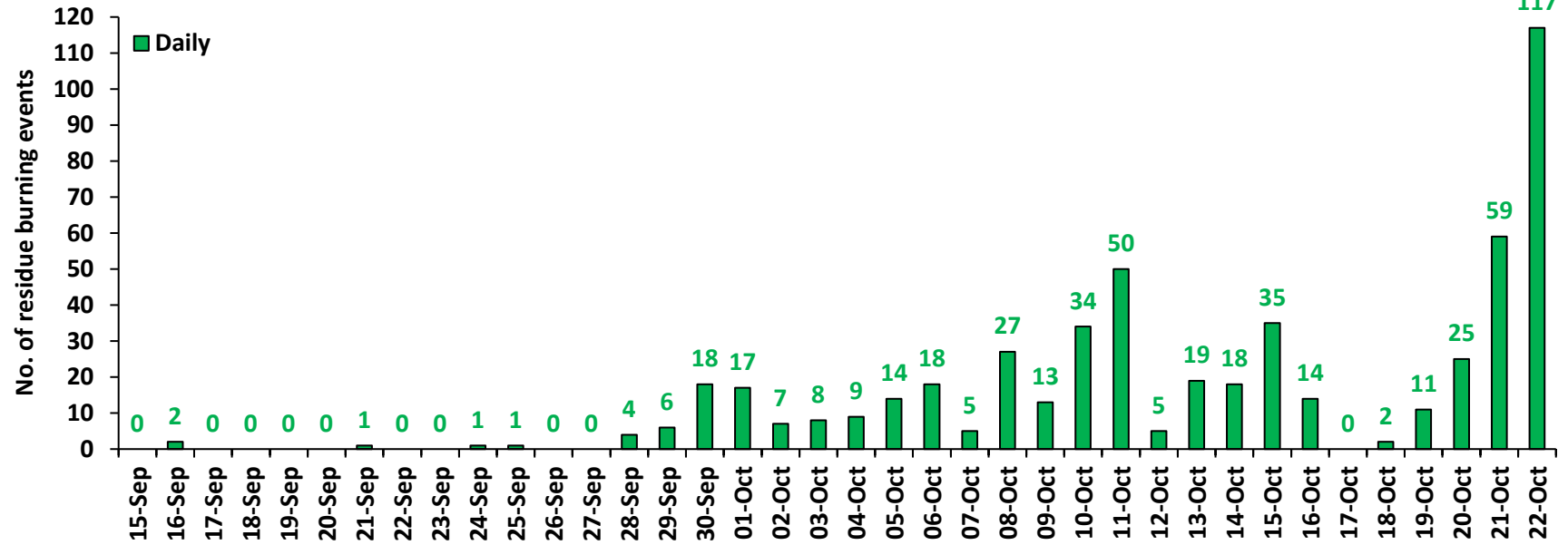
Temporal distribution of rice residue burning events for the study States in 2023



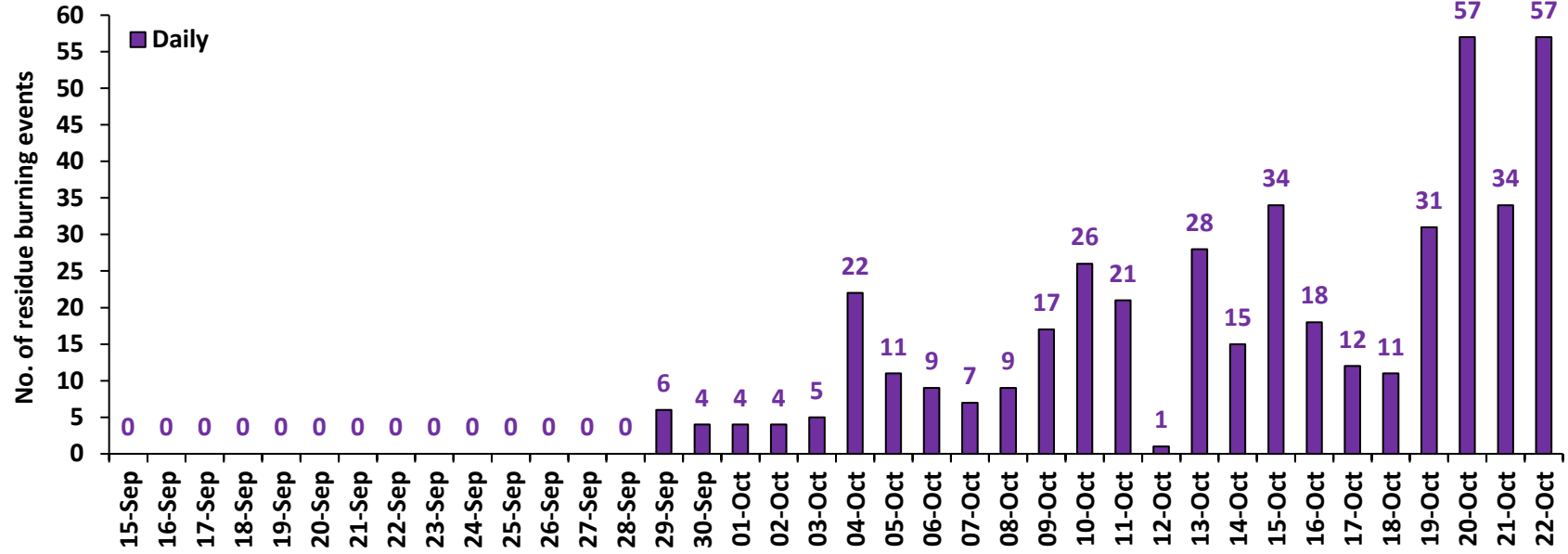
Haryana



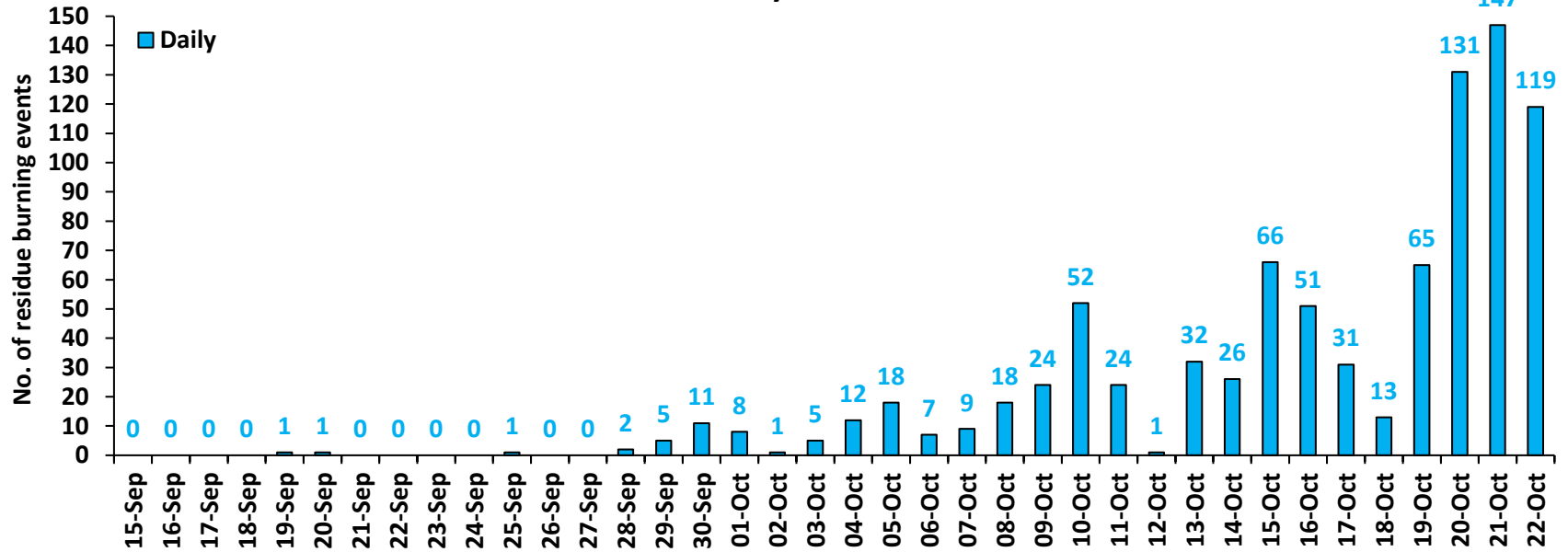
Uttar Pradesh



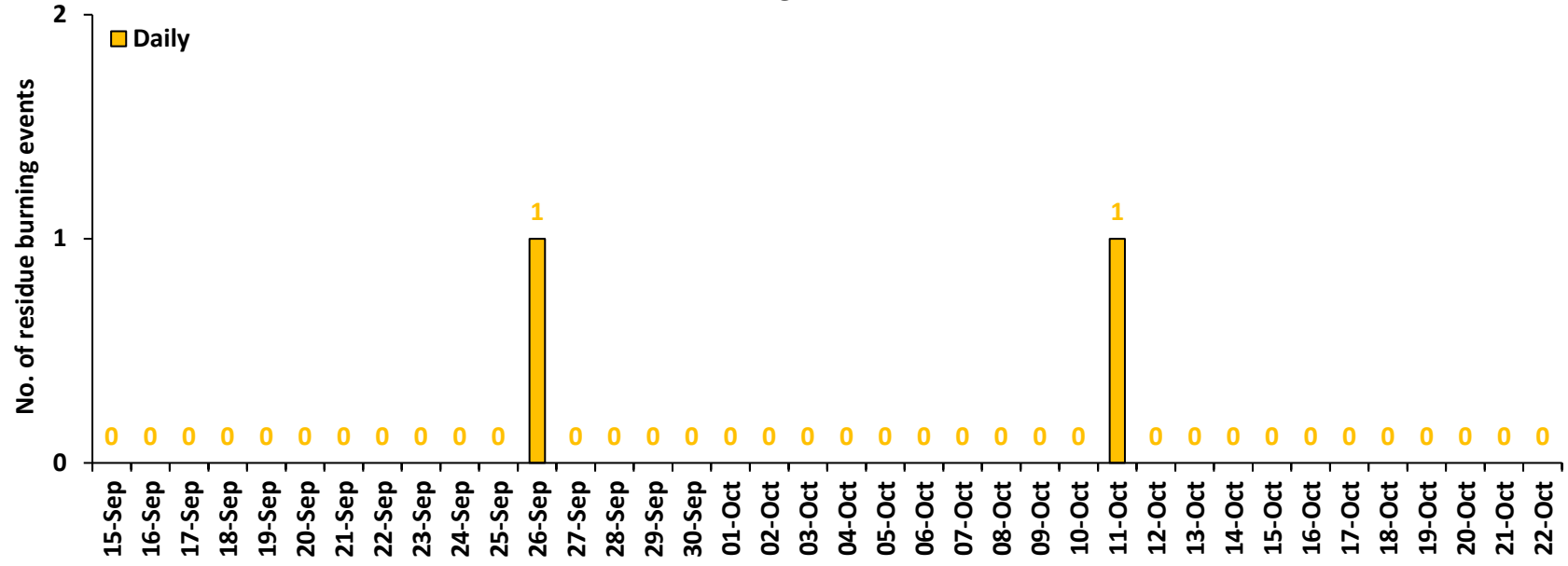
Rajasthan



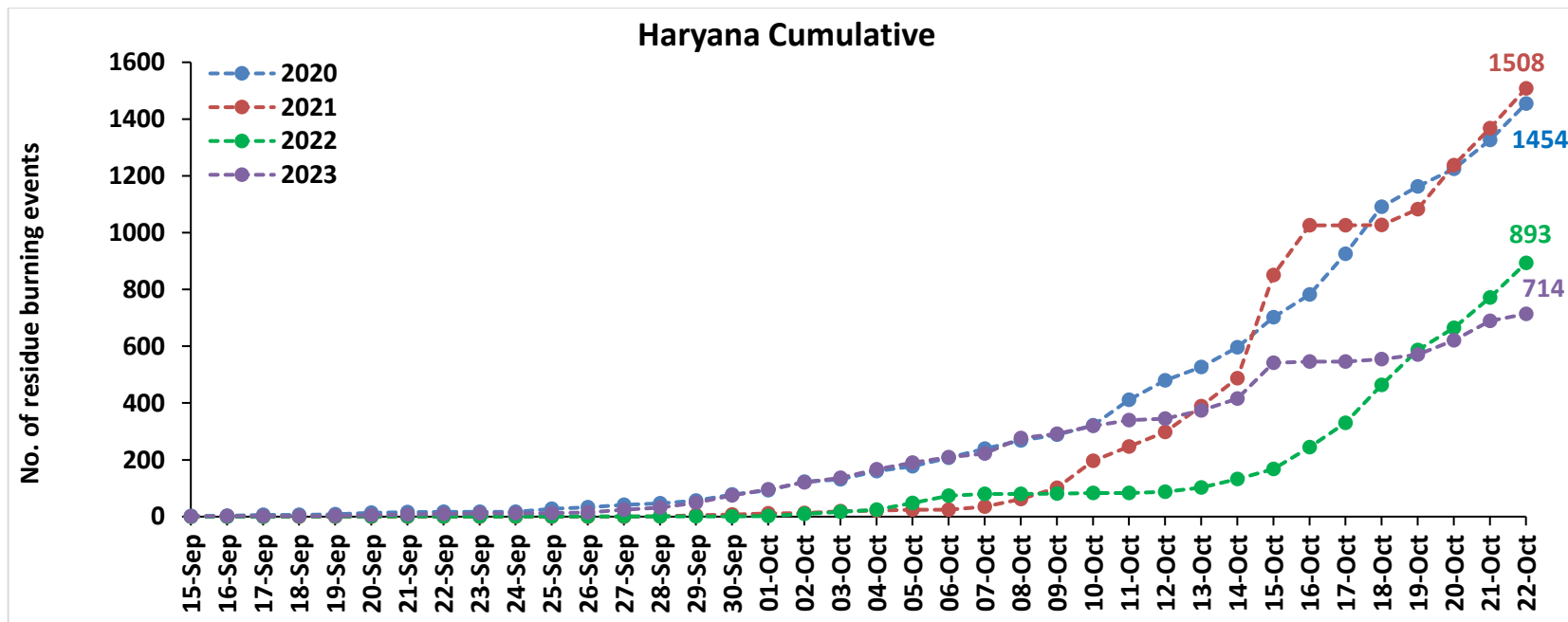
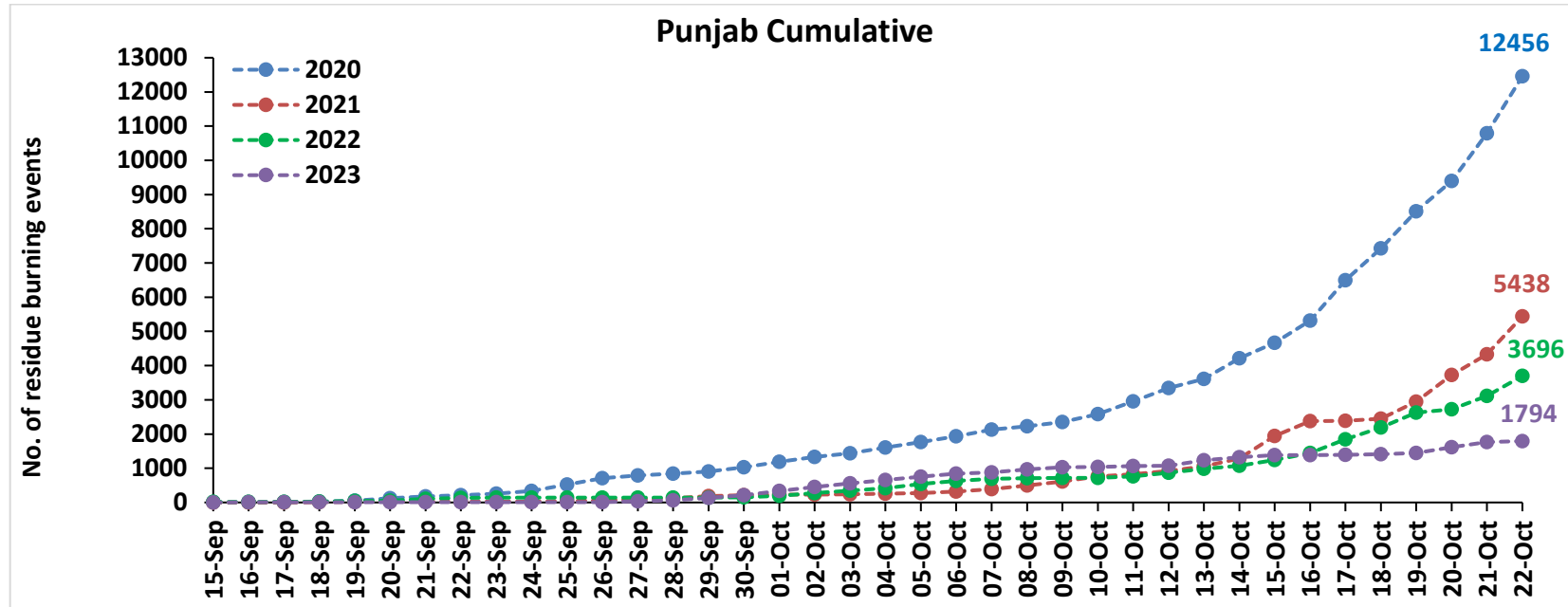
Madhya Pradesh

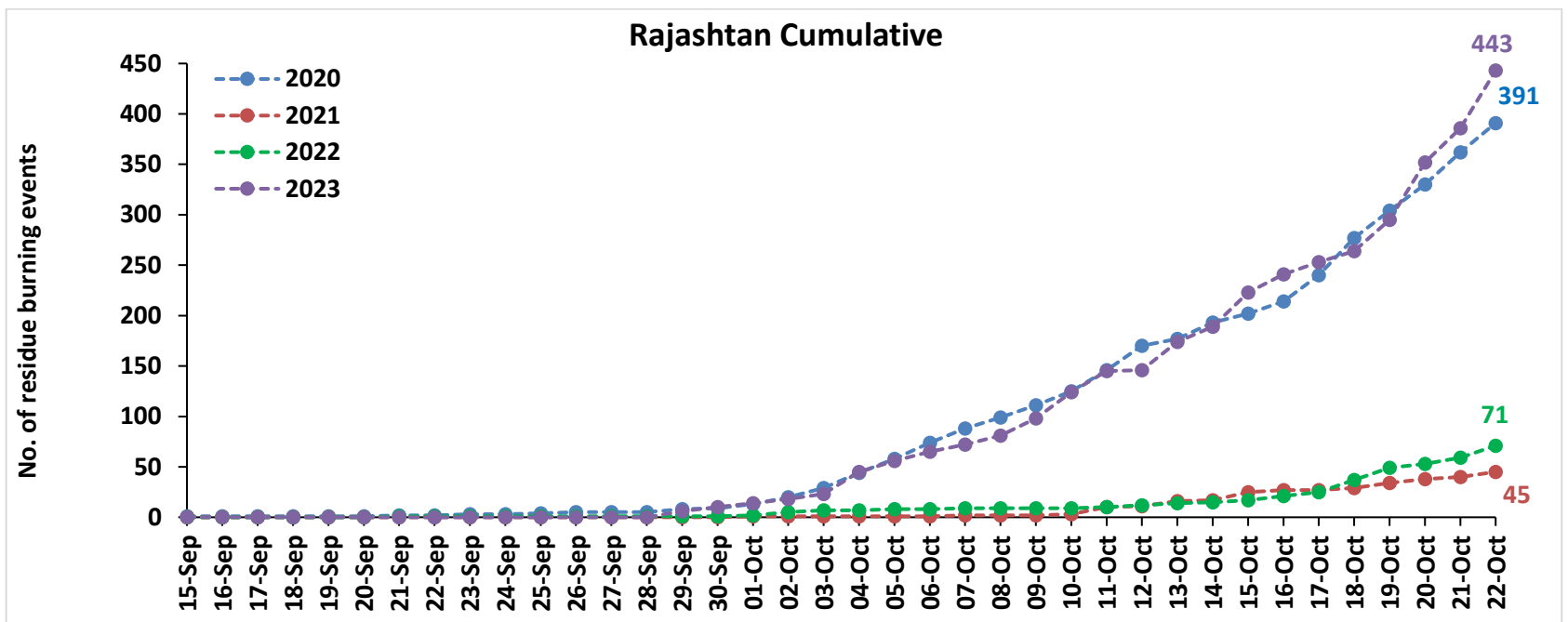
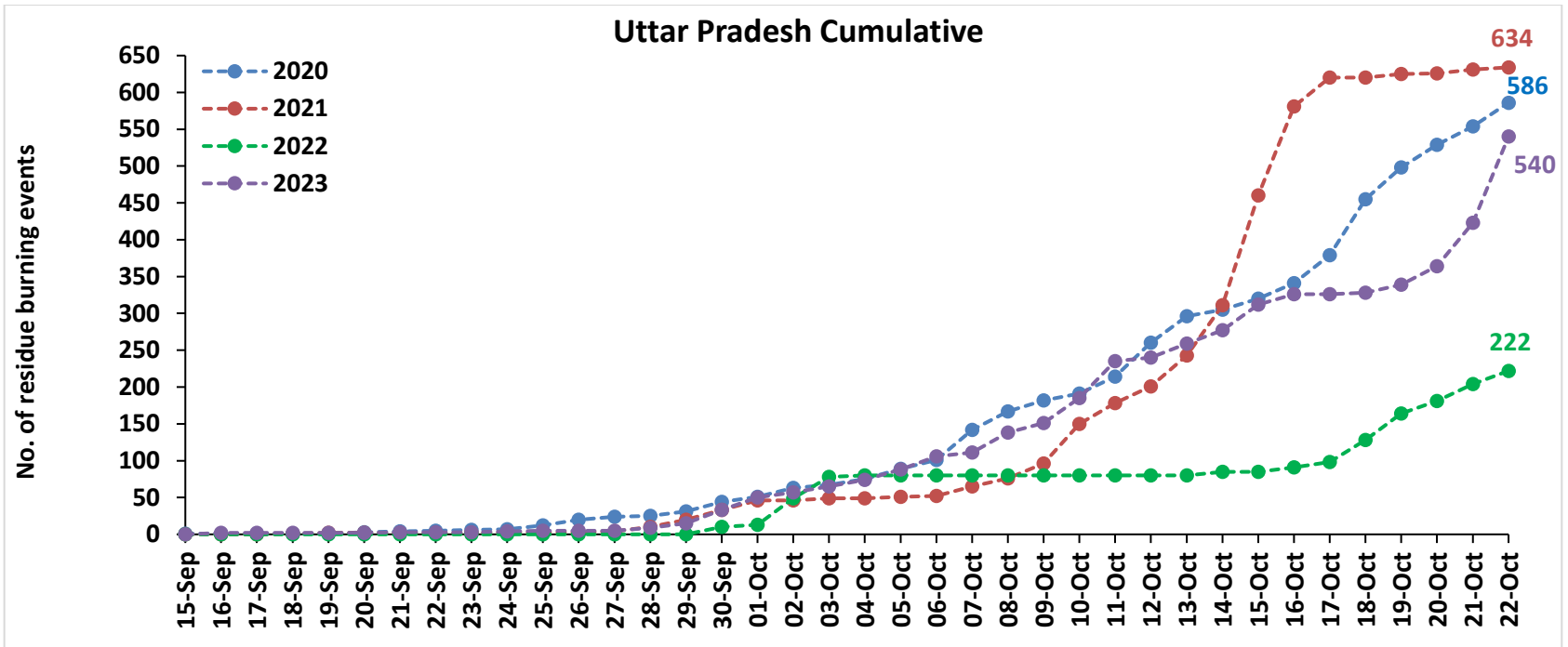


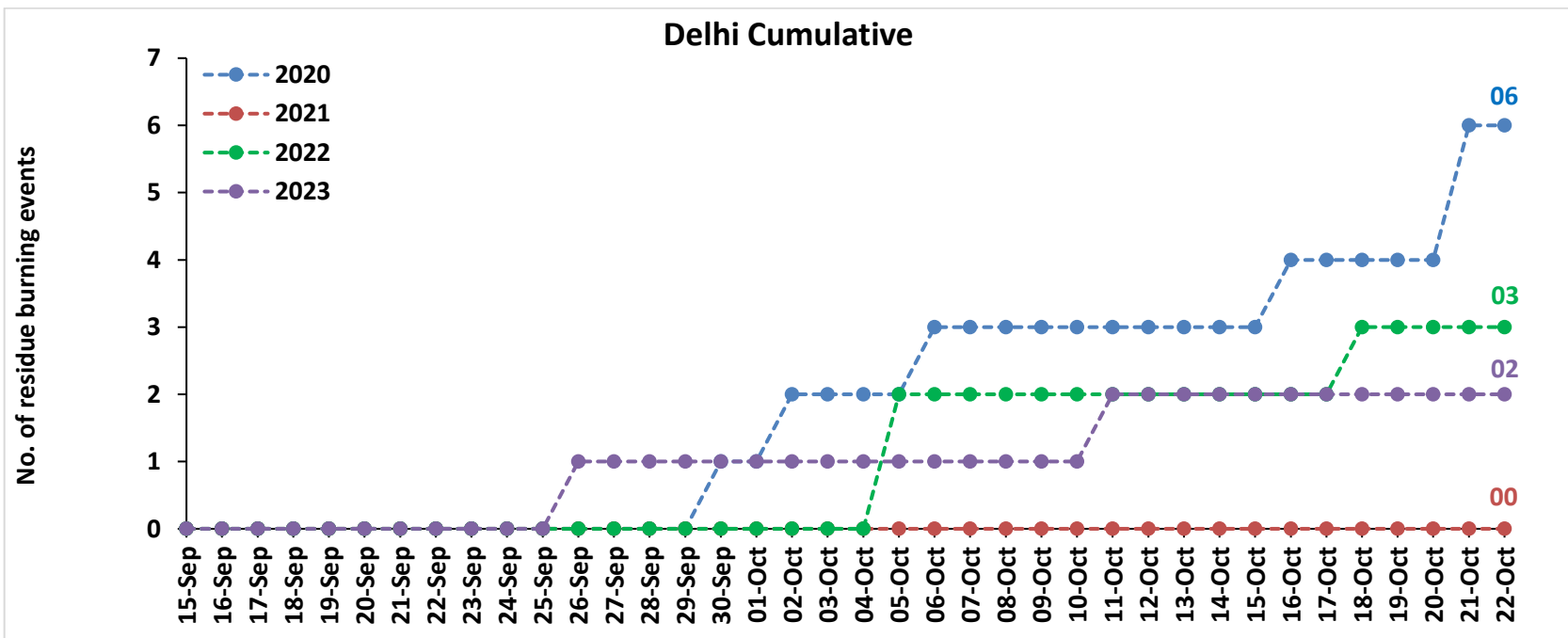
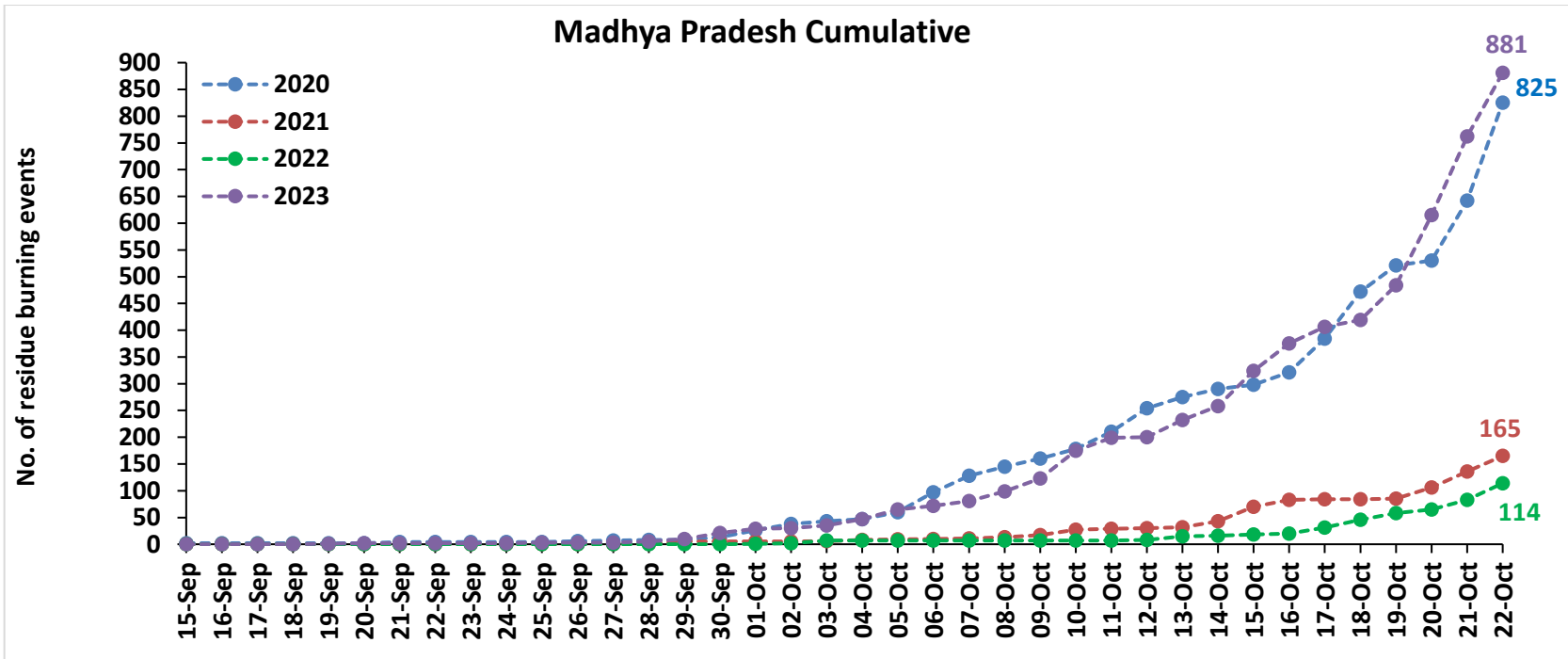
Delhi



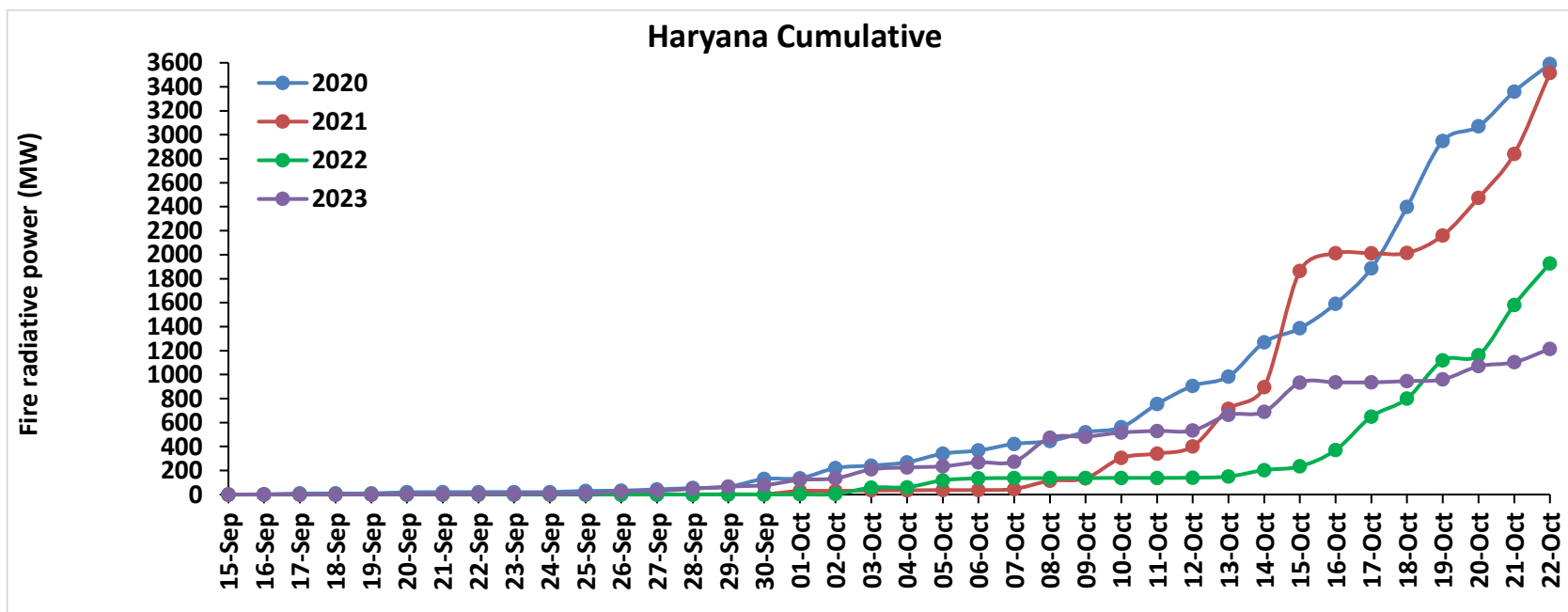
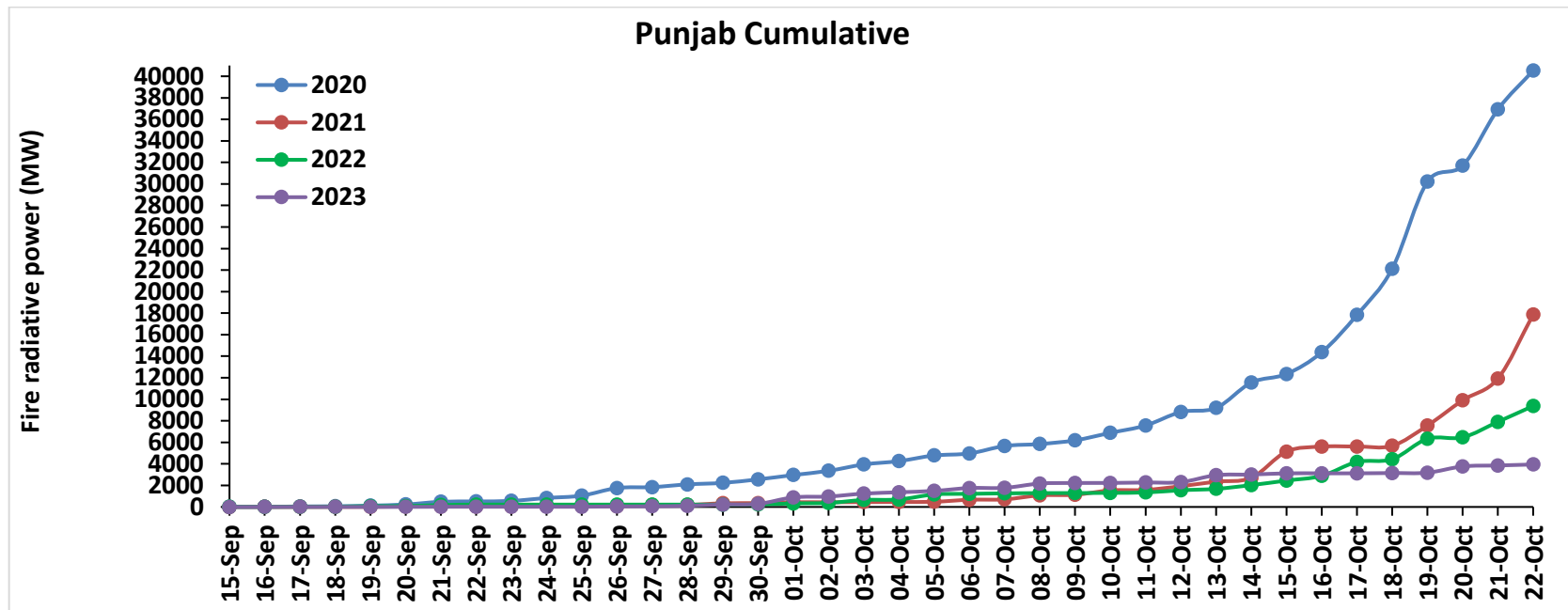
Comparison of residue burning events in current year (2023) with previous years (2020, 2021 and 2022) for the study State

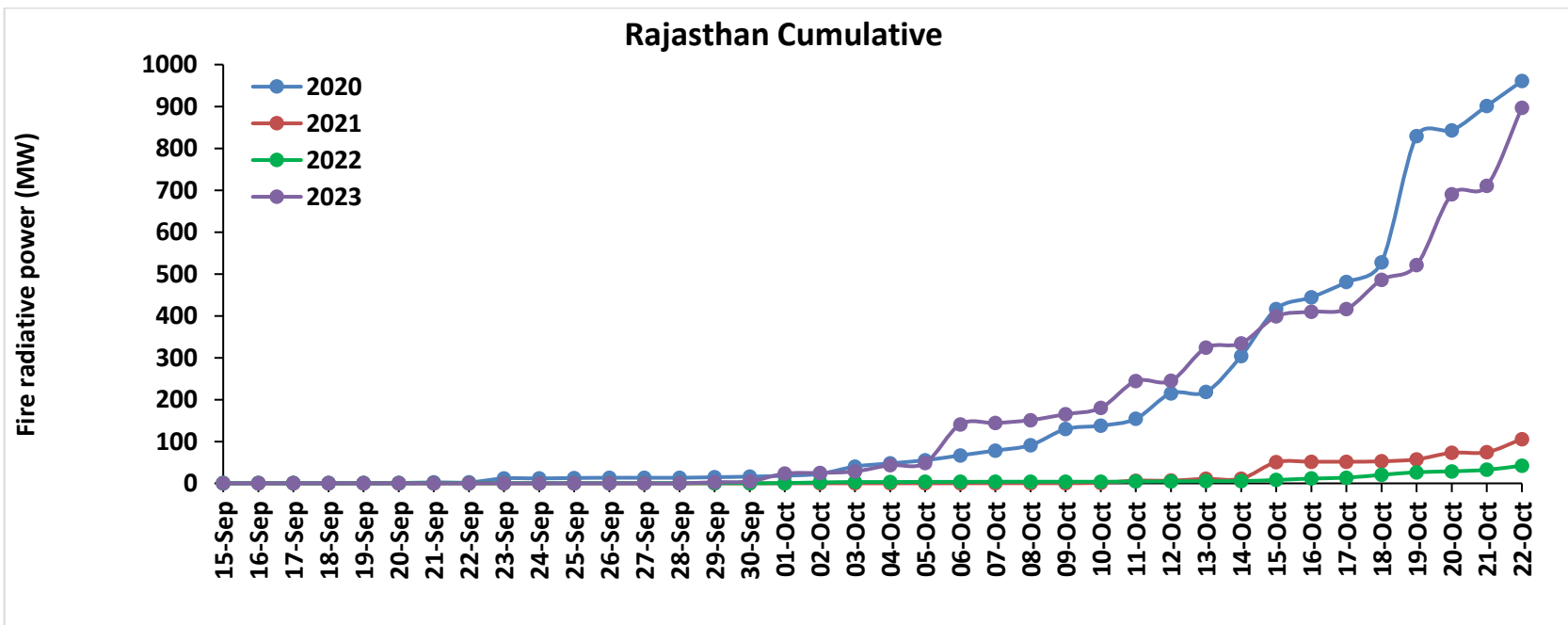
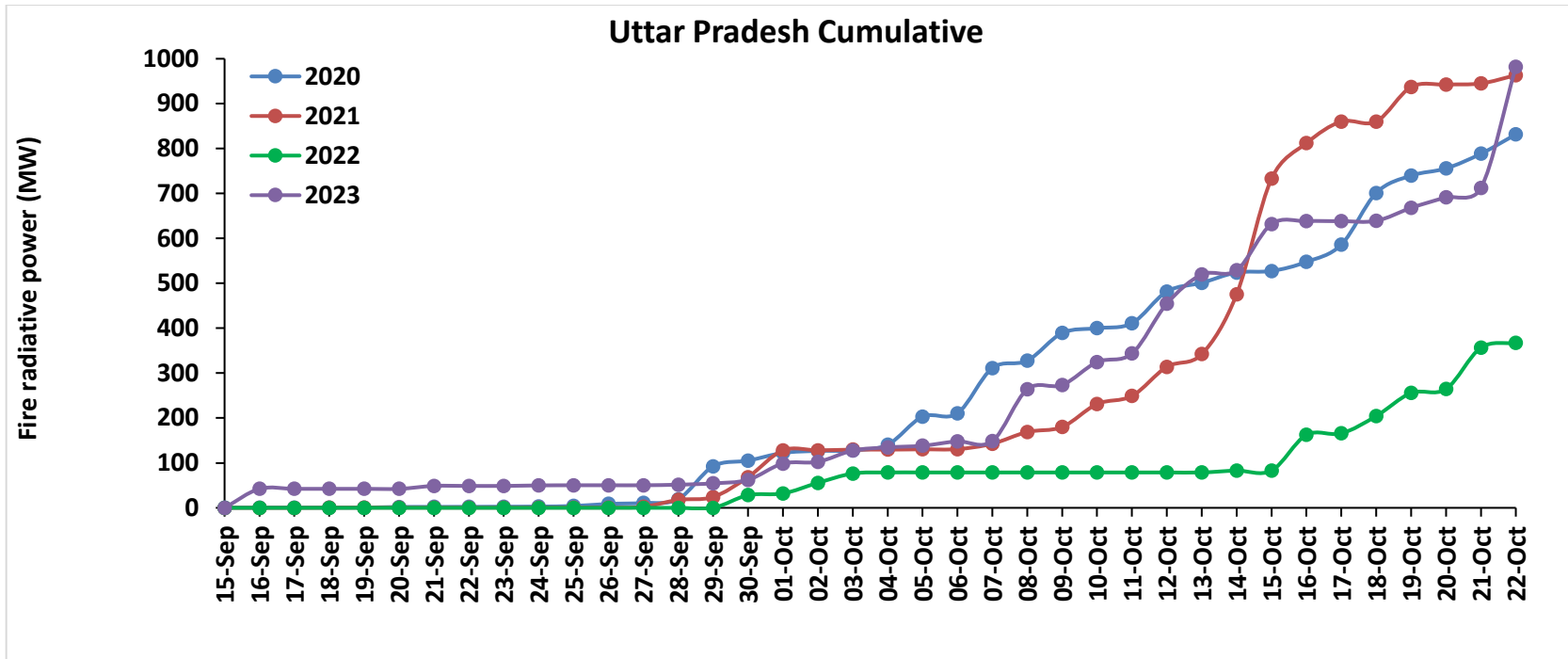


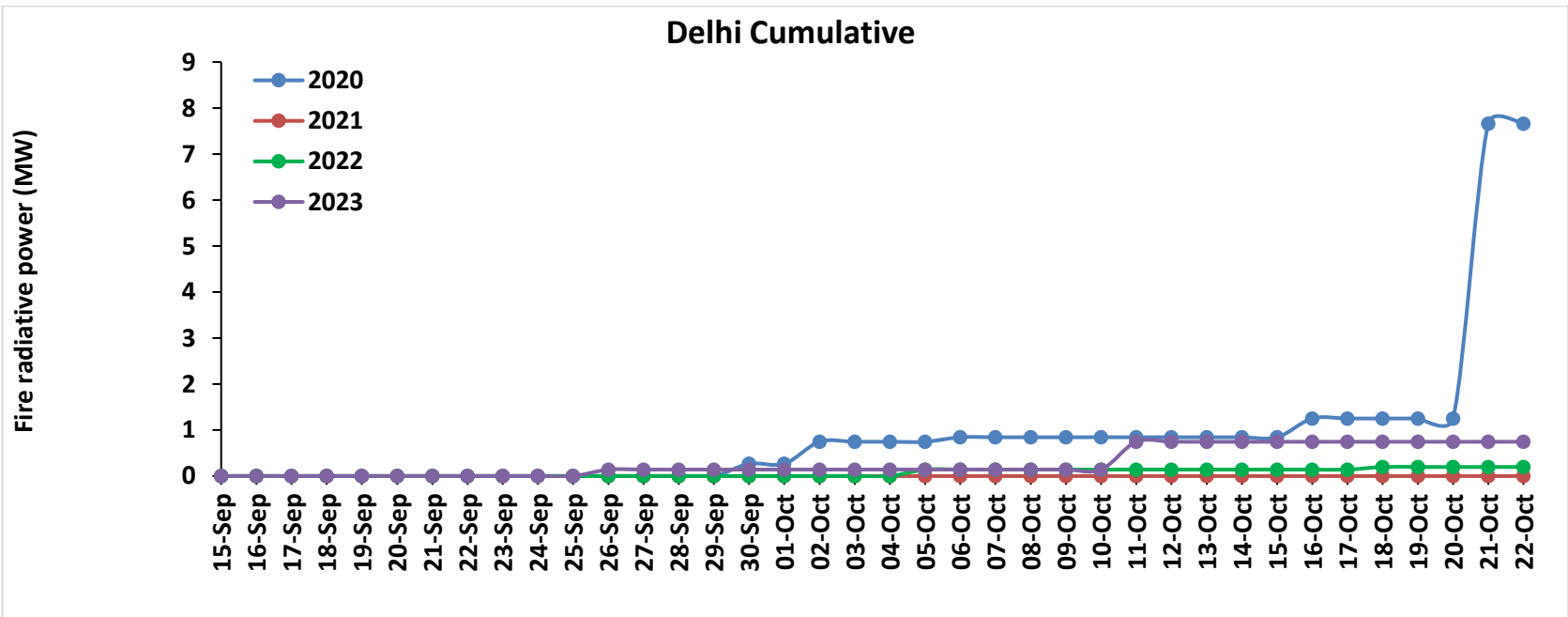
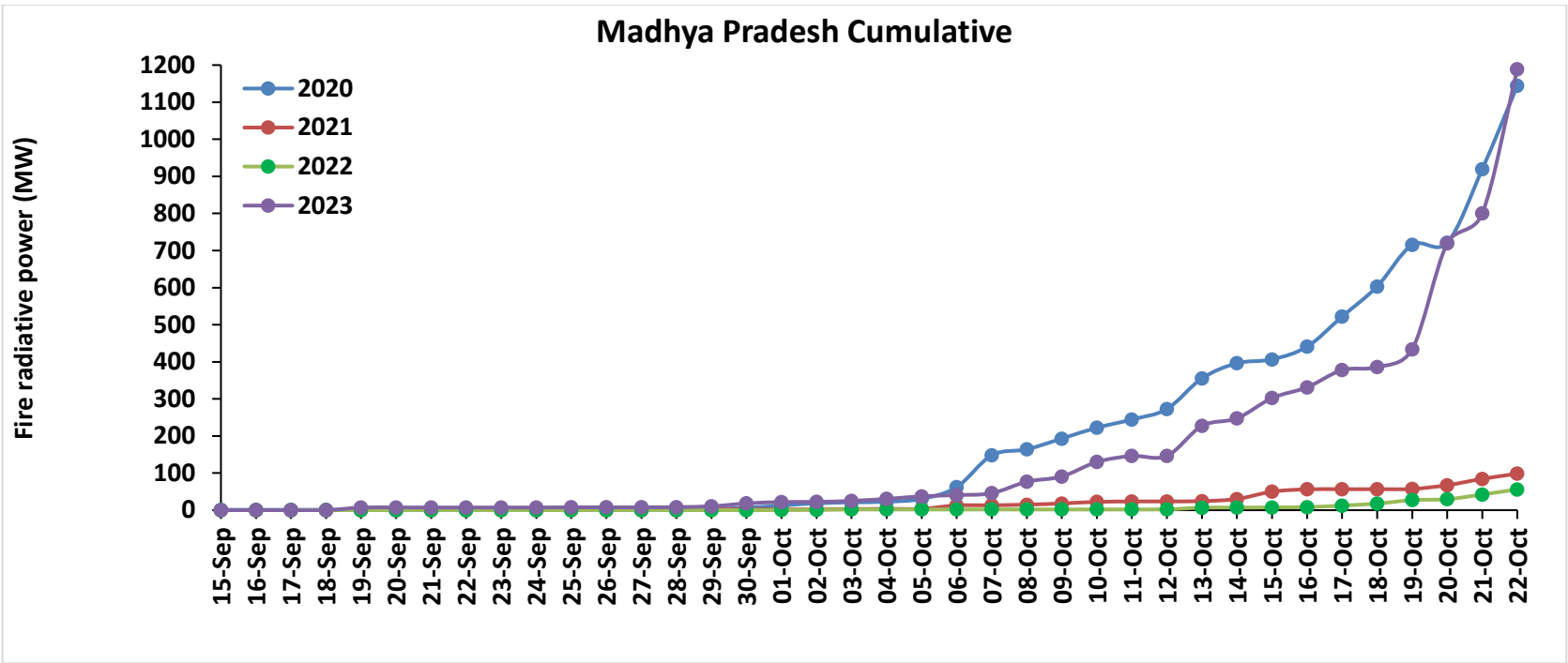




Comparison of residue burning fire power in current year (2023) with previous years (2020, 2021 and 2022) for the study States

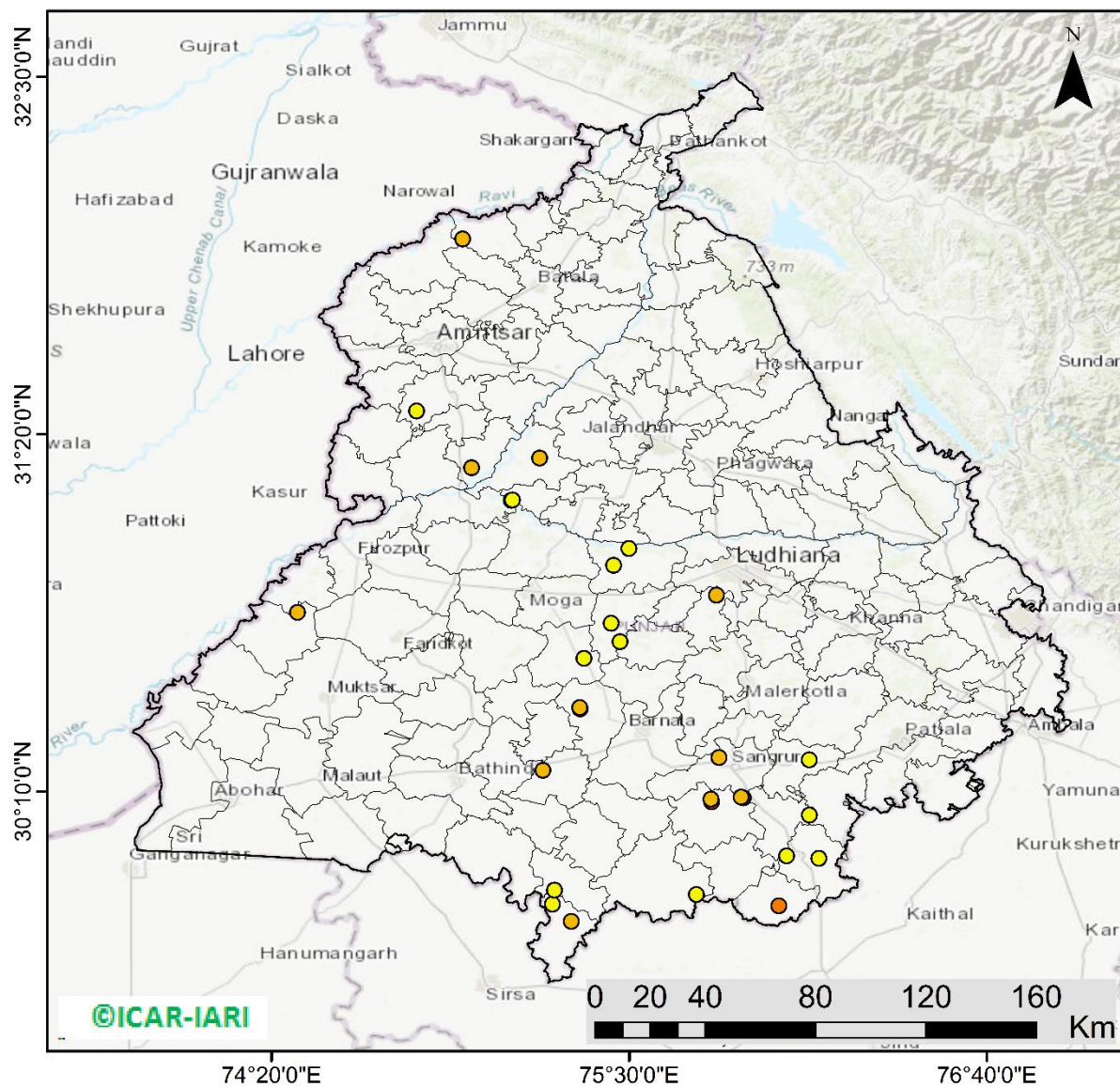






Punjab

RICE RESIDUE BURNING IN PUNJAB



30 burning events detected in Punjab during (22nd Oct 2023)

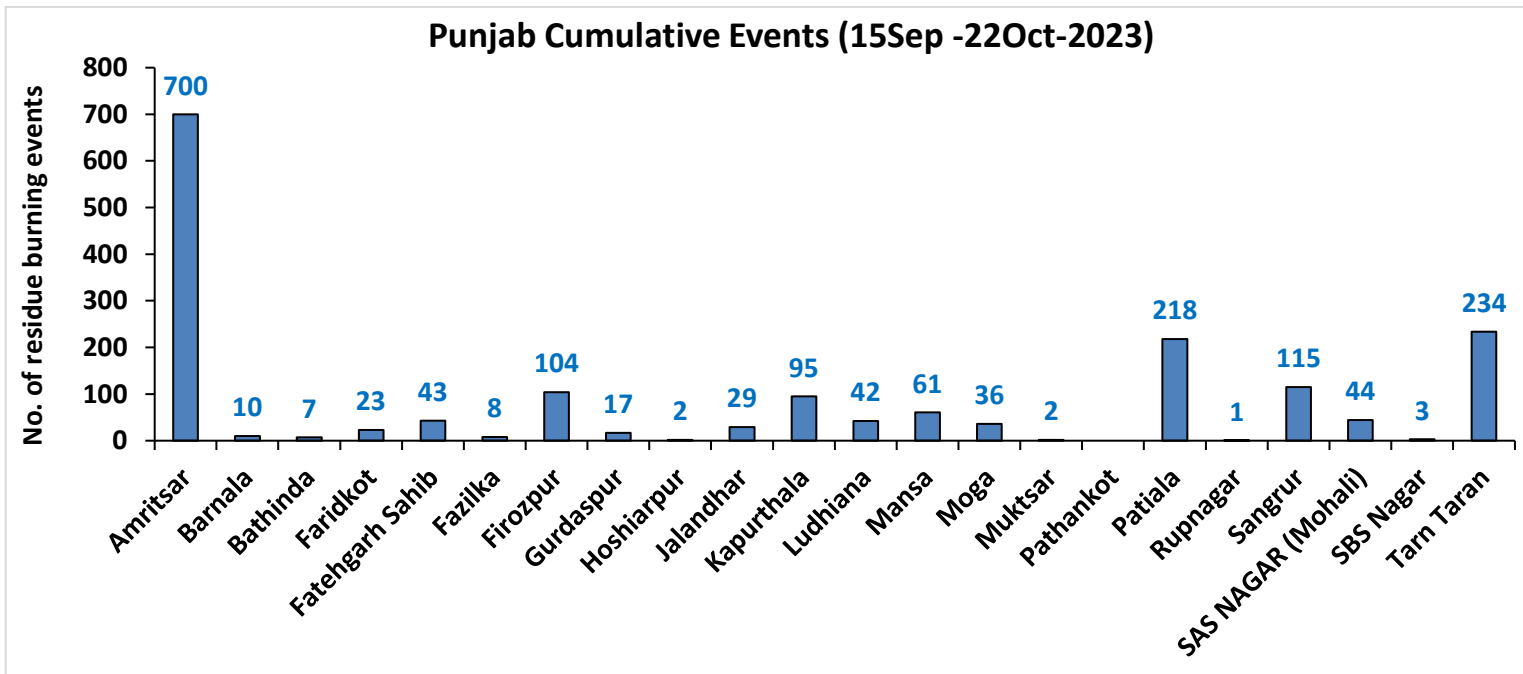
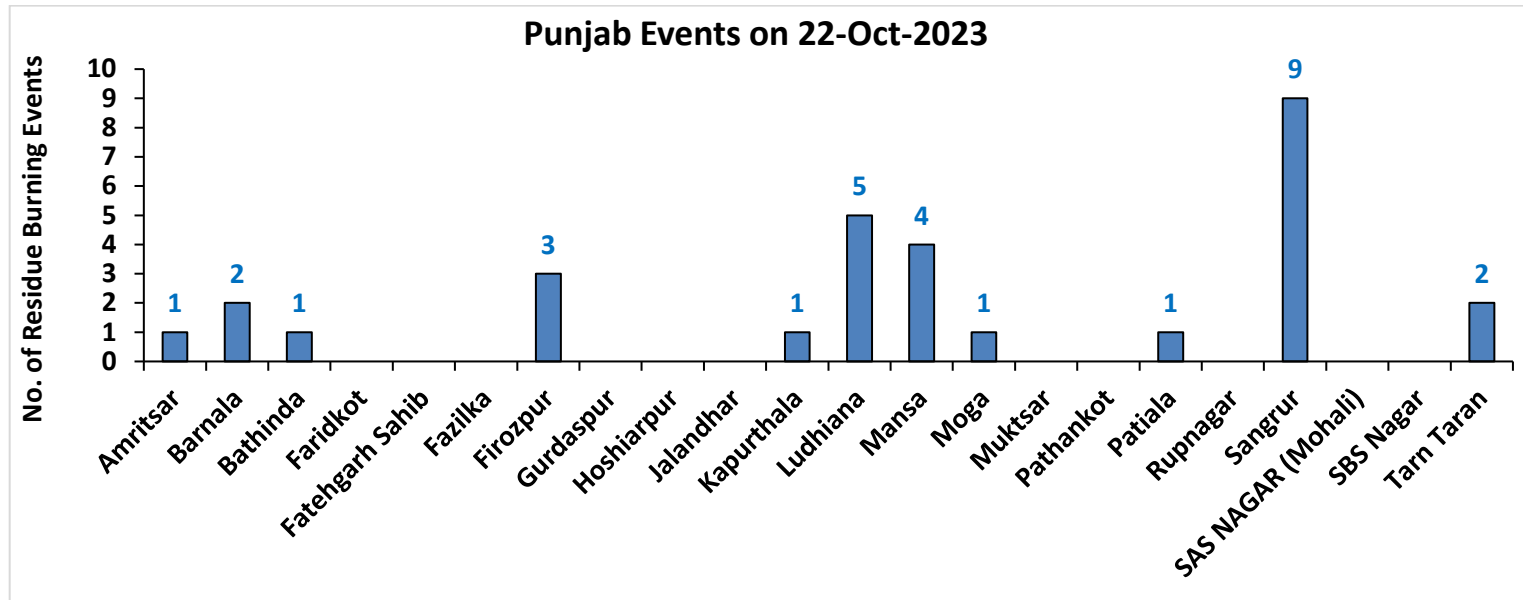
Fire Intensity (W/m²)

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



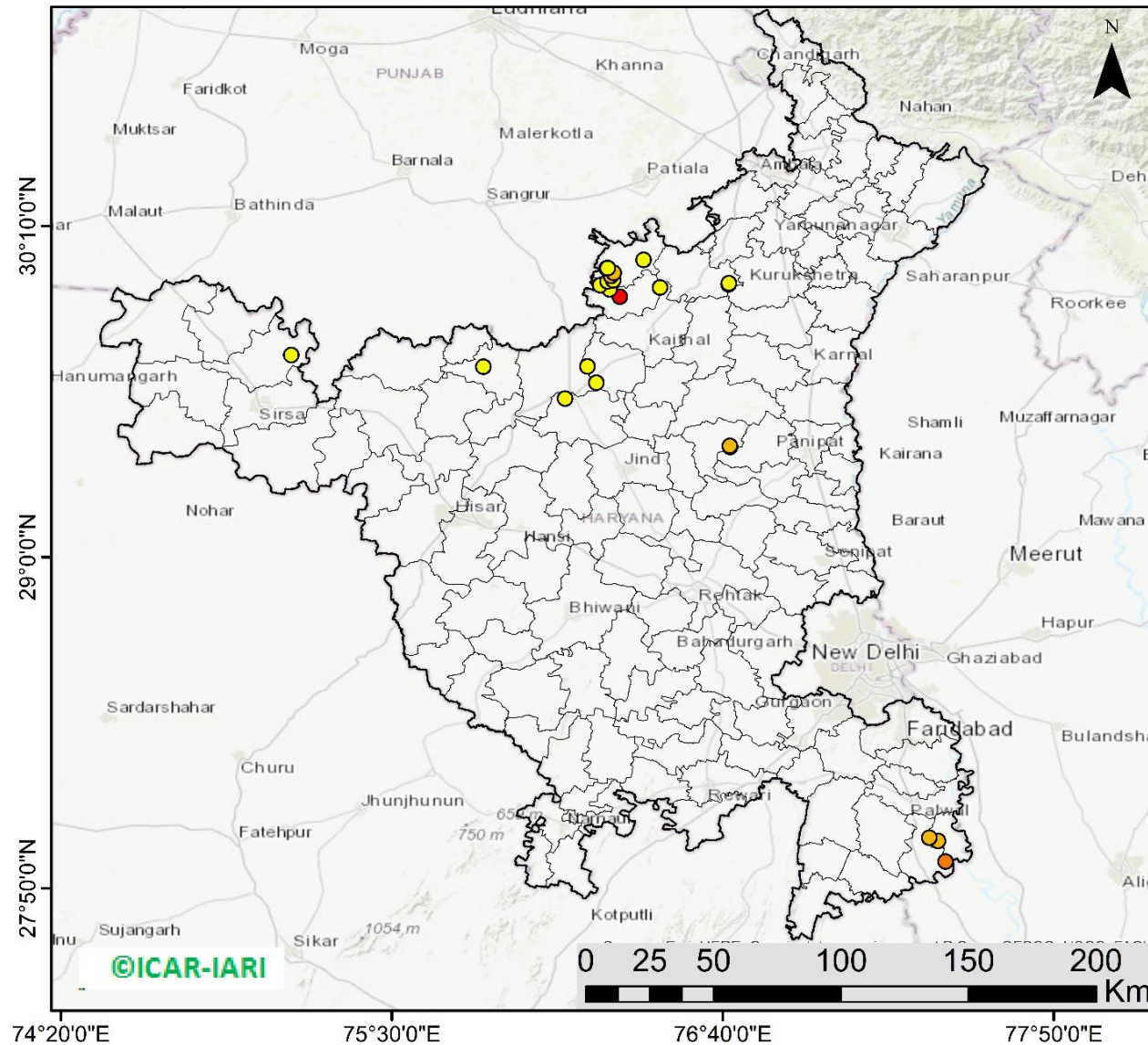
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Punjab (15Sep- 22Oct-2023)



Haryana

RICE RESIDUE BURNING IN HARYANA



25 burning events detected in Haryana on (22nd Oct 2023)

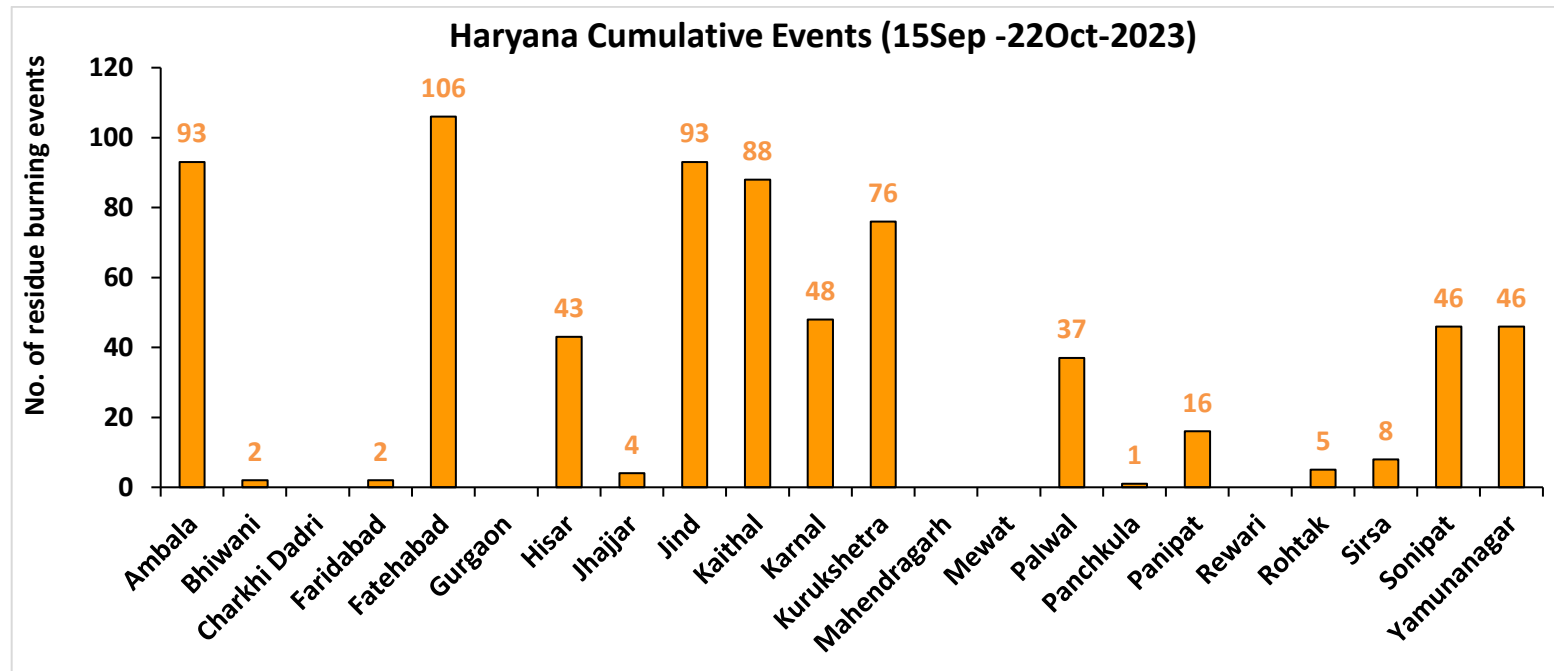
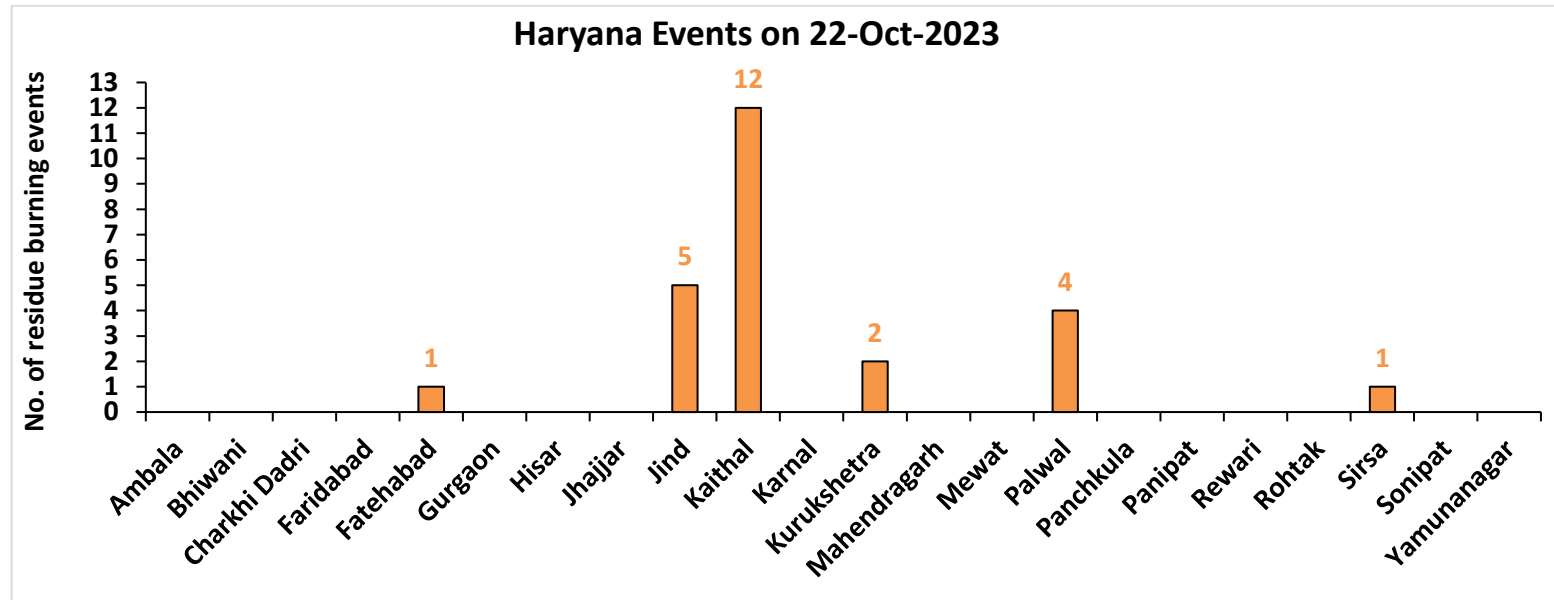
Fire Intensity (W/m²)

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



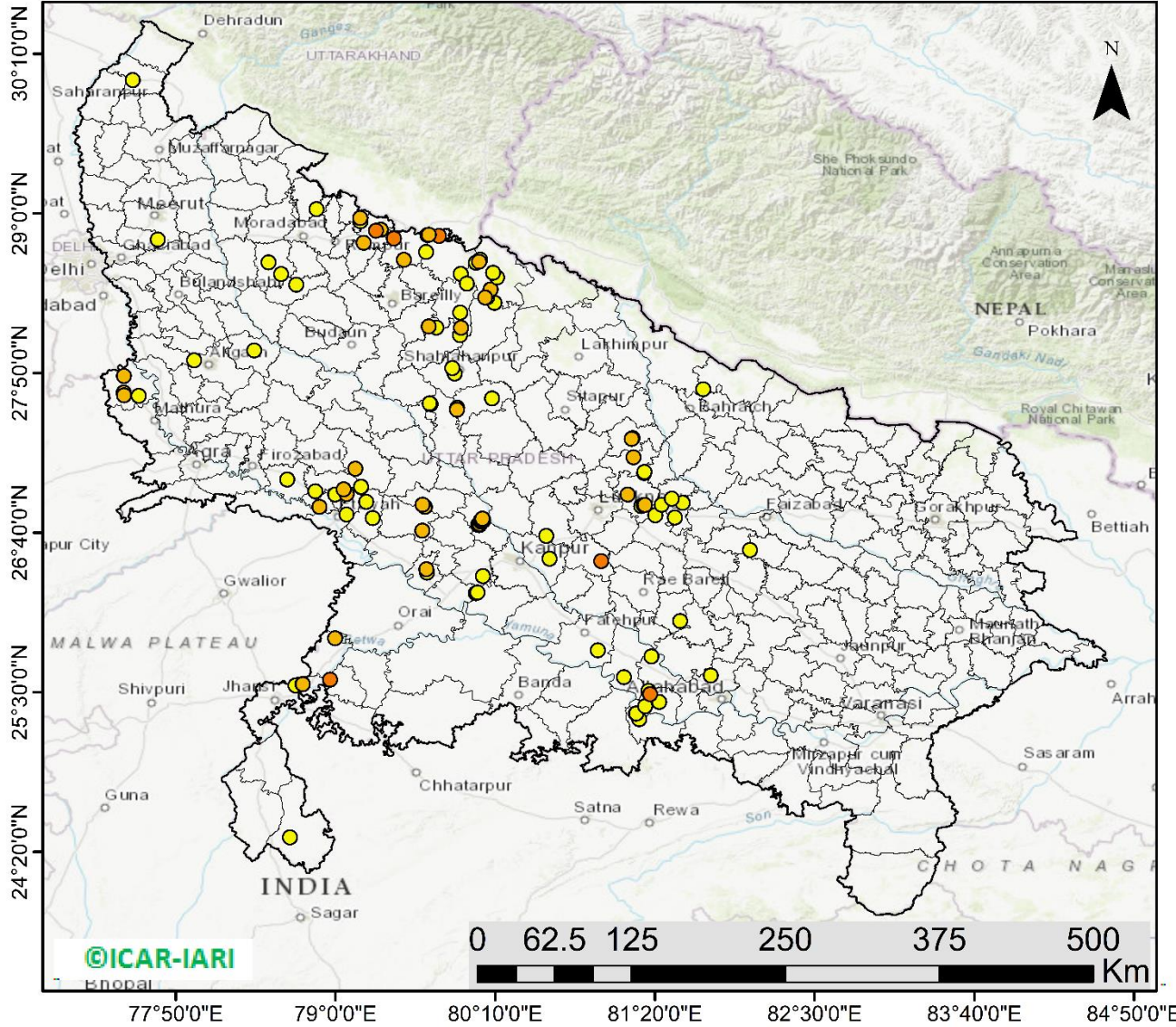
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Haryana (15Sep-22Oct -2023)



Uttar Pradesh

RICE RESIDUE BURNING IN UTTAR PRADESH



117 burning events detected in Uttar Pradesh on (22nd Oct 2023)

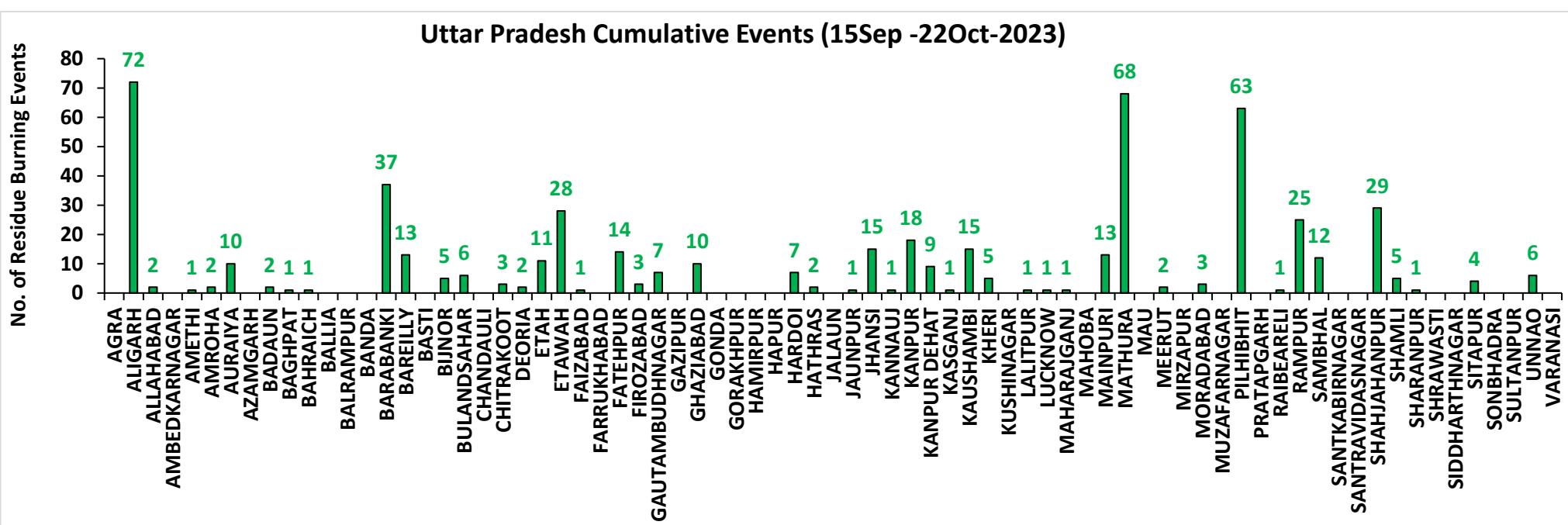
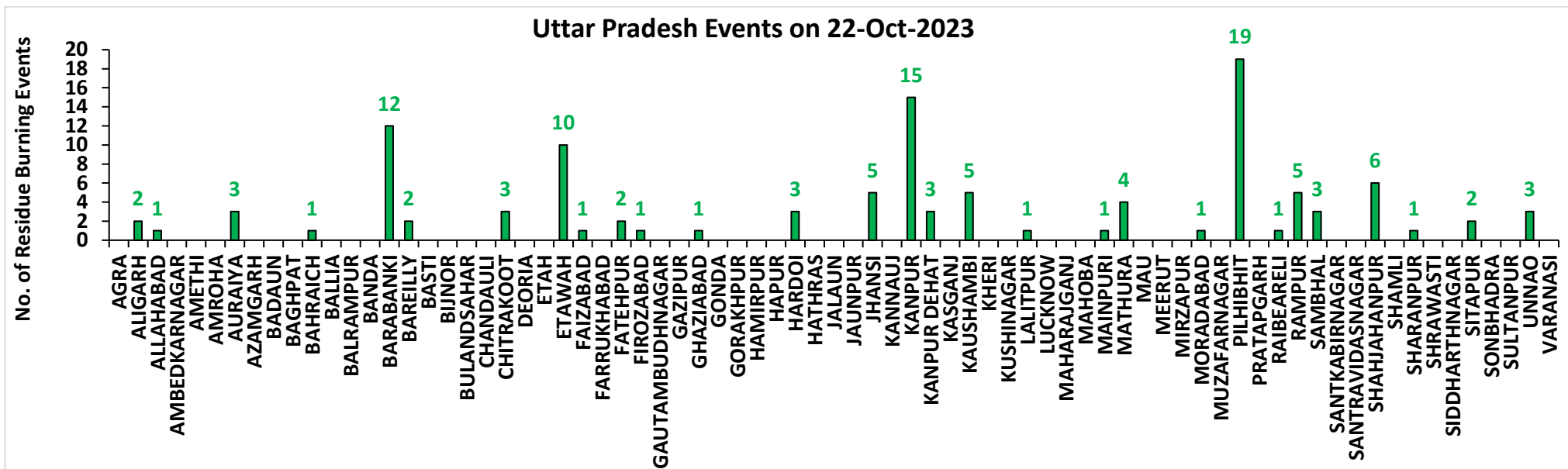
Fire Intensity (W/m²)

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



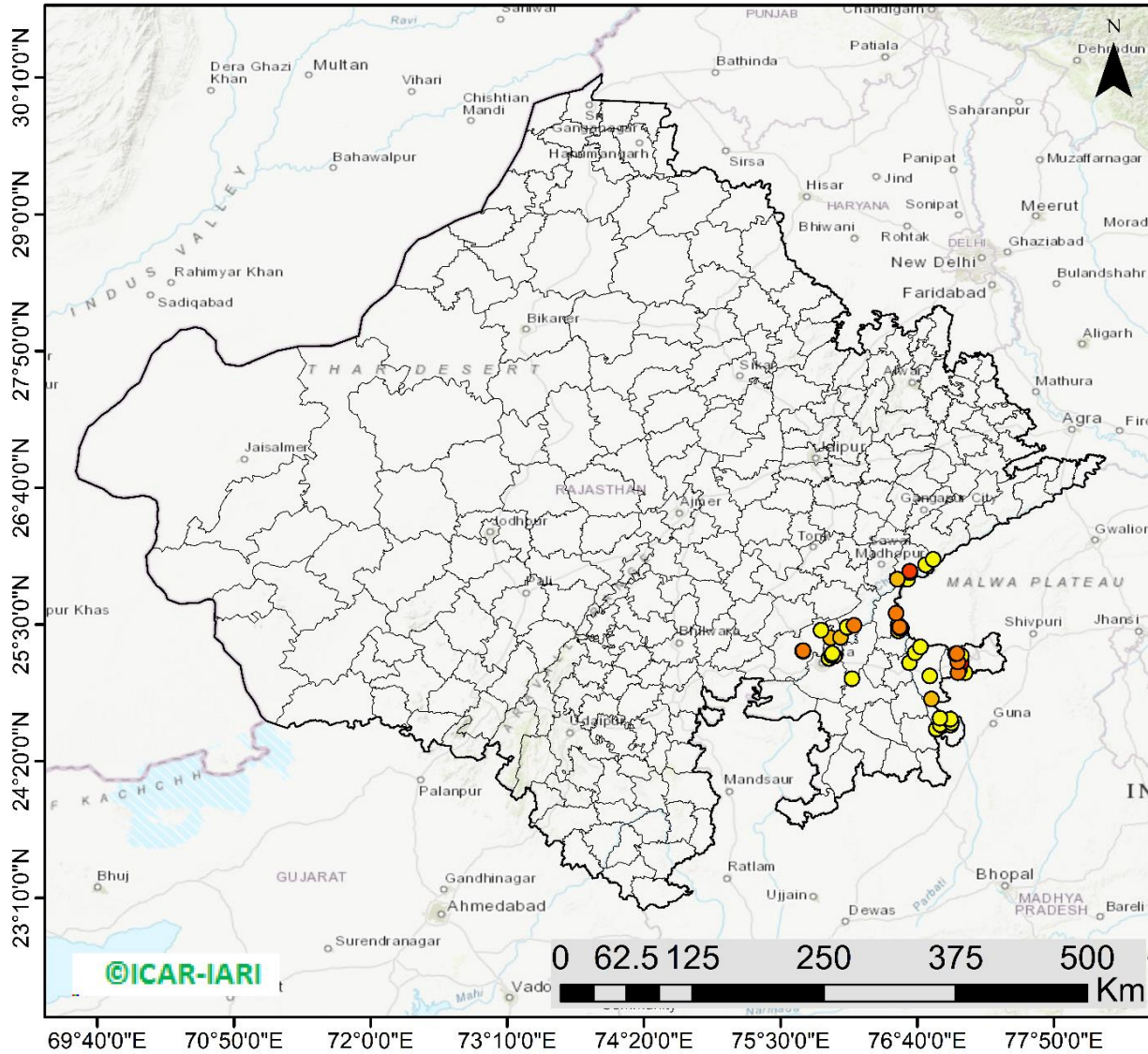
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Uttar Pradesh (15Sep-22Oct -2023)



Rajasthan

RICE RESIDUE BURNING IN RAJASTHAN



57 burning events
detected in Rajasthan on
(22nd Oct 2023)

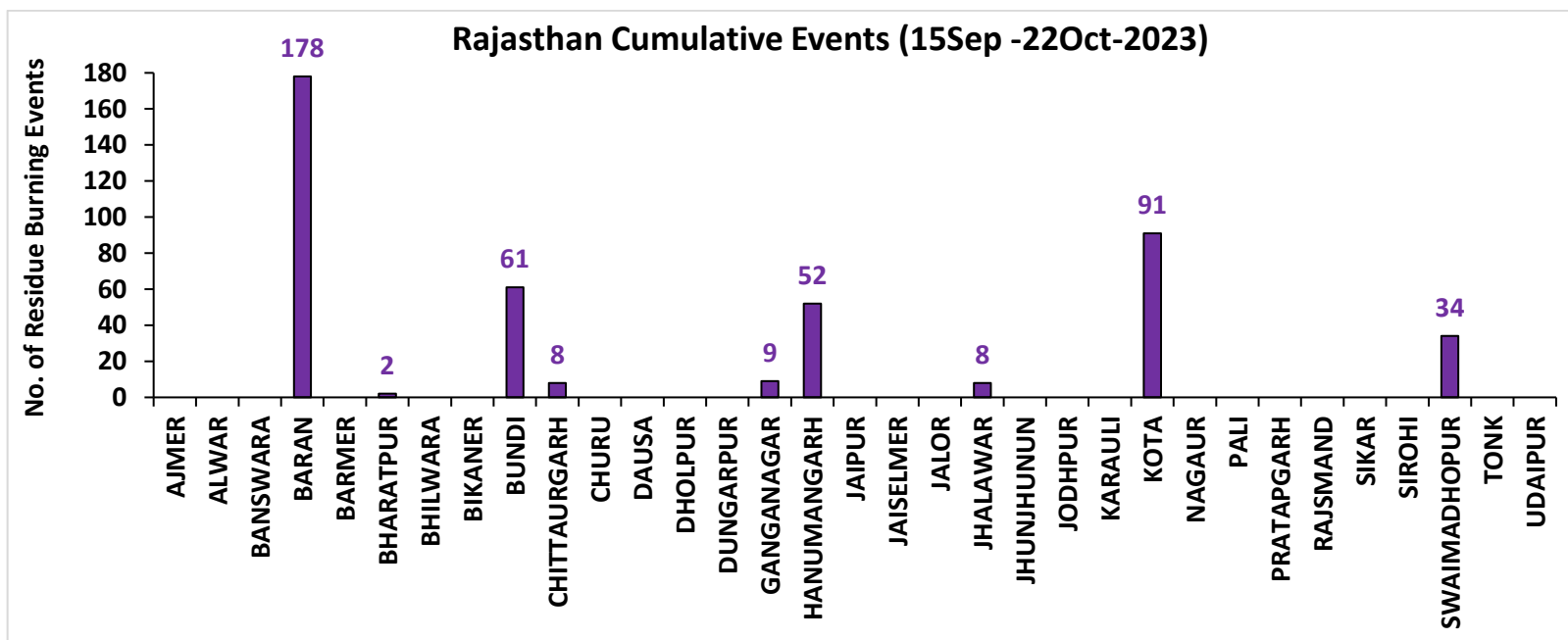
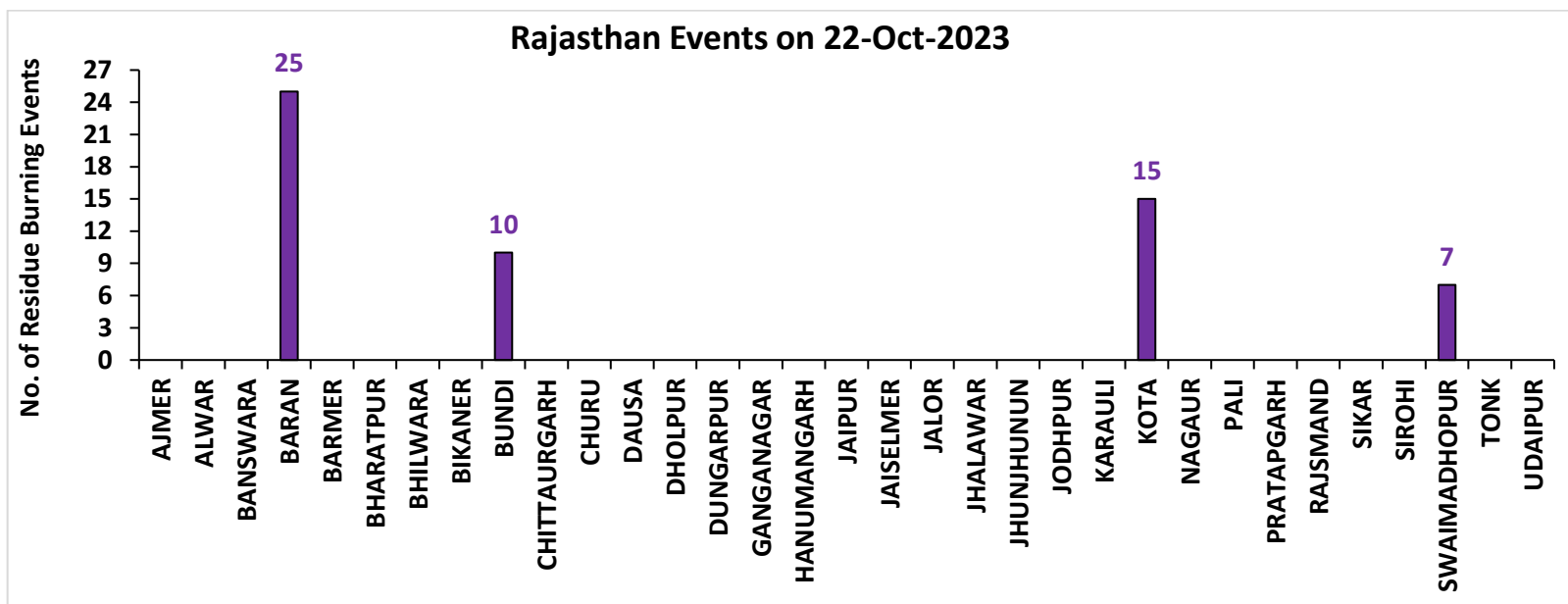
Fire Intensity (W/m²)

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



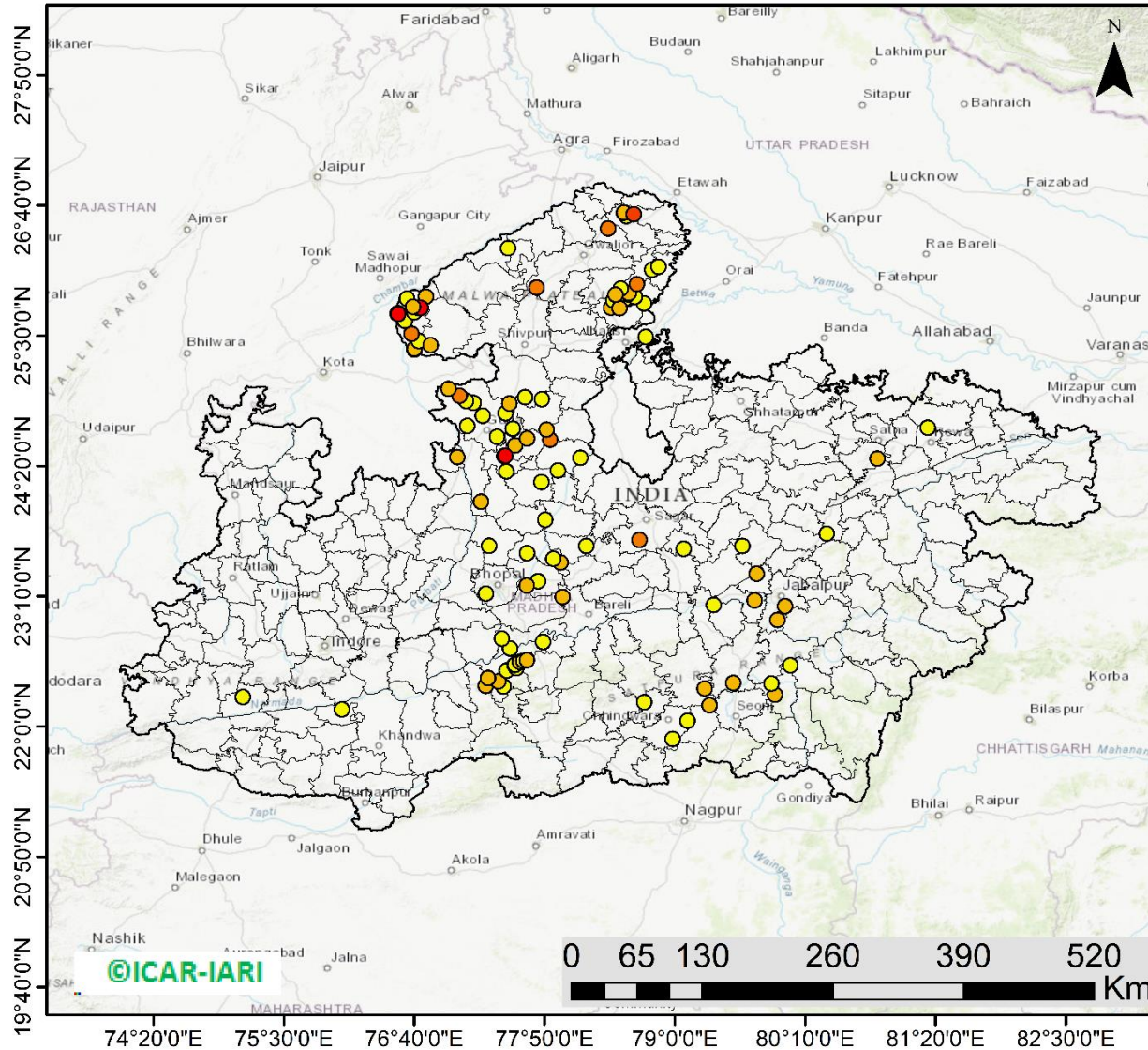
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residues burning events in Rajasthan (15Sep-22Oct -2023)



Madhya Pradesh

RICE RESIDUE BURNING IN MADHYA PRADESH



119 burning events detected in MP on (22nd Oct 2023)

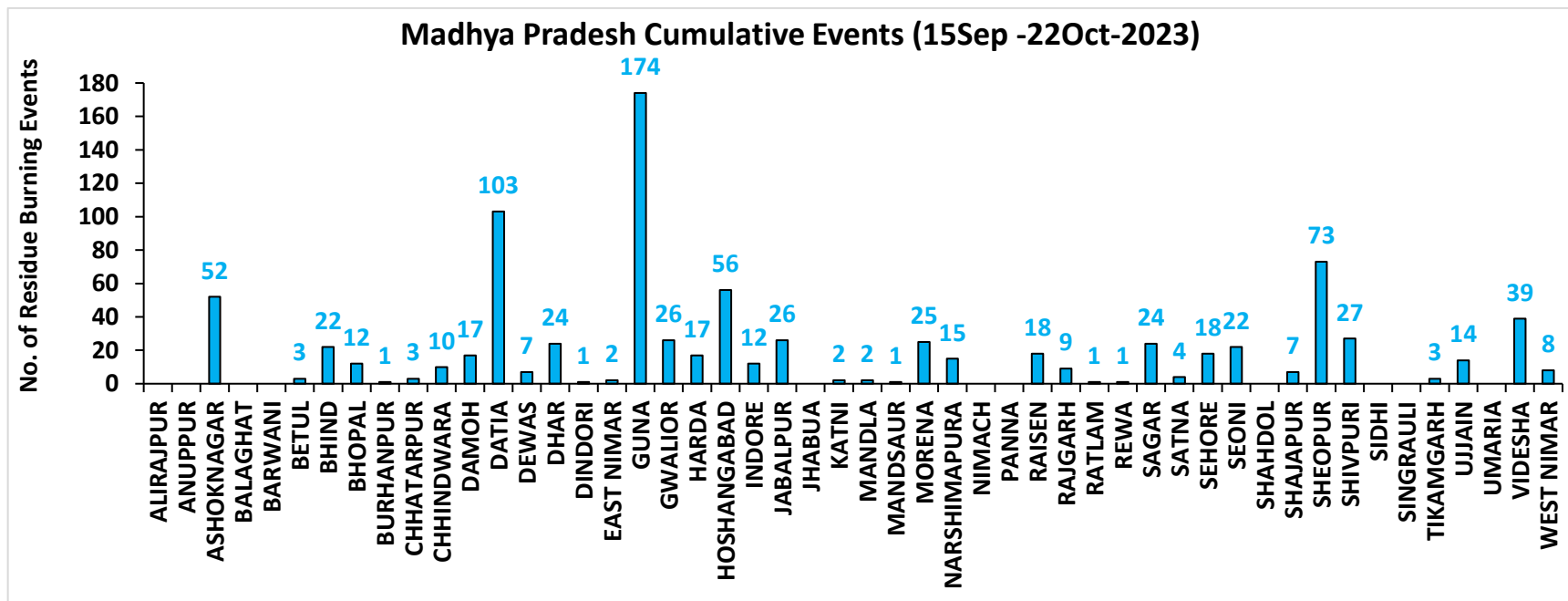
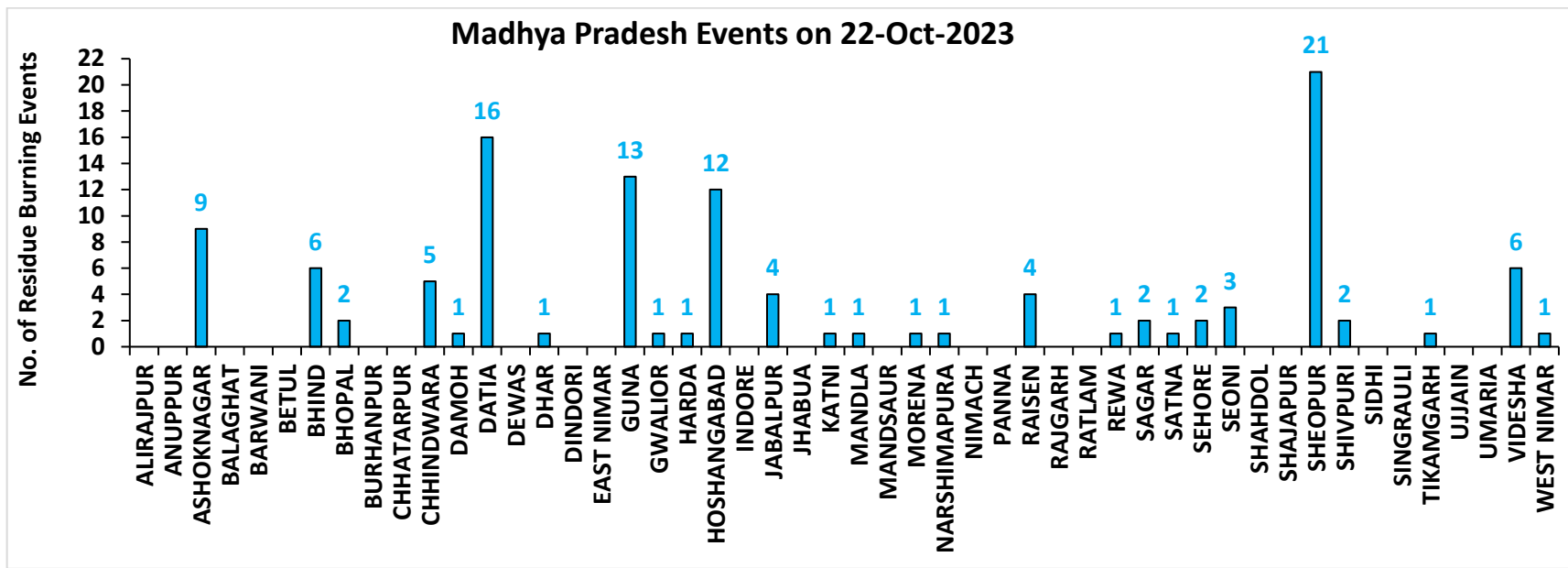
Fire Intensity (W/m²)

- 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-22Oct -2023)



District-wise cumulative number of residues burning events detected in 2020, 2021, 2022 and 2023
(Period: 15 September-22 October)

(a) Punjab

District	15 Sep-22 Oct			
	2020	2021	2022	2023
Amritsar	2268	923	895	700
Barnala	41	42	18	10
Bathinda	156	59	26	7
Faridkot	633	255	26	23
Fatehgarh Sahib	336	215	101	43
Fazilka	195	75	30	8
Firozpur	1570	363	187	104
Gurdaspur	1012	379	324	17
Hoshiarpur	146	49	12	2
Jalandhar	294	242	169	29
Kapurthala	618	292	214	95
Ludhiana	292	341	131	42
Mansa	113	24	24	61
Moga	212	119	83	36
Muktsar	187	76	9	2
Pathankot	7	0	0	0
Patiala	1037	420	254	218
Rupnagar	53	35	18	1
Sangrur	304	110	118	115
SAS NAGAR (Mohali)	63	47	21	44
SBS Nagar	18	24	2	3
Tarn Taran	2901	1348	1034	234
Total	12456	5438	3696	1794

(b) Haryana

District	15 Sep-22 Oct			
	2020	2021	2022	2023
AMBALA	165	66	53	93
BHIWANI	0	0	0	2
CHARKHI DADRI	0	0	0	0
FARIDABAD	1	1	1	2
FATEHABAD	82	93	83	106
GURGAON	0	0	0	0
HISAR	10	4	15	43
JHAJJAR	1	0	0	4
JIND	46	59	82	93
KAITHAL	294	421	250	88
KARNAL	390	493	140	48
KURUKSHETRA	310	250	185	76
MAHENDRAGARH	0	0	0	0
MEWAT	0	0	0	0
PALWAL	23	25	4	37
PANCHKULA	0	0	0	1
PANIPAT	11	19	14	16
REWARI	0	0	0	0
ROHTAK	1	0	0	5
SIRSA	25	16	14	8
SONIPAT	15	7	7	46
YAMUNANAGAR	80	54	45	46
Total	1454	1508	893	714

(c) Uttar Pradesh

District	15 Sep-22 Oct													
	2020	2021	2022	2023	GAUTAMBUDHNAGAR	3	7	2	7	MUZAFARNAGAR	3	2	1	0
AGRA	2	0	0	0	GAZIPUR	0	0	0	0	PILHIBHIT	8	108	33	63
ALIGARH	42	21	9	72	GHAZIABAD	3	2	2	10	PRATAPGARH	1	0	0	0
ALLAHABAD	0	1	0	2	GONDA	0	0	0	0	RAIBEARELI	1	0	0	1
AMBEDKARNAGAR	0	0	0	0	GORAKHPUR	1	0	0	0	RAMPUR	43	50	8	25
AMETHI	0	1	4	1	HAMIRPUR	1	0	0	0	SAMBHAL	7	7	4	12
AMROHA	1	0	0	2	HAPUR	4	1	0	0	SANTKABIRNAGAR	0	0	0	0
AURAIYA	19	6	5	10	HARDOI	14	6	2	7	SANTRAVIDASNAGAR	0	0	0	0
AZAMGARH	0	0	0	0	HATHRAS	0	0	0	2	SHAHJAHANPUR	47	181	90	29
BADAUN	1	6	0	2	JALAUN	0	0	0	0	SHAMLI	20	12	5	5
BAGHPAT	3	1	1	1	JAUNPUR	0	0	0	1	SHARANPUR	40	20	3	1
BAHRAICH	9	2	4	1	JHANSI	17	6	0	15	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	18	SITAPUR	15	9	0	4
BANDA	0	0	0	0	KANPUR DEHAT	11	1	0	9	SONBHADRA	0	0	0	0
BARABANKI	15	20	2	37	KASGANJ	2	2	0	1	SULTANPUR	0	0	0	0
BAREILLY	21	15	2	13	KAUSHAMBI	9	3	0	15	UNNAO	6	1	0	6
BASTI	3	1	0	0	KHERI	47	54	12	5	VARANASI	1	0	0	0
BIJNOR	6	4	2	5	KUSHINAGAR	0	0	0	0	Total	586	634	222	540
BULANDSAHAR	16	2	2	6	LALITPUR	0	1	2	1					
CHANDAULI	0	0	0	0	LUCKNOW	2	0	0	1					
CHITRAKOOT	0	1	1	3	MAHARAJGANJ	0	0	0	1					
DEORIA	0	0	0	2	MAHOBA	6	0	0	0					
ETAH	11	6	1	11	MAINPURI	11	7	4	13					
ETAWAH	6	7	2	28	MATHURA	36	29	3	68					
FAIZABAD	1	0	0	1	MAU	0	0	0	0					
FARRUKHABAD	0	0	0	0	MEERUT	12	4	1	2					
FATEHPUR	21	6	2	14	MIRZAPUR	6	5	2	0					
FIROZABAD	11	4	0	3	MORADABAD	6	3	0	3					

(d) Delhi

District	15 Sep-22 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-22 Oct			
	2020	2021	2022	2023
AJMER	2	0	0	0
ALWAR	1	0	0	0
BANSWARA	0	0	0	0
BARAN	97	0	7	178
BARMER	2	0	0	0
BHARATPUR	2	0	0	2
BHILWARA	3	0	0	0
BIKANER	1	0	0	0
BUNDI	21	1	26	61
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	198	41	13	52
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	34	1	17	91
NAGAU	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	391	45	71	443

(f) Madhya Pradesh

District	15 Sep-22 Oct								
	2020	2021	2022	2023					
					PANNA	5	1	0	0
ALIRAJPUR	0	0	0	0	RAISEN	51	2	3	18
ANUPPUR	0	0	0	0	RAJGARH	7	1	3	9
ASHOKNAGAR	26	1	3	52	RATLAM	0	0	0	1
BALAGHAT	0	0	0	0	REWA	6	0	1	1
BARWANI	0	0	0	0	SAGAR	17	13	8	24
BETUL	4	1	0	3	SATNA	24	8	0	4
BHIND	11	1	2	22	SEHORE	14	3	16	18
BHOPAL	10	5	3	12	SEONI	56	42	10	22
BURHANPUR	0	0	0	1	SHAHDOL	0	0	0	0
CHHATARPUR	4	0	0	3	SHAJAPUR	5	0	0	7
CHHINDWARA	9	9	1	10	SHEOPUR	28	0	1	73
DAMOH	26	10	8	17	SHIVPURI	12	0	8	27
DATIA	103	8	3	103	SIDHI	0	0	0	0
DEWAS	3	0	0	7	SINGRAULI	0	0	0	0
DHAR	22	0	0	24	TIKAMGARH	1	0	0	3
DINDORI	0	0	0	1	UJJAIN	5	0	0	14
EAST NIMAR	3	1	3	2	UMARIA	0	0	0	0
GUNA	20	2	8	174	VIDESHA	71	9	9	39
GWALIOR	76	0	2	26	WEST NIMAR	13	0	0	8
HARDA	10	12	4	17	Total	825	165	114	881
HOSHANGABAD	115	16	6	56					
INDORE	2	0	0	12					
JABALPUR	18	6	3	26					
JHABUA	0	0	0	0					
KATNI	9	0	0	2					
MANDLA	2	1	0	2					
MANDSAUR	3	0	0	1					
MORENA	19	5	3	25					
NARSHIMAPURA	15	8	6	15					
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-22 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
Total	12456	5438	3696	1794	1454	1508	893	714	586	634	222	540

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
Total	6	0	3	2	391	45	71	443	825	165	114	881

Details of residue burning events in Punjab on 22-Oct-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	AMRITSAR	AJNALA	S-NPP	31.97009	74.95670	13:04:16	D	6.50
2	BARNALA	SEHNA	S-NPP	30.43582	75.33989	13:04:16	D	3.60
3	BARNALA	SEHNA	S-NPP	30.43996	75.33876	13:04:16	D	5.10
4	BATHINDA	RAMPURA	S-NPP	30.23496	75.21848	13:04:16	D	7.10
5	FIROZPUR	GURUHAR SAHAI	S-NPP	30.75101	74.41805	13:04:16	D	5.90
6	FIROZPUR	MAKHU	S-NPP	31.11679	75.11492	13:04:16	D	3.70
7	FIROZPUR	MAKHU	S-NPP	31.11771	75.11934	13:04:16	D	3.70
8	KAPURTHALA	SULTANPUR LODHI	S-NPP	31.25458	75.20761	13:04:16	D	5.60
9	LUDHIANA	JAGRAON	S-NPP	30.71532	75.44100	13:04:16	D	2.20
10	LUDHIANA	PAKHOWAL	S-NPP	30.80690	75.78448	13:04:16	D	7.50
11	LUDHIANA	RAIKOT	S-NPP	30.65528	75.47018	13:04:16	D	2.20
12	LUDHIANA	SIDHWAN BET	S-NPP	30.90450	75.44927	13:04:16	D	3.20
13	LUDHIANA	SIDHWAN BET	S-NPP	30.95939	75.49900	13:04:16	D	2.30
14	MANSA	BUDHLADA	S-NPP	29.82968	75.71934	13:04:16	D	3.10
15	MANSA	JHUNIR	S-NPP	29.84421	75.25647	13:04:16	D	4.20
16	MANSA	SARDULGARH	S-NPP	29.74183	75.31133	13:04:16	D	5.20
17	MANSA	SARDULGARH	S-NPP	29.79829	75.24968	13:04:16	D	4.90
18	MOGA	NIHAL SINGH	S-NPP	30.60074	75.35242	13:04:16	D	3.20
19	PATIALA	PATRAM	S-NPP	29.94786	76.11850	13:04:16	D	2.20
20	SANGRUR	ANDANA	AQUA	29.79300	75.98800	13:47:51	D	13.30
21	SANGRUR	BHAWANIGARH	S-NPP	30.26958	76.08738	13:04:16	D	1.90
22	SANGRUR	DIRBA	S-NPP	29.95575	76.01375	13:04:16	D	3.50
23	SANGRUR	DIRBA	S-NPP	30.08900	76.08781	13:04:16	D	2.50
24	SANGRUR	SANGRUR	AQUA	30.27700	75.79300	13:47:51	D	9.10
25	SANGRUR	SUNAM	AQUA	30.13200	75.76900	13:47:51	D	16.40
26	SANGRUR	SUNAM	AQUA	30.14100	75.76700	13:47:51	D	8.80
27	SANGRUR	SUNAM	AQUA	30.14500	75.87200	13:47:51	D	12.80
28	SANGRUR	SUNAM	AQUA	30.14800	75.86500	13:47:51	D	9.70
29	TARN TARAN	CHOHLA SAHIB	AQUA	31.22300	74.98600	13:47:51	D	7.60
30	TARN TARAN	TARN TARAN	S-NPP	31.40853	74.80630	13:04:16	D	4.70

Details of residue burning events in Haryana on 22-Oct-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	FATEHABAD	TOHANA	S-NPP	29.67063	75.82266	13:04:16	D	4.70
2	JIND	NARWANA	S-NPP	29.61465	76.22107	13:04:16	D	4.70
3	JIND	NARWANA	S-NPP	29.67165	76.18970	13:04:16	D	3.50
4	JIND	SAFIDON	S-NPP	29.38773	76.69241	13:04:16	D	6.40
5	JIND	SAFIDON	S-NPP	29.39165	76.69142	13:04:16	D	6.40
6	JIND	UCHANA	S-NPP	29.55882	76.11102	13:04:16	D	3.80
7	KAITHAL	GUHLA	S-NPP	29.97158	76.26058	13:04:16	D	4.20
8	KAITHAL	GUHLA	S-NPP	29.97549	76.28053	13:04:16	D	3.90
9	KAITHAL	GUHLA	S-NPP	29.99059	76.27238	13:04:16	D	7.00
10	KAITHAL	GUHLA	S-NPP	29.99120	76.27254	13:04:16	D	6.80
11	KAITHAL	GUHLA	S-NPP	30.00154	76.28241	13:04:16	D	6.40
12	KAITHAL	GUHLA	S-NPP	30.01740	76.25735	13:04:16	D	2.20
13	KAITHAL	GUHLA	S-NPP	30.01820	76.26134	13:04:16	D	2.20
14	KAITHAL	GUHLA	S-NPP	30.04751	76.38766	13:04:16	D	3.80
15	KAITHAL	KAITHAL	S-NPP	29.94984	76.44572	13:04:16	D	2.30
16	KAITHAL	SIWAN	S-NPP	29.91751	76.30395	13:04:16	D	33.50
17	KAITHAL	SIWAN	S-NPP	29.94375	76.26783	13:04:16	D	2.10
18	KAITHAL	SIWAN	S-NPP	29.95812	76.23464	13:04:16	D	1.90
19	KURUKSHETRA	PEHOWA	S-NPP	29.96129	76.68756	01:54:16	N	0.60
20	KURUKSHETRA	PEHOWA	S-NPP	29.96510	76.68818	01:54:16	N	0.60
21	PALWAL	HASSANPUR	S-NPP	27.99964	77.42554	13:04:16	D	10.00
22	PALWAL	HASSANPUR	AQUA	28.01100	77.39500	13:47:51	D	6.20
23	PALWAL	HODAL	AQUA	27.92500	77.44100	13:47:51	D	78.00
24	PALWAL	HODAL	AQUA	27.92700	77.45200	13:47:51	D	11.10
25	SIRSA	BARAGUNDA	S-NPP	29.71199	75.14561	13:04:16	D	3.60

Details of residue burning events in Uttar Pradesh on 22-Oct-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m2)
1	ALIGARH	ATRAULI	S-NPP	27.99729	78.40691	01:54:16	N	0.60
2	ALIGARH	KOL	AQUA	27.92500	77.96800	13:47:51	D	4.50
3	ALLAHABAD	SORAWN	S-NPP	25.62123	81.74235	13:04:16	D	1.50
4	AURAIYA	BIDHUNA	S-NPP	26.85424	79.65415	13:04:16	D	7.00
5	AURAIYA	BIDHUNA	S-NPP	26.86960	79.63682	13:04:16	D	6.20
6	AURAIYA	BIDHUNA	AQUA	26.68000	79.63500	13:47:51	D	6.20
7	BAHRAICH	NANPARA	S-NPP	27.71348	81.68671	13:04:16	D	1.60
8	BARABANKI	FATEHPUR	S-NPP	27.10129	81.25526	13:04:16	D	1.70
9	BARABANKI	FATEHPUR	S-NPP	27.10866	81.25790	13:04:16	D	2.50
10	BARABANKI	FATEHPUR	AQUA	27.21600	81.17800	13:47:51	D	5.70
11	BARABANKI	H AidARGARH	S-NPP	26.79224	81.33764	13:04:16	D	2.30
12	BARABANKI	NAWABGANJ	S-NPP	26.85962	81.23338	13:04:16	D	1.50
13	BARABANKI	NAWABGANJ	S-NPP	26.86913	81.38389	13:04:16	D	3.40
14	BARABANKI	NAWABGANJ	AQUA	26.86700	81.25100	13:47:51	D	5.50
15	BARABANKI	NAWABGANJ	AQUA	26.86800	81.26100	13:47:51	D	5.70
16	BARABANKI	NAWABGANJ	AQUA	26.94400	81.13500	13:47:51	D	8.80
17	BARABANKI	RAMSANEHIGHAT	S-NPP	26.77642	81.48042	13:04:16	D	2.20
18	BARABANKI	RAMSANEHIGHAT	S-NPP	26.88341	81.53683	13:04:16	D	4.10
19	BARABANKI	SIRAULI GAUSPUR	S-NPP	26.91367	81.45741	13:04:16	D	2.80
20	BAREILLY	BAHERI	AQUA	28.66000	79.50100	13:47:51	D	8.40
21	BAREILLY	BAHERI	AQUA	28.81600	79.42800	13:47:51	D	11.40
22	CHITRAKOOT	MAU	S-NPP	25.30129	81.21928	13:04:16	D	4.60
23	CHITRAKOOT	MAU	S-NPP	25.34268	81.19459	13:04:16	D	2.90
24	CHITRAKOOT	MAU	S-NPP	25.34337	81.19865	13:04:16	D	2.70
25	ETAWAH	BHARTHNA	S-NPP	26.77178	79.27333	13:04:16	D	2.00
26	ETAWAH	BHARTHNA	S-NPP	26.89052	79.22521	13:04:16	D	4.00
27	ETAWAH	ETAWAH	S-NPP	26.79778	79.08175	13:04:16	D	2.80
28	ETAWAH	ETAWAH	S-NPP	26.99692	79.18889	13:04:16	D	2.60
29	ETAWAH	ETAWAH	S-NPP	27.00053	79.18807	13:04:16	D	2.70
30	ETAWAH	JASWANTNAGAR	S-NPP	26.96718	78.85404	13:04:16	D	3.70

31	ETAWAH	JASWANTNAGAR	AQUA	26.85400	78.88300	13:47:51	D	5.50
32	ETAWAH	SAIFAI	S-NPP	26.94397	78.99930	13:04:16	D	4.90
33	ETAWAH	SAIFAI	S-NPP	26.94769	79.08247	13:04:16	D	7.00
34	ETAWAH	SAIFAI	S-NPP	26.98141	79.06016	13:04:16	D	6.00
35	FAIZABAD	MILKIPUR	S-NPP	26.53820	82.02878	13:04:16	D	3.00
36	FATEHPUR	FATEHPUR	S-NPP	25.80499	80.91725	13:04:16	D	2.70
37	FATEHPUR	KHAGA	S-NPP	25.60890	81.10817	13:04:16	D	0.90
38	FIROZABAD	SIKOHABAD	S-NPP	27.05408	78.64812	13:04:16	D	4.40
39	GHAZIABAD	MODINAGAR	S-NPP	28.80756	77.70312	13:04:16	D	4.20
40	HARDOI	SHAHABAD	S-NPP	27.57790	79.89040	01:54:16	N	0.40
41	HARDOI	SHAHABAD	S-NPP	27.64683	80.14411	13:04:16	D	3.00
42	HARDOI	SHAHABAD	AQUA	27.56400	79.88800	13:47:51	D	7.90
43	JHANSI	JHANSI	S-NPP	25.54774	78.70848	13:04:16	D	2.30
44	JHANSI	MOTH	AQUA	25.89300	78.99800	13:47:51	D	8.30
45	JHANSI	TAHRAULI	S-NPP	25.55721	78.75921	13:04:16	D	6.70
46	JHANSI	TAHRAULI	S-NPP	25.55809	78.76159	13:04:16	D	5.30
47	JHANSI	TAHRAULI	AQUA	25.59100	78.96100	13:47:51	D	14.60
48	KANPUR	BILHAUR	S-NPP	26.71968	80.04749	13:04:16	D	2.30
49	KANPUR	BILHAUR	S-NPP	26.72043	80.05183	13:04:16	D	2.30
50	KANPUR	BILHAUR	S-NPP	26.72243	80.04239	13:04:16	D	4.10
51	KANPUR	BILHAUR	S-NPP	26.72667	80.04599	13:04:16	D	5.80
52	KANPUR	BILHAUR	S-NPP	26.72817	80.05469	13:04:16	D	5.60
53	KANPUR	BILHAUR	S-NPP	26.74438	80.06473	13:04:16	D	1.60
54	KANPUR	BILHAUR	S-NPP	26.74861	80.06833	13:04:16	D	4.00
55	KANPUR	BILHAUR	S-NPP	26.75432	80.08060	13:04:16	D	5.60
56	KANPUR	BILHAUR	S-NPP	26.75485	80.06248	13:04:16	D	5.00
57	KANPUR	BILHAUR	S-NPP	26.75559	80.06683	13:04:16	D	5.70
58	KANPUR	BILHAUR	S-NPP	26.76479	80.07835	13:04:16	D	5.40
59	KANPUR	BILHAUR	S-NPP	26.76754	80.07327	13:04:16	D	5.40
60	KANPUR	BILHAUR	S-NPP	26.76772	80.07414	13:04:16	D	7.60
61	KANPUR	GHATAMPUR	S-NPP	26.22257	80.02617	13:04:16	D	1.10
62	KANPUR	GHATAMPUR	S-NPP	26.22839	80.03857	13:04:16	D	2.60
63	KANPUR DEHAT	AKBARPUR	S-NPP	26.34751	80.07772	13:04:16	D	2.90
64	KANPUR DEHAT	SIKANDRA	S-NPP	26.37344	79.66898	13:04:16	D	2.40

65	KANPUR DEHAT	SIKANDRA	AQUA	26.39800	79.66500	13:47:51	D	5.60
66	KAUSHAMBI	MANJHANPUR	S-NPP	25.39639	81.26349	13:04:16	D	2.00
67	KAUSHAMBI	MANJHANPUR	S-NPP	25.42729	81.36572	13:04:16	D	3.10
68	KAUSHAMBI	MANJHANPUR	S-NPP	25.50865	81.28724	13:04:16	D	2.50
69	KAUSHAMBI	MANJHANPUR	AQUA	25.48500	81.29900	13:47:51	D	11.80
70	KAUSHAMBI	SIRATHU	S-NPP	25.76086	81.30889	13:04:16	D	2.50
71	LALITPUR	KHAGA	S-NPP	24.43789	78.66798	13:04:16	D	3.10
72	MAINPURI	BHOGAON	AQUA	27.13300	79.14600	13:47:51	D	8.60
73	MATHURA	CHHATA	S-NPP	27.66581	77.56353	13:04:16	D	2.60
74	MATHURA	CHHATA	S-NPP	27.68956	77.45385	13:04:16	D	7.40
75	MATHURA	CHHATA	S-NPP	27.81068	77.45500	13:04:16	D	5.90
76	MATHURA	CHHATA	AQUA	27.66900	77.45600	13:47:51	D	8.10
77	MORADABAD	MORADABAD	AQUA	29.03000	78.86200	13:47:51	D	3.80
78	PILHIBHIT	BISALPUR	S-NPP	28.10924	79.90987	01:54:16	N	0.50
79	PILHIBHIT	BISALPUR	S-NPP	28.16283	79.91788	13:04:16	D	8.00
80	PILHIBHIT	BISALPUR	S-NPP	28.27412	79.91241	13:04:16	D	2.80
81	PILHIBHIT	PILHIBHIT	S-NPP	28.55666	79.91542	13:04:16	D	1.80
82	PILHIBHIT	PILHIBHIT	S-NPP	28.71650	79.66249	13:04:16	D	3.30
83	PILHIBHIT	PILHIBHIT	AQUA	28.83500	79.75700	13:47:51	D	11.00
84	PILHIBHIT	PILHIBHIT	AQUA	28.84100	79.67200	13:47:51	D	18.80
85	PILHIBHIT	PILHIBHIT	AQUA	28.84300	79.68300	13:47:51	D	7.00
86	PILHIBHIT	PURANPUR	S-NPP	28.34545	80.16201	13:04:16	D	1.50
87	PILHIBHIT	PURANPUR	S-NPP	28.38552	80.10509	13:04:16	D	6.20
88	PILHIBHIT	PURANPUR	S-NPP	28.38624	80.10932	13:04:16	D	6.20
89	PILHIBHIT	PURANPUR	S-NPP	28.44255	80.13383	13:04:16	D	6.40
90	PILHIBHIT	PURANPUR	S-NPP	28.53080	80.18088	13:04:16	D	4.70
91	PILHIBHIT	PURANPUR	S-NPP	28.56479	80.15168	13:04:16	D	3.40
92	PILHIBHIT	PURANPUR	S-NPP	28.63838	80.02687	13:04:16	D	3.80
93	PILHIBHIT	PURANPUR	S-NPP	28.66129	80.05708	13:04:16	D	4.50
94	PILHIBHIT	PURANPUR	AQUA	28.38400	80.09400	13:47:51	D	6.30
95	PILHIBHIT	PURANPUR	AQUA	28.48600	79.96000	13:47:51	D	5.00
96	PILHIBHIT	PURANPUR	AQUA	28.64600	80.05000	13:47:51	D	5.30
97	RAIBEARELI	SALON	S-NPP	26.01901	81.51801	13:04:16	D	1.60
98	RAMPUR	BILASPUR	S-NPP	28.88025	79.33131	13:04:16	D	6.80

99	RAMPUR	BILASPUR	AQUA	28.87200	79.29700	13:47:51	D	10.50
100	RAMPUR	MILAK	AQUA	28.78400	79.20700	13:47:51	D	5.50
101	RAMPUR	SUAR	S-NPP	28.94162	79.18354	13:04:16	D	2.70
102	RAMPUR	SUAR	AQUA	28.96500	79.18100	13:47:51	D	8.80
103	SAMBHAL	CHANDAUSI	S-NPP	28.47828	78.71410	13:04:16	D	1.90
104	SAMBHAL	SAMBHAL	S-NPP	28.55580	78.60362	13:04:16	D	1.30
105	SAMBHAL	SAMBHAL	S-NPP	28.64081	78.51160	13:04:16	D	2.90
106	SHAHJAHANPUR	JALALABAD	S-NPP	27.60467	79.69446	13:04:16	D	3.40
107	SHAHJAHANPUR	JALALABAD	S-NPP	27.61090	79.68850	13:04:16	D	4.50
108	SHAHJAHANPUR	SHAHJAHANPUR	S-NPP	27.82807	79.87122	01:54:16	N	0.40
109	SHAHJAHANPUR	SHAHJAHANPUR	S-NPP	27.86819	79.85457	01:54:16	N	1.10
110	SHAHJAHANPUR	TILHAR	S-NPP	28.16396	79.73773	13:04:16	D	2.80
111	SHAHJAHANPUR	TILHAR	S-NPP	28.17227	79.68143	13:04:16	D	6.40
112	SHARANPUR	SHARANPUR	S-NPP	29.97361	77.52003	01:54:16	N	0.70
113	SITAPUR	MAHMUDABAD	S-NPP	27.35678	81.17136	13:04:16	D	4.10
114	SITAPUR	MAHMUDABAD	AQUA	27.35100	81.16500	13:47:51	D	6.10
115	UNNAO	HASANGANJ	S-NPP	26.64144	80.54070	13:04:16	D	1.90
116	UNNAO	PURWA	AQUA	26.45700	80.94200	13:47:51	D	11.10
117	UNNAO	UNNAO	S-NPP	26.47440	80.56474	13:04:16	D	3.80

Details of residue burning events in Rajasthan on 22-Oct-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	BARAN	BARAN	S-NPP	25.17162	76.60070	13:04:16	D	3.60
2	BARAN	CHHABRA	S-NPP	24.60345	76.83150	13:04:16	D	3.00
3	BARAN	CHHABRA	S-NPP	24.60434	76.83599	13:04:16	D	5.50
4	BARAN	CHHABRA	S-NPP	24.60772	76.83046	13:04:16	D	3.00
5	BARAN	CHHABRA	S-NPP	24.63516	76.87942	13:04:16	D	3.80
6	BARAN	CHHABRA	S-NPP	24.64043	76.95178	13:04:16	D	4.30
7	BARAN	CHHABRA	S-NPP	24.64300	76.86471	13:04:16	D	5.90
8	BARAN	CHHABRA	S-NPP	24.64533	76.86314	13:04:16	D	2.60
9	BARAN	CHHABRA	S-NPP	24.65989	76.96078	13:04:16	D	3.00
10	BARAN	CHHABRA	S-NPP	24.69117	76.94975	13:04:16	D	2.70
11	BARAN	CHHABRA	S-NPP	24.70006	76.86049	13:04:16	D	2.80
12	BARAN	KISHANGUNJ	S-NPP	24.86360	76.78774	13:04:16	D	5.70
13	BARAN	KISHANGUNJ	S-NPP	25.05942	76.77477	13:04:16	D	4.70
14	BARAN	KISHANGUNJ	S-NPP	25.25749	76.65021	13:04:16	D	2.70
15	BARAN	KISHANGUNJ	S-NPP	25.30831	76.69469	13:04:16	D	3.20
16	BARAN	SHAHBAD	S-NPP	25.08747	77.07587	13:04:16	D	3.70
17	BARAN	SHAHBAD	S-NPP	25.08922	77.01772	13:04:16	D	5.70
18	BARAN	SHAHBAD	S-NPP	25.11726	77.02938	13:04:16	D	6.20
19	BARAN	SHAHBAD	S-NPP	25.11758	77.02872	13:04:16	D	5.10
20	BARAN	SHAHBAD	S-NPP	25.17236	77.04303	13:04:16	D	22.20
21	BARAN	SHAHBAD	S-NPP	25.23314	77.04430	01:54:16	N	1.00
22	BARAN	SHAHBAD	AQUA	25.08700	77.01600	13:47:51	D	10.90
23	BARAN	SHAHBAD	AQUA	25.18000	77.01500	13:47:51	D	12.70
24	BARAN	SHAHBAD	AQUA	25.24900	76.99500	13:47:51	D	19.50
25	BARAN	SHAHBAD	AQUA	25.25100	77.00700	13:47:51	D	12.50
26	BUNDI	BUNDI	S-NPP	25.27039	75.69279	13:04:16	D	4.30
27	BUNDI	BUNDI	S-NPP	25.27418	75.68871	13:04:16	D	14.80
28	BUNDI	BUNDI	S-NPP	25.27490	75.69165	13:04:16	D	19.00
29	BUNDI	BUNDI	S-NPP	25.27524	75.69375	13:04:16	D	14.80
30	BUNDI	BUNDI	S-NPP	25.44981	75.84650	13:04:16	D	4.20

31	BUNDI	INDRAGARH	AQUA	25.49200	76.12800	13:47:51	D	11.30
32	BUNDI	KESHORAIPATAN	S-NPP	25.38489	75.92714	13:04:16	D	5.50
33	BUNDI	KESHORAIPATAN	S-NPP	25.38852	76.01278	13:04:16	D	6.60
34	BUNDI	KESHORAIPATAN	S-NPP	25.47280	76.06944	13:04:16	D	3.50
35	BUNDI	KESHORAIPATAN	S-NPP	25.47719	76.06837	13:04:16	D	2.40
36	KOTA	LADPURA	S-NPP	25.20747	75.91254	13:04:16	D	4.60
37	KOTA	LADPURA	S-NPP	25.21049	75.91352	13:04:16	D	3.80
38	KOTA	LADPURA	S-NPP	25.22926	75.96033	13:04:16	D	4.50
39	KOTA	LADPURA	S-NPP	25.23586	75.93645	13:04:16	D	4.60
40	KOTA	LADPURA	S-NPP	25.25122	75.94297	13:04:16	D	3.20
41	KOTA	PIPALDA	S-NPP	25.44273	76.50592	13:04:16	D	6.90
42	KOTA	PIPALDA	S-NPP	25.44408	76.50667	13:04:16	D	8.90
43	KOTA	PIPALDA	S-NPP	25.47766	76.51736	13:04:16	D	3.20
44	KOTA	PIPALDA	S-NPP	25.48958	76.50978	13:04:16	D	2.70
45	KOTA	PIPALDA	S-NPP	25.49295	76.50425	13:04:16	D	5.70
46	KOTA	PIPALDA	AQUA	25.46700	76.51900	13:47:51	D	23.20
47	KOTA	PIPALDA	AQUA	25.46900	76.53200	13:47:51	D	12.60
48	KOTA	PIPALDA	AQUA	25.47700	76.51700	13:47:51	D	10.90
49	KOTA	PIPALDA	AQUA	25.59500	76.48700	13:47:51	D	13.50
50	KOTA	SANGOD	S-NPP	25.03662	76.11045	13:04:16	D	1.90
51	SWAIMADHOPUR	KHANDAR	S-NPP	25.88588	76.58556	13:04:16	D	3.60
52	SWAIMADHOPUR	KHANDAR	S-NPP	25.94115	76.60534	13:04:16	D	1.70
53	SWAIMADHOPUR	KHANDAR	S-NPP	26.00723	76.73869	13:04:16	D	3.10
54	SWAIMADHOPUR	KHANDAR	S-NPP	26.05473	76.80300	13:04:16	D	2.90
55	SWAIMADHOPUR	KHANDAR	S-NPP	26.05543	76.80364	13:04:16	D	2.40
56	SWAIMADHOPUR	KHANDAR	AQUA	25.88500	76.49700	13:47:51	D	9.70
57	SWAIMADHOPUR	KHANDAR	AQUA	25.95400	76.60300	13:47:51	D	16.20

Details of residue burning events in Madhya Pradesh on 22-Oct-2023

S. No.	District	Tehsil / Block	Satellite	Latitude	Longitude	ACQ_TIME	Day / Night	Fire Power (W/m ²)
1	ASHOKNAGAR	ASHOKNAGAR	S-NPP	24.51650	77.57076	13:04:16	D	5.70
2	ASHOKNAGAR	ASHOKNAGAR	S-NPP	24.56816	77.88371	13:04:16	D	10.10
3	ASHOKNAGAR	ASHOKNAGAR	S-NPP	24.66401	77.55038	13:04:16	D	7.90
4	ASHOKNAGAR	ASHOKNAGAR	S-NPP	24.66665	77.54996	13:04:16	D	3.40
5	ASHOKNAGAR	ASHOKNAGAR	AQUA	24.57800	77.67800	13:47:51	D	9.50
6	ASHOKNAGAR	ISAGARH	S-NPP	24.65831	77.85204	13:04:16	D	6.00
7	ASHOKNAGAR	ISAGARH	S-NPP	24.93099	77.80984	13:04:16	D	3.50
8	ASHOKNAGAR	MUNGAOLI	S-NPP	24.29207	77.95410	13:04:16	D	4.10
9	ASHOKNAGAR	MUNGAOLI	S-NPP	24.40584	78.15439	13:04:16	D	2.40
10	BHIND	BHIND	AQUA	26.58600	78.63300	13:47:51	D	15.70
11	BHIND	GOHAD	AQUA	26.45800	78.40300	13:47:51	D	14.10
12	BHIND	LAHAR	S-NPP	26.11618	78.85512	13:04:16	D	2.00
13	BHIND	MAHGAWAN	S-NPP	26.56872	78.56609	13:04:16	D	1.60
14	BHIND	MAHGAWAN	S-NPP	26.59963	78.54329	13:04:16	D	7.60
15	BHIND	MAHGAWAN	S-NPP	26.60015	78.54574	13:04:16	D	6.20
16	BHOPAL	BERASIYA	S-NPP	23.61700	77.33756	13:04:16	D	2.30
17	BHOPAL	HUZUR	S-NPP	23.18920	77.30881	13:04:16	D	3.30
18	CHHINDWARA	AMARWARA	AQUA	22.34000	79.26800	13:47:51	D	6.60
19	CHHINDWARA	CHAURAI	S-NPP	22.05098	79.11406	01:54:16	N	0.40
20	CHHINDWARA	CHAURAI	AQUA	22.19000	79.31100	13:47:51	D	6.20
21	CHHINDWARA	CHHINDWARA	S-NPP	21.88734	78.98029	13:04:16	D	3.60
22	CHHINDWARA	PARASIA	S-NPP	22.21813	78.72726	13:04:16	D	3.00
23	DAMOH	JABERA	S-NPP	23.61524	79.60515	13:04:16	D	2.00
24	DATIA	BHANDER	S-NPP	25.78830	78.72394	13:04:16	D	1.60
25	DATIA	BHANDER	S-NPP	25.84767	78.64202	13:04:16	D	2.30
26	DATIA	DATIA	S-NPP	25.74893	78.42778	13:04:16	D	5.80
27	DATIA	DATIA	S-NPP	25.76633	78.49978	13:04:16	D	2.00
28	DATIA	DATIA	AQUA	25.74400	78.50500	13:47:51	D	5.20
29	DATIA	SEONDHA	S-NPP	25.81287	78.45136	13:04:16	D	2.00

30	DATIA	SEONDHA	S-NPP	25.82706	78.57209	13:04:16	D	5.20
31	DATIA	SEONDHA	S-NPP	25.82800	78.57722	13:04:16	D	5.20
32	DATIA	SEONDHA	S-NPP	25.83275	78.56010	13:04:16	D	4.30
33	DATIA	SEONDHA	S-NPP	25.87047	78.58082	13:04:16	D	9.90
34	DATIA	SEONDHA	S-NPP	25.87316	78.51059	13:04:16	D	3.70
35	DATIA	SEONDHA	S-NPP	25.87993	78.58936	13:04:16	D	6.10
36	DATIA	SEONDHA	S-NPP	25.92150	78.51581	13:04:16	D	2.80
37	DATIA	SEONDHA	S-NPP	26.08969	78.79698	13:04:16	D	3.20
38	DATIA	SEONDHA	AQUA	25.86700	78.46900	13:47:51	D	6.50
39	DATIA	SEONDHA	AQUA	25.96100	78.66000	13:47:51	D	10.50
40	DHAR	MANAWAR	S-NPP	22.26411	75.13310	01:54:16	N	1.20
41	GUNA	ARON	S-NPP	24.28326	77.49187	13:04:16	D	2.80
42	GUNA	ARON	AQUA	24.42200	77.47300	13:47:51	D	10.80
43	GUNA	ARON	AQUA	24.42400	77.48400	13:47:51	D	34.40
44	GUNA	GUNA	S-NPP	24.59410	77.40967	13:04:16	D	2.80
45	GUNA	GUNA	S-NPP	24.69077	77.14268	13:04:16	D	4.50
46	GUNA	GUNA	S-NPP	24.78266	77.28024	13:04:16	D	3.40
47	GUNA	GUNA	S-NPP	24.80528	77.48446	13:04:16	D	4.40
48	GUNA	GUNA	S-NPP	24.89752	77.19749	13:04:16	D	5.00
49	GUNA	GUNA	S-NPP	24.91521	77.13164	13:04:16	D	3.60
50	GUNA	GUNA	S-NPP	24.96029	77.07391	13:04:16	D	10.10
51	GUNA	GUNA	S-NPP	25.02380	76.97488	13:04:16	D	6.30
52	GUNA	KUMBHRAJ	S-NPP	24.41122	77.05319	13:04:16	D	6.40
53	GUNA	RAGHOGARH	S-NPP	24.01217	77.26421	13:04:16	D	5.10
54	GWALIOR	GWALIOR	S-NPP	25.92939	77.76271	13:04:16	D	11.90
55	HARDA	TIMURNI	S-NPP	22.36357	77.30814	13:04:16	D	6.50
56	HOSHANGABAD	BABAI	S-NPP	22.75579	77.82072	13:04:16	D	1.60
57	HOSHANGABAD	BABAI	S-NPP	22.75655	77.82108	13:04:16	D	2.60
58	HOSHANGABAD	HOSHANGABAD	S-NPP	22.57705	77.61359	13:04:16	D	6.20
59	HOSHANGABAD	HOSHANGABAD	S-NPP	22.58784	77.64673	13:04:16	D	2.40
60	HOSHANGABAD	ITARSI	S-NPP	22.59356	77.67653	13:04:16	D	5.50
61	HOSHANGABAD	SEONI MALWA	S-NPP	22.35775	77.46637	13:04:16	D	5.00
62	HOSHANGABAD	SEONI MALWA	S-NPP	22.40362	77.42014	13:04:16	D	5.20

63	HOSHANGABAD	SEONI MALWA	S-NPP	22.50081	77.49545	13:04:16	D	3.70
64	HOSHANGABAD	SEONI MALWA	S-NPP	22.52210	77.58112	13:04:16	D	3.40
65	HOSHANGABAD	SEONI MALWA	S-NPP	22.55013	77.56586	13:04:16	D	3.40
66	HOSHANGABAD	SEONI MALWA	S-NPP	22.55097	77.57017	13:04:16	D	3.40
67	HOSHANGABAD	SEONI MALWA	AQUA	22.43300	77.32700	13:47:51	D	8.80
68	JABALPUR	JABALPUR	S-NPP	22.95338	79.91937	13:04:16	D	5.40
69	JABALPUR	JABALPUR	AQUA	23.07700	79.98700	13:47:51	D	5.80
70	JABALPUR	PATAN	S-NPP	23.36667	79.73268	13:04:16	D	6.60
71	JABALPUR	SAHPURA	AQUA	23.12800	79.71400	13:47:51	D	8.70
72	KATNI	MURBARA	S-NPP	23.72550	80.36131	13:04:16	D	3.50
73	MANDLA	NAINPUR	S-NPP	22.54646	80.03459	13:04:16	D	3.10
74	MORENA	KAILARAS	S-NPP	26.28254	77.50799	13:04:16	D	3.50
75	NARSHIMAPURA	GOTECAON	S-NPP	23.08707	79.34809	13:04:16	D	3.50
76	RAISEN	BARELI	S-NPP	23.16003	77.99504	13:04:16	D	9.50
77	RAISEN	RAISEN	S-NPP	23.29963	77.77221	13:04:16	D	3.30
78	RAISEN	RAISEN	S-NPP	23.30040	77.77629	13:04:16	D	3.30
79	RAISEN	RAISEN	AQUA	23.26200	77.67400	13:47:51	D	8.80
80	REWA	SIRMAUR	S-NPP	24.67501	81.26544	13:04:16	D	1.20
81	SAGAR	REHLI	S-NPP	23.58986	79.08012	13:04:16	D	1.80
82	SAGAR	SAGAR	S-NPP	23.67026	78.68365	13:04:16	D	12.80
83	SATNA	UCHAHAR	S-NPP	24.39778	80.81445	13:04:16	D	5.50
84	SEHORE	BUDHNI	S-NPP	22.69831	77.52609	13:04:16	D	3.00
85	SEHORE	BUDHNI	S-NPP	22.78598	77.45242	13:04:16	D	1.80
86	SEONI	GHANSAUR	AQUA	22.38500	79.86500	13:47:51	D	4.90
87	SEONI	KEWLARI	S-NPP	22.28471	79.89621	13:04:16	D	6.30
88	SEONI	LAKHNADOU	AQUA	22.38900	79.52400	13:47:51	D	5.90
89	SHEOPUR	KARAHAL	AQUA	25.41400	76.81400	13:47:51	D	8.90
90	SHEOPUR	SHEOPUR	S-NPP	25.37445	76.66943	13:04:16	D	2.30
91	SHEOPUR	SHEOPUR	S-NPP	25.37658	76.66661	13:04:16	D	7.10
92	SHEOPUR	SHEOPUR	S-NPP	25.37747	76.67103	13:04:16	D	15.30
93	SHEOPUR	SHEOPUR	S-NPP	25.38172	76.67002	13:04:16	D	8.90
94	SHEOPUR	SHEOPUR	S-NPP	25.45157	76.70852	13:04:16	D	4.10
95	SHEOPUR	SHEOPUR	S-NPP	25.51637	76.64312	13:04:16	D	13.60

96	SHEOPUR	SHEOPUR	S-NPP	25.63183	76.58408	13:04:16	D	4.10
97	SHEOPUR	SHEOPUR	S-NPP	25.69634	76.51830	13:04:16	D	23.30
98	SHEOPUR	SHEOPUR	S-NPP	25.69724	76.52276	13:04:16	D	11.40
99	SHEOPUR	SHEOPUR	S-NPP	25.70149	76.52172	13:04:16	D	11.40
100	SHEOPUR	SHEOPUR	S-NPP	25.70874	76.66761	13:04:16	D	2.40
101	SHEOPUR	SHEOPUR	S-NPP	25.74954	76.71694	13:04:16	D	2.20
102	SHEOPUR	SHEOPUR	S-NPP	25.83189	76.60344	13:04:16	D	2.60
103	SHEOPUR	SHEOPUR	S-NPP	25.84808	76.77192	13:04:16	D	9.10
104	SHEOPUR	SHEOPUR	AQUA	25.69400	76.52300	13:47:51	D	20.20
105	SHEOPUR	SHEOPUR	AQUA	25.74600	76.70800	13:47:51	D	11.50
106	SHEOPUR	SHEOPUR	AQUA	25.74600	76.71400	13:47:51	D	60.20
107	SHEOPUR	SHEOPUR	AQUA	25.74800	76.72000	13:47:51	D	25.50
108	SHEOPUR	SHEOPUR	AQUA	25.74800	76.72600	13:47:51	D	24.90
109	SHEOPUR	SHEOPUR	AQUA	25.75800	76.65600	13:47:51	D	8.50
110	SHIVPURI	KOLARAS	S-NPP	24.89165	77.51951	13:04:16	D	6.30
111	SHIVPURI	KOLARAS	S-NPP	24.94860	77.65952	13:04:16	D	3.30
112	TIKAMGARH	NIVARI	S-NPP	25.48759	78.74036	13:04:16	D	1.90
113	VIDESHA	GYARASPUR	S-NPP	23.61565	78.20845	13:04:16	D	1.40
114	VIDESHA	NATERAN	S-NPP	23.85063	77.84010	13:04:16	D	4.50
115	VIDESHA	SIRANJ	S-NPP	24.18802	77.80678	13:04:16	D	2.70
116	VIDESHA	VIDESHA	S-NPP	23.46694	77.97833	13:04:16	D	5.50
117	VIDESHA	VIDESHA	S-NPP	23.50115	77.91275	13:04:16	D	1.50
118	VIDESHA	VIDESHA	S-NPP	23.55189	77.67824	13:04:16	D	5.00
119	WEST NIMAR	BARWAH	S-NPP	22.15222	76.01954	13:04:16	D	4.10

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](#)
